Exploring the academic success of student veterans in higher education

Claire Semer
University of Toledo

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A Dissertation

entitled

Exploring the Academic Success of Student Veterans in Higher Education

by

Claire Semer

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the

Doctor of Philosophy Degree in Higher Education

_________________________________________
Ron Opp, Ph.D., Committee Chair

_________________________________________
David Meabon, Ph.D., Committee Member

_________________________________________
Debra S. Harmening, Ph.D., Committee Member

_________________________________________
Thomas Barden, Ph.D., Committee Member

_________________________________________
Dr. Patricia R. Komuniecki, Dean
College of Graduate Studies

The University of Toledo

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Any veteran should be able to earn a degree without struggling financially, emotionally, or academically on or off campus. The purpose of this research study was to explore the college experience of student veterans and identify ways to help them succeed academically. More specifically, this study sought to identify factors that predict the academic success of veterans in their first year of college. The researcher examined veterans’ experiences in college, inside and outside the classroom, in order to identify which engagement activities, if any, influenced their first-term cumulative GPA. The researcher found the following seven variables to be statistically significant predictors of student veterans’ first-term GPA: (a) race, (b) the number of credit hours taken, (c) talking to faculty members about career aspirations, (d) receiving oral feedback from a faculty member about academic performance, (e) attending events on campus, (f) exercising or participating in physical activities, and (g) time spent commuting to class. Increased veteran enrollment has merited examination of the challenges student veterans have encountered at higher education institutions. This study adds to the limited body of knowledge on this topic and contributes to a future plan for the successful education of veterans who attend college.
I lovingly dedicate this work to all veterans and their families.
Acknowledgements

I would like to acknowledge all veterans who sacrificed everything for this country, especially those who changed higher education in the 1940s and 1950s; they were the insurgents of our educational system. I also want to acknowledge the following individuals who impacted me over the course of time. Thanks to my parents, who instilled in me the idea that knowledge is power and helped me through school – all of it. A special thanks to Eric, my partner, who surrendered to the long hours of reading, writing, and research. I want to acknowledge my young children, who motivate me to make things better every day. Lastly, thanks to Dr. Ron Opp, who reinforced that my research is timely and will make a difference.
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Introduction  

For years, veterans have faced an array of difficulties with reintegration - the media plays an important role in maintaining a constant relationship between veterans and the public. Sensationalized books, movies, and stories described veterans as “damaged” and “dangerous”, and have persisted for decades. Several high-profile incidents, protests, lawsuits, and movies have resulted in headlines that have positive and negative consequences for both veterans and society. For example, the record-breaking movie, American Sniper (Motion Picture, Universal Studios) propelled a huge discussion about war and heroism. The story of the late Chris Kyle showcased how the mental burdens placed on modern day servicemen, servicewomen, and their families is a reality.  

The overall direct impact on many Americans of the September 11, 2001, terrorist attacks has diminished over the past 14 years. However, one indirect impact will be felt for dozens of years to come. The way our communities and campuses embrace the soldiers who participated in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) will be a critical component in determining the length and breadth of this impact. The number of returning veterans will continue to grow, and enrollment in institutions of higher education will increase as these individuals seek higher education degrees. Unfortunately, some of these veterans have encountered problems that interfere with their efforts to succeed academically and, ultimately, to obtain a degree. There is a lack of understanding within the larger US society about the unique needs of veterans in higher education, and veterans, as a group, have earned fewer and fewer college degree (Cook & Kim, 2009). According to Herrmann, Raybeck, and Wilson (2008), a great need
currently exists for colleges and universities around the nation to become aware of the challenges veterans face during their first year of college and university life.

The GI Bill, also known as the Servicemen’s Readjustment Act of 1944, changed the way society perceived college education. This government program provided increased opportunities and the promise of upward social mobility among returning soldiers. Veterans blazed the path for others to follow, seemingly reconfiguring American colleges to fit the useful needs of its citizens in a new modern society. Since the last great advent of veterans attending college following the Vietnam War, there have been many changes in college administrative procedures, educational requirements, and American culture (Herrmann, Raybeck, & Wilson, 2008). Some noteworthy changes have included a decrease in the number of veterans seeking higher education, modified GI Bills, new GI Bills, prerequisite requirements, and the unwelcome attitudes towards veterans from faculty members, staff members, and students on campuses across the United States.

According to the 2010 National Questionnaire of Student Engagement, freshman and senior student veterans often have felt a lack of engagement and connectedness to their campuses (Talking Stick, 2011). With very little interaction from faculty members and a perceived lack of assistance, veterans often have experienced difficulty transitioning into life as a college student.

As of September 30, 2008, the U.S. Department of Veterans Affairs (2008) estimated that there were roughly 23.4 million veterans in the United States. Nearly 2 million U.S. military personnel have fought in the Afghanistan and Iraq wars (American Council on Education, 2008). According to the 2008 National Postsecondary Student Aid Study, the number of veterans choosing not to attend college today is not the same as in
previous years - this number has drastically decreased. Data from Defense Manpower indicated that more than 75% of veterans have completed some education beyond high school. Slightly more than 10% of all veterans in 2010 have attended higher education and earned a bachelor’s degree (see Figure 1).

These data suggest that a substantial number of returning veterans will seek a degree in higher education in the upcoming decades. Colleges and universities across the United States have been seeking creative solutions to improve the overall success of veterans, and to remove unnecessary educational obstacles to enhance their educational experience. One such solution has been Project SERV (Supporting Education for the Returning Veterans), a program administered from Cleveland State University that helps veterans overcome the many transitional challenges they experience in their first year of college. Other colleges and universities have addressed these transitional issues by becoming members of the Student Veterans of America. As chapter members, institutions establish student veterans groups on campus to help create a warm, positive environment for veterans. From coordinating campus activities to providing networking opportunities, these groups have been influential in helping student veterans adjust to their new environment, while also achieving academic success (Talking Stick, 2011).
Figure 1. Education levels of military personnel. Source: Data from Defense Manpower, Office of Assistant Secretary of Defense for Public Affairs.

Statement of the Problem

During a presidential summit in 2008, Serving Those Who Serve: Higher Education and America’s Veterans, veterans reported they were concerned about a number of issues, including the use of education benefits, the application of military training toward a degree program, financial aid, living accommodations, mental and emotional health support, and academics (Issue Brief, American Council on Education).

In 2009, the Informed Practice Report was issued in conjunction with another ACE Project, indicating that military students often have found it difficult to finance their education, manage time constraints, transition from military life to student life, and overcome bureaucratic obstacles.

Very limited research has been conducted on the veteran population to understand the factors that influence their academic success and other information specific to veteran involvement in higher education (Cook & Kim, 2009). Therefore, the problem addressed in this study is the lack of knowledge related to factors that influence academic success of first-year student veterans in college, as measured by their first-term cumulative GPA.
**Purpose of the Study**

The purpose of this study was to identify factors that predict the academic success of student veterans in their first year of college. The researcher explored veterans’ experiences in college, inside and outside the classroom, in order to discover which engagement activities, if any, influence their first-term cumulative GPA.

**Research Questions**

This study was guided by the following research questions:

RQ1: What demographic characteristics, if any, impact the academic success of first-year veterans?

RQ2: What between-college characteristics, if any, impact the academic success of first-year veterans?

RQ3: What academic involvements, if any, impact the academic success of first-year veterans?

RQ4: What faculty-to-student interactions, if any, impact the academic success of first-year veterans?

RQ5: What student-to-student interactions, if any, impact the academic success of first-year veterans?

RQ6: What co-curricular involvements, if any, impact the academic success of first-year veterans?

**Theoretical Framework**

There are a variety of lenses that could be used to explore veteran academic success. However, Astin’s Theory of Student Involvement and Nancy Schlossberg’s
Transition Theory provided the most appropriate frameworks to explore this phenomenon. The basic principle of Astin’s theory is that students enhance their learning when they are more involved both in academics and the social aspects of the collegiate experience. According to Astin (1984), involved students devote considerable energy to academics, spend much time on campus, participate actively in student organizations and activities, and interact often with faculty members. Astin’s theory further suggests that students play an integral role in determining their own degree of involvement in college classes, extracurricular activities, and social activities. According to Astin, involvement theory has an advantage over traditional pedagogical approaches because it focuses on the behaviors of students.

Schlossberg’s transition theory is applicable when working with diverse and multicultural student populations, especially veterans. This transition theory was created to better understand students in transition and to lead them to the help they need to cope with transition processes (Schlossberg, 1981). Practitioners working within the framework of this theory understand that students react and adapt differently to transitions at different points in life, and that everyone handles transitions in very different ways from one another. Schlossberg (1989) explained that transitions and feelings of marginality are many times interconnected; that is, students in transition often feel marginalized and that they do not matter. Marginality and self-esteem may discourage or encourage campus involvement and community development aspects of university life that have been linked to student success.

Conceptual Framework

The conceptual framework for this study was comprised of Astin’s Input -
Environment - Output (I-E-O) model. This model was used as a framework for analyzing veteran inputs, environmental characteristics, and outcomes. The primary purpose of Astin’s model is to examine the influence of an array of input and environmental variables on an outcome variable—in this case, veterans’ academic success. This model provided a framework for exploring the link between veteran’s background characteristics and the college environment that may lead to academic improvements for veterans.

Veterans’ inputs in this study consist of demographic information, such as their age, gender, ethnic identification, and year classification in college. Institutional factors consist of educational experiences, practices, programs, interventions, antecedents (e.g. exposure to institutional policies may occur before joining a college organization), personnel, curricula, instructors, facilities, institutional climate, courses, teaching styles, friends, roommates, extra-curricular activities, and organizational affiliations (Astin, 1993). The outcome variable of interest was the veterans’ cumulative grade point average at the end of their first term.

Significance of the Study

Faculty members, staff members, and veterans all over the country have expressed concern about veterans’ academic progress once they enroll in college. According to Cook and Kim (2009), student veterans have struggled in college, even though students with military backgrounds know how to focus, work, and succeed. The college experience also makes it difficult for veterans to flourish in the modern-day classroom setting (Dr. John Schupp, personal communication, April 21, 2010). Dr. Schupp reported that college officials and professors often have been unprepared to help
first-year college veterans cope with problems. For example, student veterans transition from a highly structured, team-focused environment to the primarily individualized experience of the college educational process, and instructors have not been prepared to adequately facilitate this transition. Although veterans, like all students, attend lectures, complete assignments, write term papers, and take exams, they also face a number of additional special challenges. For example, writing papers, studying, and taking exams are largely individual projects, which is an adjustment for student veterans, since they have been conditioned to be more comfortable working in groups and teams. Discovering ways to help any student succeed academically is vital, especially veterans. That is why the purpose of this study was to identify input and environmental variables that influence the academic success of first-year veterans in college.

Addressing student veterans’ concerns at higher education institutions better serves society. Higher education is a helpful transitional mechanism for student veterans as they transition from soldier to civilian. By providing student veterans with educational tools and transitional experiences through higher education, their lives could be improved, and appreciation for student veteran transitions through education can be demonstrated in the process.

Significant increases in the number of veterans attending institutions of higher education suggest that constituent groups within higher education need to learn more about student veterans. The student veteran population will continue to increase, and higher education institutions should work more diligently to address their needs. To succeed and grow, student veterans attending colleges and universities for the first time need meaningful relationships with faculty members and staff members.
Definition of Terms

For the purposes of this study, the following terms and definitions will be used:

*American Legion:* The American Legion is a mutual-aid organization of veterans of the United States armed forces chartered by the United States Congress. It was founded to benefit those veterans who served during a wartime period as defined by Congress.

*GI Bill:* Formally referred to as the Servicemen’s Readjustment Act, this Act became informally known as “the G.I. Bill,” an omnibus law that provided college or vocational education for returning World War II veterans (commonly referred to as G.I.s) as well as one year of unemployment compensation.

*GPA:* Grade point average; in this particular study, GPA was self-reported.

*I-E-O Model:* This term refers to Astin’s (1991) Input-Environment-Output model.

*Involvement Theory:* Alexander Astin’s theory stating that the degree to which students learn while in college is directly related to the amount of time and energy that students invest into the collegiate environment.

*Operation Enduring Freedom (OEF):* Operation Enduring Freedom is the official name used by the United States government when referring to the war in Afghanistan, together with a number of smaller military actions, under the umbrella of the global “War on Terror.”

*Operation Iraqi Freedom (OIF):* Operation Iraqi Freedom is the official name used by the United States government when referring to the war in Iraq. The war is also referred to as the Occupation of Iraq, the Second Gulf War, or Operation Iraqi Freedom
by the US military.

*Project SERV*: This term refers to a program created at Cleveland State University, in Cleveland, Ohio, formally referred to as Supportive Education for the Returning Veteran. It is a national model for addressing the very special needs of veterans as they readjust to civilian life.

*Student Veterans Association (SVA)*: Founded in 2008, Student Veterans of America is a coalition of student veteran groups with a presence on college campuses across the United States.

*Transition Theory*: This term refers to Nancy K. Schlossberg’s theory suggesting that college students experiencing a transition need to understand the type of transition they are going through; the context of the transition; the impact of the transition; and, most importantly, their perception of the transition.

*Veterans of Foreign Wars*: The Veterans of Foreign Wars of the United States (VFW) is a congressionally chartered war-veterans organization in the United States. Headquartered in Kansas City, Missouri, the VFW currently maintains 1.5 million members belonging to 7,644 posts, and is the largest American organization of combat veterans.

**Delimitations and Limitations of the Study**

Delimitations are constraints the researcher places on his/her study in order to narrow its scope (Creswell, 2003). This study used a quantitative approach to data analysis and collected data through an online questionnaire. The sample consisted of 301 first-year veterans in the state of Ohio attending an institution of higher education.
Before drawing conclusions about veterans’ experiences based on this study, several limitations should be considered. First, the researcher is not a veteran and has no military experience. There is a potential for bias. Bias can occur in the planning, data collection, analysis, and publication phases of research. Understanding research bias allows readers to critically and independently review the literature and avoid conclusions which are ineffective/harmful. A thorough understanding of bias and how it affects study results is essential for any research. Therefore, not being a veteran reduced the potential for researcher bias in the data analysis.

A second limitation that may have influenced the quality of this study was the data collection. The researcher collected data only from institutions of higher education in the state of Ohio. Therefore, the findings cannot be generalized to all veterans attending their first-year of college across the country. A third limitation is that the questionnaire was developed by the researcher. This questionnaire elicited student self-reported data to measure levels of involvement. Kuh (2004) observed that using self-reported data is a common research practice when assessing the quality of undergraduate education. The credibility of self-reported data as a valid data collection tool, especially self-reported grade point average (GPA), was a concern and could have influenced the overall results.

A fourth limitation was that some veterans may have been deployed or been unavailable to participate in this study. Veterans face many unique challenges in college, causing them to drop out/stop out or possibly be deployed mid-semester. This questionnaire was administered at the end of the year, which means any veteran leaving before this time was arbitrarily excluded from the study.
**Organization of the Remaining Chapters**

This study contains five chapters; each chapter covers an array of information on veterans in higher education. Chapter one presents an overview of the study that includes the (a) background, purpose, research questions, and significance; (b) theoretical and conceptual frameworks utilized; and (c) definition of terms. Chapter two provides a review of the literature that contextualizes the study of veterans in higher education. Chapter three explains the methods and data analysis procedures used to conduct this study on veterans in higher education. Chapter four presents the findings of the study by answering the research questions and addressing the purpose of the study. Chapter five provides recommendations for practice, a discussion of the findings using the theoretical and conceptual lenses, and conclusions drawn from the study. The final chapter also provides insights into the study’s implications for higher education administrators and recommendations for further research.
Chapter Two

Review of Literature

Because the purpose of this study was to identify factors that predict the academic success of veterans in college, research on this topic should be presented in an historical context. To gain a greater understanding of veterans’ experience in institutions of higher education, a thorough review of literature has been conducted. This review of literature identifies factors that predict the academic success of first-year veterans in college. However, it must be noted that, according to DiRamio et al. (2008), “The amount of scholarly literature studying student veterans is slim and dated” (p. 75). The topics discussed in this review of literature are as follows: (a) the history of the G.I. Bill, (b) today’s G.I. Bill, (c) the history of the American veteran, (d) today’s American veteran, (e) veterans in higher education and their involvement activities, (f) relationships with peers and relationships with faculty members and staff members, (g) response to veterans in higher education, and (h) challenges veterans experience in higher education. Also included in this review of literature are the results of empirical studies that have been conducted on academic success, student involvement theory, the I-E-O Model, and transition theory.

G.I. Bill

The most important tool assisting veterans with the process of re-assimilation after serving in the military was the G.I. Bill. In the short term, this Act of Congress provided veterans with basic social services, such as medical treatment and insurance. The most significant part of the G.I. Bill was the provisions it provided for education. In this one area, lawmakers vested their faith in the American education system’s ability to
bridge the gap between military and civilian life.

Many American scholars began to publish their opinions regarding the influx of veterans entering college. Articles were published on an array of topics and issues, such as how this influx of veterans might come at the expense of more qualified female applicants, the necessity of competent instructors to teach this influx of veteran students, and the fact that the G.I. Bill did not distinguish between those who can profit most by advanced education and those who may not. Many worried that the academic integrity of American colleges would be bankrupted by veterans.

After World War II, the public expected that the federal government would provide not only security for the United States, but also a host of other functions contributing to the public good. Nowhere is this better illustrated than in the Servicemen’s Readjustment Act of 1944 (known as the G.I. Bill of Rights), the greatest social-welfare program in U.S. history. A host of programs in nearly every state mirrored or extended the benefits established by the federal government. For millions of Americans, veterans, and their families, the G.I. Bill solidified the link between the public’s expectation and public policymaking.

The next two sections of this review of literature discuss the history of veterans’ benefits and how the G.I. Bill was originated. Today’s G.I. Bill is also addressed, highlighting the countless changes (and the consequences of these changes) during the course of American history.

**History of the G.I. Bill**

Veteran pensions and benefits can be traced back to Egypt, Mesopotamia, and the Aztecs. According to Mosch (1975), military veterans in those societies were granted
tracts of land based upon their years of military service. In Greece, food, housing, and education were provided for orphans of soldiers killed in war. In ancient Rome, veterans were awarded power, influence, and political respect.

Stern (1957) presented an historical framework to contextualize the concept of the citizen-soldier. He explained that the origin of the American ideal of the citizen-soldier originated in ancient Greece and Medieval Switzerland. Americans feared the tyranny of a standing army, so they adopted the model of the citizen-soldier during the American Colonial era and the early republic. This response created a poorly trained and poorly financed band of soldiers. During his presidency, George Washington argued for the necessity of the federal government funding military training for the state militias, but Congress never passed legislation to do so. Even Thomas Jefferson, an opponent of having a standing army, expressed the need of an adequately trained army. In the classic treatise Democracy in America, de Tocqueville (2007) discussed the importance of helping soldiers, through educational assistance, to ease their transition back into civilian life. Disabled veterans of the Revolutionary War, the War of 1812, and the Mexican War were given pensions and land grants. Civil War veterans were eligible for death and disability benefits as well as preference when homestead lands were offered.

The relationship between the United States military and higher education can be credited to the implementation of the Morrill Land Grant Act of 1862. Abrams (1989) argued that although it was a last-minute amendment to the original legislation, the involvement in the Civil War was the key factor in Congressman Morrill adding “...and including military tactics...” to the purpose statement in the legislation (p. 16). Abrams (1989) cited the Union’s need to fill the officer ranks that had been greatly depleted when
the Confederate states seceded. The bond between the military and higher education evolved throughout the nineteenth and the twentieth centuries. The link between the military and higher education expanded beyond the training of military personnel when the United States entered World War II. The greatest example was the creation of the Office of Scientific Research, which sponsored national defense research that produced missile technology, gun sights, bomb sights, radar, and the atom bomb.

Mosch (1975) outlined the events and policies that influenced the enactment of the G.I. Bill. One of the primary reasons for the implementation of the G.I. Bill was to avert the social disorder and high unemployment rate that occurred after World War I. At first, disabled veterans received educational benefits as part of a vocational rehabilitation program; they were given an educational stipend to aid their transition into the workforce. Mosch (1975) stated that the push to provide disabled veterans with this benefit provided the groundwork for the post-World War II legislation. In 1946, in the state of Wisconsin, approximately 5,000 veterans participated in educational programs to assist unemployed veterans.

The creation of a publication named the *Guide to Work and Benefits for Soldiers and Civil-War Workers* also influenced the G.I. Bill. Created in the United Kingdom, this publication provided a guide for veterans in their transition from military service to civilian employment. According to Mosch (1975), the two key elements of this program were (a) the focus on the importance of educating and training young people, and (b) a commitment to the education of individuals in order to benefit society as a whole.

By the end of World War II, government officials in the United States were considering an array of options to help veterans transition to civilian life. According to a
public opinion questionnaire of citizens in 1943, Mosch (1975) reported that 86% of the individuals polled favored providing educational assistance for veterans (p. 21). A commission of educators was charged with the responsibility to provide a recommended course of action, which resulted in the decision to require that the federal government be involved in an education program for all veterans. President Roosevelt sanctioned a national program to assist returning veterans by providing educational opportunities.

Although the Servicemen’s Readjustment Act was originally created to address the impending high unemployment rate of veterans in society, educational benefits were not added to the fundamental proposal. Even though there were several reauthorizations of this legislation, the original legislation changed higher education immensely. For the first time, higher education became affordable to individuals from all levels of socioeconomic status.

Mettler (2005) explained the influence of the G.I. Bill on American society by concluding that not only was there an economic impact on veterans who participated in the G.I. Bill educational program, but these citizens also contributed to the advancement of democracy and provided measurable leadership to the nation, states, and communities. Regardless of family background and social class, veterans participated in the educational program at very high rates, ranging from 44% among those from the lowest socioeconomic background to 83% among those from the highest income group (Mettler, 2005). When questioned later in life, 78% of participants in the higher education program identified the G.I. Bill as “a turning point in their lives” (Mettler, 2005, p. 87).

Mettler (2005) concluded that there has been no governmental program that influenced society to a greater degree than did the original G.I. Bill. The G.I. Bill
educational benefits program has changed during the past 60 years to accommodate the increase in the cost of higher education. Although the educational benefits have enabled a large number of veterans to pursue college degrees, the issue of the increasing cost of a college education became prevalent in the 1970s. Cohen et al. (1995) investigated the educational attainment of Vietnam-era veterans. In comparison with the veterans of World War II and Korea, Cohen et al. found that Vietnam-era veterans did not earn college degrees at the same rates as did their civilian peers.

Some of the factors contributing to this outcome included pay, educational benefits, and the stigma of the Vietnam War. Regarding pay, prior to 1973, men were drafted into military service. These soldiers’ and sailors’ salaries were very low compared to the salaries of civilians. Cohen, Warner, and Segal (1995) theorized that the low pay rates made it difficult for military personnel to save money for their future education. At the same time, the cost of education was increasing at a pace much faster than the monetary equivalent of G.I. Bill benefits. Conversely, in the civilian sector, financial aid began to make college affordable to a greater number of citizens. The final factor was the stigma of the Vietnam War. Much of the political unrest and anti-war sentiment started on college campuses across the United States. Cohen et al. (1995) argued that most likely veterans did not feel welcome on these campuses. Cohen et al. analyzed pay, educational benefits, and the stigma of the Vietnam War, “while controlling for gender, race, family, socioeconomic status, parents’ education, occupational and educational aspirations, closest friends’ educational aspiration, and ability, military service”, which resulted in an educational decrement of more than two-thirds of a year on average (p. 95). This means that if all of these factors were controlled,
for every three years of higher education a non-veteran completed, a veteran completed two. Cohen et al. (1995) concluded that in order to increase veteran graduation rates, it was necessary for the G.I. Bill educational benefits to keep pace with the increase in educational expenses.

The original G.I. Bill provided a political and educational pathway for other financial aid programs. In Teachman’s study (as cited in Bauman, 2009) that examined the educational attainment of Vietnam veterans to determine whether the Montgomery G.I. Bill had a similar impact as the original G.I. Bill. Teachman (2005) cited previous research estimating that Vietnam veterans had a lower level of educational attainment than their non-veteran peers. The need for financial aid, admissions competitiveness, and the increasing cost of credits contributed to the lower level of attainment (Teachman, 2005). Teachman concluded that “rapidly expanding educational opportunities for civilians meant that education and military service became competing (and, for the most part, mutually exclusive) activities, placing veterans at a disadvantage” (p. 66).

Very few expected much of the government’s college plan. A feature article in the August 1948 issue of the Saturday Evening Post observed that GIs at that time were rejecting educational programs in favor of employment. Many college officials expressed reservations, even opposition to the act. However, by the fall of 1945, 88,000 veterans had applied and had been accepted. By 1946, G.I. Bill college enrollments surpassed one million, and total benefits paid out by the federal government as part of the Act exceeded $5.5 million ($8 billion dollars in 2000). By 1950, of the 14 million eligible veterans, more than 2 million, or 16%, had opted to enroll in postsecondary education as part of the G.I. Bill.
Today’s G.I. Bill

Khadaroo (2008) notes that the G.I Bill has been criticized for failing to adequately fund veterans’ education. After the Vietnam War and the Korean War, G.I. Bill funding was not as generous (Schwartz, 1986). Quinland (2008) stated that the rising cost of higher education has outpaced the benefits of the G.I. Bill, especially among reservists and National Guard personnel. The G.I. Bill seemed to be too complicated because there is essentially a separate Bill for active-duty reservists, including those in the National Guard, and reservists who served at least 90 days in combat after September 11, 2001 (Marklein, 2007).

The debate over the intent of the G.I. Bill and the issue of the cost of higher education outpacing the monetary amount of compensation for veterans continued for more than 30 years (Van Dusen, 2011). In Van Dusen’s study (as cited in Asch, Fair, and Kilburn, 2000) a report compiled for the United States Department of Defense, argued for a significant change in the G.I. Bill. According to their research, the benefits provided by the G.I. Bill in 1999 were not able to keep pace with college costs. The study conducted by Asch et al. (2000) examined the impact of several legislative proposals during 1999. Each of these proposals offered significant changes in the current allocation of G.I. Bill funds. The authors made several arguments in favor of updating the G.I. Bill. One of the first arguments made was the economic impact of earning a baccalaureate degree. Asch et al. (2000) explained the college premium as follows: “The percentage difference between the hourly wage of a four-year college graduate and the hourly wage of a high school graduate rose from 40 percent in 1979 to 67 percent in 1997” (p. 5).

Asch et al. (2000) further cited the positive impact of the G.I. Bill on colleges and
universities (as cited in Van Dusen, 2011). Asch et al. reported that when veteran students receive adequate financial aid from the G.I. Bill, other students can benefit from the funds that would have otherwise been used by the veteran students. Secondly, according to Asch et al., G.I. Bill recipients are more likely to attend public institutions; therefore, these public colleges and universities benefit from increased enrollment. In addition, these researchers reported that colleges are more likely to recruit veterans because students with guaranteed payment of tuition and fees may bring increased academic potential. The final argument Asch et al. (2000) made for the positive influence of the G.I. Bill on colleges and universities was its influence on the United States military. Van Dusen (2011) stated they argued that increased educational benefits through the G.I. Bill would result in a more attractive recruitment package available for potential military personnel. For example, if benefits were able to be transferred to family members, current personnel may be motivated to reenlist.

Van Dusen (2011) stated that in an effort to alleviate the financial strain on veterans pursuing higher education, Congress passed the Post 9/11 G.I. Bill. This legislation came into effect on August 1, 2009. In a webinar presentation to university administrators across the United States, Wilson (2009) outlined the benefits that eligible veterans can receive. Eligible veterans must have served a minimum of 90 days on active duty since September 10, 2001 (Van Dusen, 2011). If veterans are discharged due to disability, they must have served for a minimum of 30 continuous days (Wilson, 2009, p. 2). Once eligibility has been determined, veterans can receive up to 36 months of benefits (Wilson, 2009, p. 5). First, recipients are granted tuition and fees equivalent to the highest amount of tuition and fees charged at a public institution in the state of enrollment.
(Wilson, 2009, p. 9). If a public university offers an aviation program that charges high fees, G.I. Bill recipients can apply that maximum rate toward tuition and fees at a private institution. Secondly, students who physically attend courses at a college or university for at least one credit hour, and are enrolled in a minimum of 51% of full-time equivalent credit hours, are awarded a housing allowance equal to payment of what an active duty E-5 soldier with dependents receives. The rate is dependent upon the geographic location of the institution of higher education (Wilson, 2009, p. 10). Third, veterans not on active duty are eligible for a maximum of $1,000 per year for books and supplies (Wilson, 2009, p. 11). Additionally, if veterans serve an aggregate total of 10 years of active duty, benefits can be transferred to dependents (Wilson, 2009, p. 12).

The final provision of the legislation has been termed the Yellow Ribbon Program. This program includes a provision that allows institutions of higher education to enter into an agreement with the federal government to pay tuition and fees not covered under the G.I. Bill (Wilson, 2009, p. 14). For example, if a private university charges $20,000 per year for tuition and fees and the maximum state award is $12,000, then the university can predetermine the amount beyond the maximum award. However, the amount must be predetermined and be the same for all veterans who participate at that institution.

Wright (2008) stated that the G.I. Bill covers 60% to 70% of cost of college. Once-a-month payout rates to veterans range from a minimum of $894 to a maximum of $1,101 (Department of Veterans Affairs, 2008). Wright highlighted political complications associated with the approval of the new G.I. Bill legislation, despite endorsement from congressional leaders and higher education constituents. Reports by
Field (2007) and Wasley (2007) noted that both National Guard personnel and reservists had been treated unfairly regarding their educational benefits. However, on a positive note, Lederman (2008) stated that many institutions view veterans as an attractive student population with ample financial resources. Military recruiters also use education benefits to increase personnel retention (Carnevale, 2006; White, 2004). There is a mutually beneficial relationship between the military and institutions of higher education that requires cooperation in order to recruit soldiers.

The Post-9/11 Veterans Educational Assistance Act of 2008 was signed into law by President George W. Bush on June 30, 2008. This bill was written and introduced by Virginia Senator Jim Webb, who introduced it on his first day in the Senate in January 2007. Webb's hope was that these benefits would expand the educational benefits for military veterans who have served since September 11, 2001. The main provisions of the act include funding 100% of a public four-year undergraduate education to a veteran who has served three years on active duty since September 11, 2001 (Background on the Post-9/11 GI Bill, Office of the Press Secretary, 2009). The act also provides the ability for the veteran to transfer benefits to a spouse or children after serving ten years. At various times the new education benefits have been referred to as the Post-9/11 GI Bill, the 21st Century G.I. Bill of Rights, or the Webb G.I. Bill.

The Ohio GI Promise seeks to make Ohio the most veteran-friendly state in the country for higher education (Ohio Higher Education, 2015). In January of 2009, the Governor Ted Strickland, wanted to encourage veterans from across the country to bring their families, leadership, motivation and maturity to Ohio's colleges and universities. This new bill allowed qualified veterans, and their dependents, from anywhere in the
country to skip the 12-month residency requirement and attend University System of Ohio schools at in-state tuition rates. This was the first plan of its kind in the United States and a great initiative for the state of Ohio because it brings in more qualified individuals looking to improve their education and professional skills – possibly improving Ohio’s workforce (Ohio Higher Education, 2015).

**The American Veteran**

The history of the student veteran is an unfinished story. Its history dates back to the relationship between the military and higher education established at the beginning of the U.S. Civil War and was further advanced through the creation of the G.I. Bill in 1944. The experiences of veterans in higher education following World War II have further shaped the college experience of today’s student veterans. The concept of the citizen-soldier, distinct to the United States, has defined student veteran experiences in the United States.

**Historical Perspective of the American Veteran**

Veterans have been a valuable and integral component interwoven into the development and growth of the United States since the founding of the country. In the beginning, as tiny settlements of colonists clung to the New England and Virginia shorelines, military personnel were often the only protection standing between survival and death (Thelin, 2004, p. 262). The status of being a war veteran quickly became a prerequisite for American leadership. Politicians and presidents used their prior military experience not only to lead the country, but also to advance it as well. As veterans created a place for themselves in American politics, veterans also gradually established a dominant place in public policy. Very early on, it was commonplace for colonies to
establish benefits for older soldiers and their families (Thelin, 2004, p. 262). In the 1630s, the Plymouth Colony decided that any soldier who was disabled in the war should be cared for by the colony for the rest of his life (Thelin, 2004, p. 262). In 1718, Rhode Island enacted a law that included medical care and an annual pension drawn from the colony’s treasury to support veterans (Thelin, 2004, p. 263).

New laws and programs developed to meet a staggering demand. The War Risk Act of 1918 provided rehabilitation for the war injured (Gambone, 2005, p. 118). Under the Rehabilitation Law of 1919, disabled veterans received tuition, books, and a subsistence allowance of between $90 and $145 per month (Thelin, 2004, p. 263). However, Gambone (2005) stated that many unmet problems remained for the millions of veterans seeking work, homes, and a means to re-assimilate after the war. Demobilization for the vast majority of veterans was abrupt, and little attention was paid to their transition back into civilian life. Beyond these steps, veterans were left alone to negotiate a postwar American climate that was characterized by a sharp economic recession that lasted until 1921, the Red Scare, the outbreak of the influenza epidemic, and a general consensus to tuck the war as far away in the public memory as possible (Gambone, 2005, p. 120).

Disgruntled over what appeared to be public apathy regarding their plight, and doubting that policymakers could successfully create an agency to represent their interests, veterans began to organize themselves. In 1919, the American Legion (AL) joined the Veterans of Foreign Wars (VFW) to create a national institution designed to protect and promote the interests of former service members (Thelin, 2004). In many important respects, the AL and VFW represented the time-honored desire for veterans to
simply congregate and enjoy the camaraderie that was rooted in common service. Meeting halls became cultural enclaves in which old soldiers could not only meet and exchange “war stories” but also, and perhaps more importantly, maintain an identity that represented one of the most profound and important aspects of their lives (Thelin, 2004). Locally, chapters of the VFW and AL became community activities; sponsored charity fundraisers, youth sports, and educational contests; and engaged in a host of other activities.

At the state and national levels, the two veterans’ groups rather quickly became political forces to be reckoned within the post-World War I era. With its headquarters in Indianapolis, Indiana, the AL, for example, maintained frequent contact with state and local chapters through telegrams, correspondence, and the American Legion Magazine. Overall, veterans formed a highly organized and integrated constituency that constituted a powerful voting bloc at nearly every level of the political process (Thelin, 2004). These former soldiers started to create what amounted to their own subculture within American society. They impacted ballots, college classrooms, and popular culture. Veterans became the first cohort of students to change American higher education.

**Today’s Student Veteran**

Livingston (2009) stated that the history of veterans’ higher education following World War II stands in contrast to the lack of research that has been conducted on student veterans today. However, Jackson and Sheehan (2005) (as cited in Livingston 2009) discussed strategies for supporting returning college veterans. Many of their 28 recommended strategies, however, involved outside sources of help, such as “Vet Centers” or simply suggested the need to engage veterans in open dialogue. The authors
also suggested that personnel at college counseling centers would need to undergo training prior to providing services for returning veterans. The suggested strategies, while useful, illuminated the lack of services and preparedness at the institutional level (Livingston, 2009).

Researchers have provided other warnings that colleges and universities have been unprepared to wholly assist student veterans today. DiRamio, Ackerman, and Mitchell (2007) noted the general lack of support for college veterans both at the governmental and institutional levels. According to Eddy, Burnett, Spaulding and Murphy (1997), student health centers, unprepared to support the mental health of student veterans, may also be ill-equipped to meet student veterans’ unique medical needs. The initiative of 25 student-formed veterans’ organizations to create the Student Veterans of America organization is a potential indicator that student veterans feel they need something more from their respective institutions (Guiles, 2008a, 2008b; Pekow, 2008; Student Veterans of America Press Release, 2008). The organization has published a website replete with documents that have been designed to help veterans manage the transition back to college (Student Veterans of America, 2008b, 2008c), as well as resources for campus administrators (Student Veterans of America, 2008a). Since the Vietnam War, leaders and scholars in higher education have recognized problematic issues facing student veterans--especially issues that represent a concern to higher education professionals. Stephens and Stenger (1973) described a challenging and unique opportunity for administrators to support this population. During the Gulf War, Caple (1991) suggested that student affairs administrators recognize student veterans as adding to the diversity of student populations. More recently, scholars and administrators have
recognized the unique transitions student veterans undergo when returning to college (DiRamio et al., 2007; DiRamio et al., 2008; Jackson & Sheehan, 2005; Livingston, 2008; Murt, 2006).

To support student veterans, it is important that faculty and staff member make a cogent effort to understand student veterans. Student veterans are students who experience many transitions--specifically, understanding the transitions of first-year students and military transitions are important in assisting this population.

**Veterans in Higher Education**

The legacy of the G.I. Bill changed the structure and culture of the American college campus. The first change involved the ways in which colleges and universities evaluated student applicants. Decisions were made quickly, even though the applicant pool was much larger than usual. Veterans did not have transcripts and college preparatory records. Since colleges needed to move students through degree programs quickly to free up space, admissions decisions began to include evaluations to allow for advanced placement, for waivers of course requirements, and for a host of other complicated decisions (Thelin, 2001, p. 263). College administrators responded by relying on proxies to take the place of secondary-school transcripts, and by considering the training and experience applicants received from the military.

The increasing enrollment levels also brought about the need for the construction of educational science labs, classroom buildings, and residence halls. It also meant that college administrators had to change the way they accommodate traditional students. The veterans were older than the traditional college age of 17 to 21, many were married and had children, and some were disabled. The collision of cultures on campus and in the
classroom certainly changed the landscape of higher education.

**Involvement Activities**

At times, the large numbers of veterans absorbed as college students elicited mixed results for campuses. Contrary to some accounts, it is not accurate to say that veterans had no interest in traditional campus activities. In varsity sports, the presence of veterans meant there were unprecedented numbers of male students trying out for teams.

Veterans also shaped curricular enrollments by voting with their feet – that is, by enrolling in courses and declaring majors in such employable fields as business administration and engineering (Thelin, 2001, p. 263). Thelin (2001) stated that at times, there was a substantial difference in perspective between G.I.s and professors (especially in the arts and sciences).

**Relationships with Faculty and Staff**

Veterans presented a unique challenge to many faculty members and how they conducted their classrooms. Generally, veterans were more experienced than traditional students, having seen parts of the world most Americans might have had difficulty finding on a map in 1940 (Thelin, 2004). As a group, veterans were older than traditional undergraduate students. Some faculty members and administrators openly worried that veterans had attained a maturity level of moral adulthood, but suffered from a lack of mental stimulation (Greenberg, 1997). The mission for faculty members and administrators was to create a curriculum that would interest veterans without alienating them (Greenberg, 1997). Faculty members needed to change their teaching approaches and engage this new type of student.

Veterans reshaped the classrooms and redrew the boundaries of college social life.
in the 1940s. Veterans’ significant participation in college study allowed for an important improvement in the intellectual capacity of the country. For example, most undergraduates at that time had little interest in the traditional culture that had characterized the pre-war campus: wearing beanies, patiently being victims of pranks, or bowing down to members of the junior and senior classes (Thelin, 2004). Unfortunately, the transformation of college prompted by veterans planted the seeds for later trouble at many institutions. The emphasis on vocational learning was a benefit to junior colleges, but it diminished the focus on the traditional humanities and liberal arts at the four-year universities (Thelin, 2004). The contemplation of abstract ideas too often became an afterthought in the headlong race to finish a degree.

**Response to Educating Veterans**

The value of educating veterans was clearly demonstrated by the success of the original G.I. Bill of Rights after World War II. If education is vital to a prosperous nation, then the current state of higher education affairs must be examined. A variety of research studies have linked societal ills such as homelessness, alcoholism, suicide, and drug abuse to mental health issues and an inability of veterans to reintegrate into civilian life (e.g., Barnes, 2008; Lederman, 2008b; Lewis & Sokolow, 2008; Madhani, 2008; O’Brien, 2008; Redden, 2008a; Storer, 2007; Sullivan, 2008; Veterans & Higher, 2008; Ward, 2008). McQuarrie and Sennot (2007) emphasized that college attendance is recognized as an important factor in addressing any mental health issues. Hence, it should not come as a surprise that education has been considered key to better assimilating veterans into the civilian world. The strongest argument for providing educational opportunities for veterans has been made by Greenberg (1997), who asserted that
education is the antidote to societal tribulations, such as unemployment and homelessness.

For every dollar spent on G.I. Bill education benefits, the nation received as much as $8 in income taxes, but the true value is incalculable. This success could be attributed then, and even more so in the 1990s, to the correlation between increased earning capacity and educational achievement (Greenberg, 1997). President George Bush (1990) in his remarks at a ceremony honoring the G.I. Bill said, “The GI Bill has special importance… to the peace and prosperity that America has enjoyed during the 46 years since it first began. The GI Bill changed the lives of millions by replacing old roadblocks with paths of opportunity. And, in so doing, it boosted America’s workforce. It boosted America’s economy, and really, it changed the life of our nation” (p. 38). Thus education serves as an effective pivot in the transition from military to civilian life. The next section examines the challenges veterans have faced in higher education.

**Challenges Veterans Experience in Higher Education**

Veterans encounter many obstacles to their education, such as lack of support services, administrative barriers, the inability to fit in with traditional college students, and difficulty transitioning from the structured military atmosphere to the oftentimes less structure life of a civilian (Lewis, 2008; Lewis & Sokolow, 2008). Another educational obstacle that veterans encounter is cultural insensitivity, which was referred to by the Student Veterans Association (SVA) president of the University of Michigan, who lamented that he stopped telling others he was a veteran after classmates asked him if he had killed anyone (Field, 2007; Lederman, 2008).

The bureaucracy involved in administering educational benefits can sometimes
become an obstacle for veterans. Because veterans’ benefits have undergone frequent changes, it has been difficult even for G.I. Bill experts to make sense of the complex regulations associated with the bill (Redden, 2008; Wasley, 2007). Likewise, many veterans have been confused about the most appropriate ways their benefits can be put to optimum use (Redden, 2008). In some cases, veterans have been provided incorrect information by the military about their education benefits upon completion of their service commitment (Wasley, 2007). Frustration with the financial aspects of education, coupled with the absence of psychological and emotional support, has resulted in decreases in retention and program completion among veterans. Alvarez (2008) stated that “many institutions have failed to make allowances for the soldiers’ special circumstances or to promote themselves as veteran friendly” (p. 16). According to Herrmann, Raybeck and Wilson (2008), a common frustration among veterans is the “denial of academic credit for military training and experience that correspond[s] to the content of their college courses” (p. 4). Another obstacle identified by Herrmann et al. is the lack of orientation programs for veterans before college matriculation. Because veterans are usually older than traditional college freshman, and many are married (Herrmann et al.), it is important for institutions to consider veterans as a unique group of students.

Palm (2008) asserted that negative attitudes of college personnel have been a core obstacle for student veterans. For example, if the pervasive campus attitude is one of condescension, pretentious empathy, or pity toward veterans, then the outcome will not be positive. Likewise, if the expectation is that veterans will arrive on campus with more problems than any other cohort of students, then the obstacle is the expectation itself.
Palm rightly stated that “the expectation that someone will behave badly can create a self-fulfilling prophecy” (p. 25). Jaschik (2008) supported Palm’s contention, pointing out a common mistake made by professors confronted with academically underprepared students. He suggested that it is a mistake to treat the unprepared students with pity, disrespect, or to consider them academically incapable of improving. Regardless of students’ academic history, professors should maintain high levels of expectations for unprepared students, since most students tend to respond to how they are treated and the expectations that are set for them. It is a mistake not to let students know that instructors expect their best effort, hard work, and to make a commitment to the class if they are behind.

Veterans, like any other student group, need support and early intervention. Higher education would be wise to focus on the needs of the veteran population, for fear that they lose a viable part of their potential student body. The next section presents the scholarly literature on academic success.

**Challenges to Academic Success**

A number of research studies have focused on factors that influence academic success. This section defines “student academic success” for the purposes of this study and gives an overview of the literature on undergraduate students.

**Defining academic access.** Academic success can be explained as excellence in all academic disciplines—in class as well as in extracurricular activities. Student academic success in this study is defined as students’ grade point average (GPA). Cumulative GPA traditionally has been recognized as a measure of academic success and is an indication of students’ academic achievement. Since the questionnaire was distributed to veterans in
the spring term, the cumulative GPA for this study is defined as the cumulative GPA through the first academic term of their first-year in college.

**Veteran and nontraditional student academic success.** The American Council on Education surveyed 723 colleges and universities in 2009 and found that 65% of the respondents who offered services to veterans and military personnel prior to September 11, 2001, had increased their emphasis on those services since that time. This increase included adding new programs for military personnel and veterans, and marketing and outreach strategies aimed at those groups (Veterans transition from war zone to classroom, Sally Holland, CNN, Monday, Dec. 19, 2011). Unfortunately, although colleges and universities have established offices and organizations to assist veterans with disabilities or who have encountered G.I. Bill difficulties, few are prepared to assist student veterans academically.

Arizona State University recently assessed its program to help veterans’ readjust to civilian and academic life, and identify ways colleges and universities could assist. Researchers concluded that by not knowing about veterans’ experiences, needs, and expectations, the challenge to develop appropriate campus programs and services becomes more difficult, ultimately jeopardizing veterans’ academic success.

Across the United States, the University of Texas at Arlington launched a weekly student veterans workshop, a series of free seminars adapted from a program offered to the general student population to help them learn about managing their time, coping with test anxiety, achieving academic success, staying healthy, and other topics related to college. The only difference between this program and the one aimed at veterans was that the latter was taught by veteran students. The IUPUI Office for Veterans & Military
Personnel has received a $49,887 grant that it will use to create a model program designed to boost the academic success of student military service members and veterans nationwide.

Another program established to help veterans succeed in college is Project SERV (Supportive Education for the Returning Veteran). This program was created at Cleveland State University, in Cleveland, Ohio, and started in the spring of 2002. It is a national model designed to address the very special needs of veterans as they readjust to civilian life.

For the purposes of this research, nontraditional students can be from any part of the country; from rural or urban settings; rich or poor; black, white, or Hispanic; 18 years old or older; unemployed, working full- or part-time, or retired; male or female; with or without dependents; married, single, or divorced; and enrolled for vocational or vocational reasons in a single course or in a degree or certificate program. Due to this heterogeneity, it was very difficult to develop a profile of a typical nontraditional student. For this reason, the focus of this definition is on the differences between traditional and nontraditional students.

Social interactions have been shown to influence self-efficacy, academic achievement, and career development in nontraditional students (Neemann & Harter, 1986). Social interactions can be described as social support or social acceptance. Perceived social support has been defined as the belief that help would be available if needed. It provides positive expectations for interactions with others, increased self-efficacy, positive self-image, and less anxiety (Weiss, 1974).

Studying nontraditional students, Chartrand (1992) found that social support from
friends and family members was an important predictor of successful college adjustment. Social acceptance is the perception of one’s ability to make and keep friends (Neemann & Harter, 1986). Social acceptance has not been studied in relation to academic performance or career development, yet, Dill and Henley (1998) reported that social acceptance is a more important variable in the lives of traditional students than in the lives of nontraditional students.

While increasing in number, nontraditional students have shown a higher rate of attrition from college than their traditional counterparts (Astin, 1975; Fetters, 1977). The reasons why these students drop out of school are not well understood. The need for additional research about the attrition of older, part-time, and commuter undergraduate students enrolled in courses for college credit has been well documented (Knoell, 1966; Lenning, Beal, & Sauer, 1980; Tinto, 1975, 1982; Zaccaria & Creaser, 1971).

**Theoretical and Conceptual Constructs**

Two theories and one model provide an analytical framework for this study: (a) Astin’s Student Involvement Theory, (b) Schlossberg’s Transition Theory and (c) Astin’s I-E-O Model.

**Student Involvement Theory**

The proposed study explored the influence of veteran involvement on their first-term cumulative GPA. Understanding the concepts and principles of Astin’s student involvement theory is important in order to understand its applicability. Alexander Astin (1984) is the leading expert in student involvement theory in higher education. He has defined student involvement as “the amount of physical and psychological energy that a student devotes to the academic experience” (p. 518). Astin has defined a highly involved
student as one who “devotes considerable energy to studying, spends time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (p. 518). Astin noted that while motivation is important, the behavior of “being involved” is critical.

Astin (1984) identified five components of student involvement theory: (a) investment, (b) degree of involvement, (c) quantitative and qualitative features, (d) quality of student involvement, and (e) institutional commitment. Involvement has been defined as the investment of “physical and psychological energy” (p. 518) and can range from planning an event on campus to studying for a midterm exam. Astin also noted that involvement varies with different experiences and at different times. The importance of quantitative and qualitative components of involvement can be reflected through test scores, hours studying, number of involvement activities, as well as the value of friendships, group interactions, and relationships with faculty members. According to Astin, the quality and quantity of involvement reflects on student development outcomes. Students’ level of involvement determines the outcome. For example, students who overextend themselves in involvement activities might experience a negative outcome. They may ignore academic work or other priorities as a result of focusing too much on those involvement activities. In addition, institutional commitment to increasing student involvement must be evident.

Astin’s theory of student involvement served as the theoretical framework for this study. As students spend more time within the university community, they have greater opportunities to interact with faculty, join student groups, become involved in government, or join a sorority or fraternity--all of which contribute greatly to the
likelihood of students returning another year and developing on a personal level. Astin, in a number of previous research studies and writings, has explained how student involvement directly impacts students’ motivation to remain in school, to apply for graduate or professional schools, and to excel academically (Astin, 1984).

I-E-O Model

Astin’s (1994) I-E-O Model served as the conceptual and data analysis framework for this study. The model seeks to identify the influence, if any, that input and environmental variables have on an outcome variable of importance to the researcher. The I-E-O model was originally conceptualized to show the effects of college on undergraduate students, and this dissertation examines the effect of involvement activities and relationships with faculty members and staff members on first-year student veterans’ academic success, as measured by their first-term cumulative GPA.

Looking at the effects of the undergraduate experience on students, Astin (1994) utilized high school GPA and SAT/ACT scores, among other factors, as input variables. These variables were controlled in the data analysis to determine the degree to which they are able to predict students’ success in college. This study also explored several additional input variables, including pre-college characteristics, such as age, branch of military, and years in service. This study differs greatly from Astin’s original work in the number of input variables examined.

Astin’s (1994) work tested the effects of student involvement, and whether certain involvement activities were significant predictors of retention and persistence through an undergraduate program of study. Through the Veteran’s Academic Questionnaire, this study utilized many of the same environmental variables that Astin utilized at the
undergraduate level. The I-E-O model has been used in other higher education contexts to study professional school students and faculty involvement (Barger, 2001; Gore, 2009).

Transition Theory

Schlossberg’s (1984) theory of adult transitions is the other theoretical footing for this study. Leibowitz and Schlossberg (1982) (as cited in Livingston 2009) noted transitions are vulnerable and uncertain periods of time for people. While transitions can be precarious, there is power in the transition process. Sargent and Schlossberg (1988) stated that transitions, not age, motivate adult behavior. Adults have a need to fit in, to create meaning, and to master new tasks, all of which leads to a need to change, which in turn leads to transition (Livingston, 2009). Transitions have been defined as events or nonevents that result in change (Schlossberg, 1984, 1990; Schlossberg, Lynch, & Chickering, 1989). More specifically, transitions alter an individual’s roles, relationships, routines, and assumptions (Chickering & Schlossberg, 2002; Schlossberg, 1984; Schlossberg, Lynch, & Chickering, 1989). Schlossberg’s (1984) original theory highlighted four types of transitions: (a) anticipated, (b) unanticipated, (c) chronic “hassles,” and (d) nonevents. Anticipated transitions are those which individuals can prepare for—e.g., going to college, enlisting in the military, and getting married. Unanticipated transitions are those out of the normal, and they typically involve crises (Livingston, 2009). Livingston believed being expelled from an institution, being deployed as a Reservist, and getting a divorce are examples of unanticipated transitions. Chronic “hassles” “…can erode self-confidence and lead to an inability to initiate necessary changes” (Schlossberg, 1984, p. 46). Concerns with health and weight, ongoing employment issues, and unstable spousal relationships are examples of such “hassles.”
Finally, transitions may take the form of a nonevent--i.e., an anticipated transition that never occurs.

Schlossberg (1984) noted, “The relationship of the individual to the event or nonevent resulting in change is central to our understanding of transitions” (Schlossberg, 1984, p. 47). The context of a transition refers to an individual’s relationship to the transition. The context takes into account the setting of the transition and whether the transition was personal, interpersonal, or communal (Schlossberg, 1984).

Elements of transition fit in all three categories – personal, interpersonal, and communal. Schlossberg (1984) argued that the degree to which a transition alters an individual’s daily life, not the event itself, is most important to the individual. Schlossberg further noted that the altered state of a person’s life affects the amount of coping resources an individual needs to deal with a transition. Livingston (2009) noted as the transition alters one’s relationships, routines, and roles, so too does the impact of the transition. This emphasizes that transitions are progressions, and the effects of transitions are noticeable over a period of time. A transition is not a quick, simple process. Individuals are left to cope with the impact of transitions. Sargent and Schlossberg (1988) and Schlossberg, Lynch, and Chickering (1989) identified four broad categories of coping resources: (a) situation, (b) self, (c) supports, and (d) strategies. These categories are commonly known as the 4 S’s. The availability of resources in the four categories often predicts how individuals cope with transitions (Sargent & Schlossberg, 1988; Schlossberg, Lynch, & Chickering, 1989). Situation resources are found in an individual’s experience within the entire context of the transition. Self resources consist of the experience, attitude, and awareness a person possesses. Supports include financial
and emotional support sources and networks. Finally, individuals must employ a number of methods of coping with the transition, which constitute the *strategies* component.

Goodman, Schlossberg, and Anderson (1997) (as cited in Livingston 2009) further explained the transition processes related to each segment of the model: (a) *moving in* constitutes an individual becoming increasingly familiar with norms and expectations, (b) *moving through* involves an individual relinquishing past roles, (c) *moving out* is a tenuous period where the individual may struggle to emotionally conceptualize the transition, and (d) *moving in* is the process of entering a new life phase. DiRamio et al. (2008) used Schlossberg’s model of adult transitions in a study on student combat veterans. The researchers established a grounded theory utilizing the four segments of the model: moving in, moving through, moving out, and moving in, as developed by Schlossberg, Lynch, and Chickering (1989). In the *moving in* phase, DiRamio et al. (2008) noted the motivations student veterans reported for joining the armed forces and student veterans’ military activation and mobilization. The *moving through* phase consisted of student veterans’ actual combat deployment. *Moving out* was characterized by student veterans’ transitioning from deployment, coming home, and preparing to return to college. Finally, student veterans underwent the college transition in the *moving in* phase, as they gained familiarity with their institution by connecting with peers, faculty members, and services offered by the institution.

DiRamio et al. (2008) (as cited in Livingston, 2009) established a holistic model for assisting student veterans. The basis of this model was the need to track student veterans as they re-enrolled. The tracking of veterans allows student services to be synchronized for the student veteran population. The key components of the DiRamio et
al. (2008) model included the following: (a) financial aid support, (b) counseling, (c) student organization involvement, (d) disability support, (e) academic advising, (f) faculty support, and (g) institutional research. Ideally, these services should operate in cooperation and conjunction with one another to wholly assist student veterans.

**Transition Issues of Veterans**

Van Dusen (2011) stated that veterans who enroll in higher education are a subgroup of nontraditional students. Due to the expansion of educational benefits provided through the post-9/11 G.I. Bill, institutions of higher education experienced a tidal wave of veterans on campuses. Institutions fought to provide resources and infrastructure to lessen transition issues and address student development needs.

This issue is not new; rather, it has existed since the inception of the original G.I. Bill. Adjustment to college life was a concern of World War II veterans. Olson (1974) listed the adjustment problems experienced by these students: “...learning to study and concentrate, finances, housing, recall of old subject matter, and being an older student” (p. 49). As important as this issue may seem, there is a fine line between (a) awareness and attentiveness to transition and (b) stigmatizing veterans.

Veterans expressed frustration and concerns as soon as they arrived on campus. Atkinson and Webb (1946) described the characteristics and expectations of the veterans who used their benefits to attend college. Atkinson and Webb conveyed concern that veterans were being labeled as problem students in other publications by researchers who had limited contact with this population. They clarified their argument by stating that these labels originated from isolated incidents at institutions involving a small percentage of student veterans, and these labels were then generalized to characterize the entire

Atkinson and Webb (1946) (as cited in Van Dusen, 2011) identified the fact that many veterans did return from war with emotional, physical and sometimes psychological problems, but with appropriate treatment, these students still had the potential to successfully maneuver through the college experience. The authors also specified that if universities made an effort to implement support services, it would simplify their transition. As far back as 1946, Atkinson and Webb attempted to illustrate the transitional issues that student veterans may experience. They were also trying to make universities acknowledge that they had the ability to accommodate the needs of their student veterans. Van Dusen (2011) noted if institutions provided accommodations for veterans, this would not have been a concession to the unrealistic demands of this particular population. Although written more than 50 years ago, the challenges student veterans faced during that era are similar to the barriers student veterans encounter today.

Van Dusen (2011) highlights a guide written to assist veterans in their transition from combat to civilian life, where Armstrong, Best, and Domenici (2006) discussed strategies that would lead veterans to success in college. First, Armstrong, Best, and Domenici suggested that veterans should ease into taking college courses. When first starting college after deployment, veterans are encouraged to take a light course load. Secondly, these authors suggested that the lack of structure in college gives student veterans the opportunity to lose focus and to think about past experiences. They recommended that student veterans be aware of this and remain focused during class lectures. Third, Armstrong, Best, and Domenici suggested that many veterans may not feel they have anything in common with classmates. Involvement in extracurricular
activities is a way to make connections or to establish relationships outside the classroom. Fourth, these authors suggested that there may be students and faculty members who do not support current military operations. According to Armstrong, Best, and Domenici, these individuals have a right to feel this way, and veterans should not take it personally. Fifth, according to Armstrong, Best, and Domenici, colleges and universities offer a variety of student services, such as counseling and tutoring. These authors encouraged student veterans to utilize all available resources. Sixth, Armstrong, Best, and Domenici suggested that student veterans should familiarize themselves with the on-campus office that specializes in veterans’ funding. Finally, not all veterans can go to college full-time and not work. Armstrong, Best, and Domenici encouraged veterans to start college on a part-time basis. Additionally, Armstrong, Best, and Domenici provided a list of “dumb questions” that civilians might ask veterans, such as, “Did you ever kill anyone?” (p. 166). The authors suggested that veterans rehearse responses to these types of questions and not take them too seriously.

Rumann and Hamrick (2009) (as cited in Van Dusen, 2011) discussed strategies to train faculty and staff in creating a receptive environment for veterans entering or reentering the educational environment. Rumann and Hamrick gave a brief historical overview of the long-standing relationship between the United States military and institutions of higher education. In the beginning of the twentieth century, the two bodies were dependent upon one another for enrollment and leadership training. By the Vietnam War, the relationship still existed, but colleges and universities were less interested in maintaining a strong relationship with veterans, and students enrolled in educational programs while being concurrently loyal to military service. During the post-World War
II era, colleges and universities were encouraged to hire faculty members and staff members who were veterans themselves. However, because of the reduced number of veterans produced when military service became voluntary, the number of university faculty members and staff members with prior military service was very small. Rumann and Hamrick (2009) addressed the potential impact of the small number of university faculty members and staff members:

If veterans are not well represented among campus faculty members and administrators, and if these individuals have little first-hand or systematic knowledge of military culture and the potential impact of wartime service on service members, it may complicate campus efforts to serve student veterans and facilitate successful transitions for veterans. (p. 30)

In 2009, Rumann and Hamrick recommended that colleges and universities be proactive in preparing for the potential influx of veterans on campuses. First, institutions of higher education should partner with organizations that effectively serve veterans in order to give students contact with individuals or organizations that may understand some of the issues they may be experiencing (Van Dusen, 2011). Secondly, institutions must effectively train faculty members and staff members through in-service or educational programs that help them disarm stereotypes and understand what veteran students have experienced, or may potentially experience, upon enrollment in college (Van Dusen, 2011). In conclusion, Rumann and Hamrick (2009) suggested that administrators “learn from and follow the lead of the current group of student service members and student veterans and to treat them as pioneers and invaluable sources of information on their own experiences, concerns, and questions” (p. 32).
Student services provided by colleges and universities are not the only areas of concern when addressing veterans’ transition to college life (van Dusen, 2011). The curriculum can also be an obstacle. Branker (2009) identified the need for college curricula to be redesigned to include the experiences of student veterans, especially those with disabilities. College faculty members strive to teach their students how to become self-sufficient problem solvers once they leave college. However, the methods used to implement this technique of teaching are one-dimensional and fail to identify the needs of students who do not fit into the role of traditional college student.

The American Council of Education released a report in 2009 that (a) released a report that discussed how institutions of higher education were currently structuring their veterans’ services and (b) also conducted a focus group of student veterans to identify their concerns (Cook & Kim, 2009). The goal of the study was to figure out how prepared institutions of higher education were to educate veterans. Cook and Kim (2009) estimated that more than half of all institutions surveyed have some sort of veterans’ service program, with public universities and community colleges being more likely to provide these services. It was also reported that the majority of institutions (a) anticipated changing their current structure during the subsequent five years through programs that would better educate faculty members and staff members about the needs of veterans and (b) pursue grant funds to improve current student services for veterans. The focus group of student veterans identified the following areas of concern: currently available campus services and programs, including a lack of flexibility of some campus programs with respect to military students’ sometimes unpredictable deployment schedule in the armed forces; uncertainty about campus recognition of civilian courses taken while in the
military and/or formal training obtained as a service member; and lack of strong guidance about navigating the bureaucratic maze of G.I. Bill education benefits (Cook & Kim, 2009). These issues resonated among student veterans, regardless of military branch or geographic location.

Summerlot, Green, and Parker (2009) (as cited in Van Dusen, 2011) explained the importance of student veteran organizations on college campuses: “Military service is a bonding experience because individual safety and security often depends on cohesive group efforts. Student veterans, once they are on campus, will look to replace the cohesion of their unit by seeking out others that had similar experiences” (p. 72). As veterans themselves, Summerlot et al. (2009) described the types of campus climates student veterans may experience. The first type of campus climate is supportive. Supportive campus climates are open to veterans and have long-standing ties to the military and veterans. The second type of campus climate is ambivalent. Ambivalent campus climates normally have a high number of non-traditional students, and veterans do not stand out. In this climate, veterans normally do not feel connected with the campus environment, and there are minimal veterans’ services available. The third and final type of campus climate is challenging. Challenging campus climates have a history of resistance to military actions. On these campuses, veterans often choose not to identify themselves and attempt to blend into the student body. Regardless of the campus climate, Summerlot et al. (2009) suggested that university administrators support the creation of veterans’ organizations. The various types of organizations can provide a “safe” environment for veterans, mentoring opportunities, and a potential voice for students who may encourage change within the policies and procedures at the university, state, or
Cook and Kim (2009) identified areas where institutions of higher education have been sufficiently meeting the needs of students, as well as areas where improvement is necessary. The areas where institutions of higher education have been sufficient include acknowledging the importance of educating veterans, offering programs and services for veterans, recognizing the experience military veterans bring into the educational environment, providing counseling services for those veterans in need, providing programs that assist students who are called to active duty, and assisting veterans in obtaining the benefits for which they may be eligible. The areas identified as deficient were assistance in transition to college, professional development opportunities for faculty members and staff members about issues that veterans may encounter, training staff to better assist students, creating a more efficient bureaucratic structure for students returning from deployment, and providing an environment for veterans to connect with other veterans.

Summary

This chapter provided a review of the literature that contextualizes the study of veterans in higher education. The topics included in this review of literature were as follows: the history of the G.I. Bill, today’s G.I. Bill, the history of the American veteran, today’s American veteran, veterans in higher education and their involvement activities, relationships with peers and relationships with faculty members and staff members, response to veterans in higher education, and challenges veterans experience in higher education. The researcher also summarized the literature on academic success, student involvement theory, the I-E-O Model, and Schlossberg’s (1984) transition theory.
Chapter Three

Methods

The purpose of this study was to identify factors that influence the academic success of veterans in their first year of college. The researcher explored veterans’ experiences in college, inside and outside the classroom, to identify which engagement activities, if any, influenced their first-term cumulative GPA. This chapter presents the research design of this study and its rationale. The sections of this chapter include the research questions, data analysis framework, the I-E-O Model, research design, participant information and selection, data collection process and questionnaire instrument, data analysis, role of the researcher, limitations and assumptions of the study, and a summary of the chapter.

Research Questions

This study addressed the following research questions:

RQ1: What demographic characteristics, if any, impact the academic success of first-year veterans?

RQ2: What between-college characteristics, if any, impact the academic success of first-year veterans?

RQ3: What academic involvements, if any, impact the academic success of first-year veterans?

RQ4: What faculty-to-student interactions, if any, impact the academic success of first-year veterans?

RQ5: What student-to-student interactions, if any, impact the academic success of first-year veterans?
RQ6: What co-curricular involvements, if any, impact the academic success of first-year veterans?

**Data Analysis Framework**

An adaptation of Astin’s I-E-O Model served as the conceptual framework and data analysis framework for this study. The I-E-O model seeks to determine whether input and environmental variables influence an outcome variable (first-year GPA). The I-E-O model was originally conceptualized for the purpose of identifying the influence of college on undergraduate students, and this study explored the effect of the first year in college on veterans’ academic success, as measured by their GPA.

Astin (1991) explored the effects of the undergraduate experience on students; he utilized high school GPA and SAT/ACT scores, among other factors, as input variables. These variables were controlled in the data analysis to identify what influence, if any, they have in predicting students’ success in college. This study also controlled for several input variables, ranging from age to marital status to years of military service. This study differs greatly from Astin’s original work in the number of input variables. In short, this study examines the influence of various college environments on student outcomes by controlling for inputs--i.e., veterans’ entering characteristics and environmental experiences.

Block 1 was comprised of student inputs. Input variables have been referred to as “the students' entering characteristics” (Astin, 1991, p. 70). The predictor variables were grouped in the following blocks in the data analysis procedure: inputs/demographics (Block 1), between college-characteristics (Block 2), students’ academic involvements (Block 3), faculty-to-student interactions (Block 4), student-to-student interactions (Block
5), and students’ co-curricular involvements (Block 6) (see Figure 2). In this study the researcher organized the pre-college independent variables into input Block 1. Pre-college variables were defined as attributes that student veterans would bring with them before they enrolled in an institution of higher education.

Environmental variables were defined as any environmental influences that student veterans were exposed to during their first year at an institution of higher education. In this study, the researcher established five different blocks when exploring the environmental variables.

Astin’s (1991) work tested the effects of student involvement and whether certain involvement activities were significant predictors of retention and persistence through an undergraduate program of study. Through the Veterans Academic Questionnaire, this study used many of the same environmental variables that Astin used at the undergraduate level.

The outcome of interest was self-reported first-term cumulative GPA. All of the demographic, involvement, and environmental predictor variables were analyzed to determine whether they exerted any influence on the academic success of first-year veterans’ GPA.
Research Design

This study used a quantitative, non-experimental design to examine the influence of demographic characteristics, between-college characteristics, academic involvements, faculty-to-student interactions, student-to-student interactions, and social involvements had on the academic success of first-year veterans. The researcher conducted a blocked form of stepwise regression analysis to determine which variables, if any, predicted the academic success of first-year veterans. The decision to utilize a quantitative study derived from the lack of research studies that have been conducted and a lack of knowledge pertaining to the research topic. The empirical investigation of this topic included statistical, mathematical, and computational techniques. The process of measurement was vital to this research because it provided the connection between empirical observations and mathematical expressions of quantitative relationships.

This study explored the influence of several independent variables, such as
veterans’ background characteristics, self-reported gains in various intellectual and personal areas, feelings about the level of institutional support, their overall satisfaction with their institution and experiences to date, and involvement in activities.

The majority of the sample size in this study represents the population of 4,000 first-year veterans returning from military service and attending colleges and universities in the state of Ohio. The researcher created a questionnaire to collect data on demographic characteristics, between-college characteristics, academic involvements, faculty-to-student interactions, student-to-student interactions, and social involvements in an effort to explore first-year college veterans’ experiences.

The decision to use involvement theory and transition theory also was based on a lack of research literature and knowledge about the research topic. The inclusion of involvement theory and transition theory adds to the base of knowledge about this topic, is relatable to other studies, and ultimately generates useful information with practical applications.

Quantitative research is appropriate in the investigation of student veterans. There is a general lack of literature and understanding regarding student veterans. The use of quantitative research allowed the researcher to add to the body of knowledge and, in this case, create an initial foundation for future studies.

**Participant Information and Selection**

The population of interest for this study was first-year college veterans in institutions of higher education in the state of Ohio. The exact number of this population is unknown, but Dr. Schupp, Director of Project SERV estimated that approximately 4,000 students receive benefits per academic year in the state of Ohio (J. Schupp,
In order to participate in this study, participants were required to meet the following criteria: (a) participants must have begun their college career, (b) participants must have been or currently affiliated with a branch of military service, and (c) participants must have completed at least one term or semester of their first year of college.

**Data Collection Process**

Data for this study was gathered through two electronic questionnaires as well as Vovici, and Qualtrics, two online questionnaire management tools. The questionnaires were sent via email to all Ohio higher education certifying officials, along with a request to forward the letter and questionnaire to first-year veterans attending their institution. Another avenue of recruitment that was used to enlist participants in this study was email communication to an array of student veteran associations and student organization listservs. Finally, the researcher sent the questionnaire out in hardcopy format to veterans’ home addresses obtained through the Certifying Officials and Dr. John Schupp. Participants were asked to recommend other potential participants and forward the questionnaire on to potential participants who met the inclusion criteria. Students received no more than five contacts from the researcher.

It is important to note that when working with the veteran population questionnaire, response rates traditionally have been low. Research has shown that veterans often lack the time to complete questionnaires or are fearful that their personal, identifiable information will fall in the wrong hands.

The researcher chose a quantitative research approach to collecting data on the
veteran population. The researcher considered taking a qualitative approach by conducting veterans’ focus groups to gather data about their experience during their first year in college. This approach would have yielded only a small number of veterans on only one campus. The researcher instead chose a quantitative approach as the most appropriate way to meet the goals of the research.

Each participant completed the electronic questionnaire online. Participants were informed that the questionnaire requires approximately 8 to 15 minutes to complete. The instrument was piloted on February 28, 2012, with 5 student veterans and non-student veterans in Indiana, California, and New York. The purpose of piloting the questionnaire was to determine the length of time required to complete the questionnaire and evaluate its practicality for use with veterans.

**Questionnaire Instrument**

Literature on student involvement and academic success informed the construction of the items that were ultimately included in the questionnaire. After developing a 25-item instrument and based on a four-point Likert-type response scale for some of the items, the researcher consulted with the RAND Corporation and the Business Analytical Center (BAC) at Bowling Green State University. RAND and the BAC enhanced the questionnaire by recommending changes to the wording of some of the items, recommending changes to the order of items, and suggesting that the questionnaire consistently use a four-point response scale.

The researcher constructed a questionnaire consisting of items related to important college initiatives, tasks, and activities as informed by relevant research and scholarly literature. The questionnaire asked veterans to self-assess their level of
involvement with academics in their first year of college. It is important that the researcher examined the degree to which first-year student veterans engaged with the academic environment and with faculty members and staff members. The researcher paid careful attention to the wording of the questionnaire to make certain the questions addressed what the researcher intended to ask regarding involvement and participation. Other questionnaire items focused on social involvements, such as athletic events; experiences in college, such as community service work; relationships with people on and off campus; and how they managed their time during their first-year in college. These items were intended to elicit information about how much time first-year veterans spend on activities that are not academically focused--activities that may influence first-term cumulative GPA.

The researcher explored the relationship first-year veteran have to the military. These non-academic variables, such as what branch of service the veteran is affiliated with, years of service, and if the G.I. Bill was utilized, may influence the first-term cumulative GPA, and ultimately the academic success of first-year veterans.

This questionnaire was based on the National Survey of Student Engagement (NSSE) and Astin’s (2001) I-E-O model. Questionnaire items were formulated using involvement theory as a theoretical basis, and items were created to explore gaps in the existing literature. The NSSE is designed to assess the extent to which college students are engaged in empirically vetted good practices in undergraduate education. The NSSE asks students questions about their level of involvement both on and off campus. The individual items in the NSSE are grouped into five categories: (a) level of academic challenge, (b) active and collaborative learning, (c) student-faculty interaction, (d)
enriching educational experiences, and (e) supportive campus environment.

Academic involvement variables assess the degree to which students engage with faculty members and the academic environment. Garland (2010) and Hawkins (2010) found strong relationships between students’ academic involvement and their academic performance. Social involvement variables refer to the time that students spend on activities that are not academically focused. These variables may influence first-term cumulative GPA, but should be blocked separately from the academic measures. Astin (1993) included these social involvement variables in his study of undergraduate student persistence.

The I-E-O model helped the researcher determine which blocks would be used to sort the different variables and how to incorporate veteran inputs and between-college characteristics into the analysis. Astin (1998) designed the I-E-O model to address the methodological problem of not randomly assigning inputs to environments. In non-experimental studies, the nonrandom assignment of participants to programs can be challenging; therefore, the researcher controlled for student input characteristics before probing the effects of the environmental factors. By entering student characteristics in the first block of the regression model, these characteristics were statistically equated, allowing for a less biased causal inference about the influence of environmental variables on first-year GPA.

Table 1

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Race</td>
</tr>
<tr>
<td>Gender</td>
</tr>
</tbody>
</table>
Table 2

Block 2: Between-College Characteristics

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Region</td>
</tr>
<tr>
<td>Level</td>
</tr>
</tbody>
</table>

Table 3

Block 3: Environmental Variables, Academic Involvements

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of questions asked in class</td>
</tr>
<tr>
<td>Class presentations</td>
</tr>
<tr>
<td>Reviewed drafts of a project/paper</td>
</tr>
<tr>
<td>Included diverse perspectives in class discussions</td>
</tr>
<tr>
<td>Used an electronic medium for academic purposes</td>
</tr>
<tr>
<td>Prepared/studied for a class</td>
</tr>
<tr>
<td>Taken a foreign language course</td>
</tr>
<tr>
<td>Studied abroad</td>
</tr>
<tr>
<td>Taken an independent study course</td>
</tr>
<tr>
<td>Variable Description</td>
</tr>
<tr>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Attended an orientation</td>
</tr>
<tr>
<td>Full-time or part-time student</td>
</tr>
<tr>
<td>Amount of credit hours</td>
</tr>
<tr>
<td>Participated in a LLC</td>
</tr>
</tbody>
</table>

Table 4

*Block 4: Environmental Variables, Faculty-to-Student Interactions*

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used email to communicate with an instructor</td>
</tr>
<tr>
<td>Talked about career aspirations with a professor</td>
</tr>
<tr>
<td>Discussed ideas from readings with a faculty member</td>
</tr>
<tr>
<td>Worked on a research project with a faculty member outside of class</td>
</tr>
<tr>
<td>Relationships with faculty members</td>
</tr>
<tr>
<td>Received oral feedback from a faculty member</td>
</tr>
<tr>
<td>Worked with a faculty member on activities other than coursework</td>
</tr>
<tr>
<td>Relationships with staff members</td>
</tr>
</tbody>
</table>

Table 5

*Block 5: Environmental Variables, Student-to-Student Interactions*

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worked with peers outside of class on a project</td>
</tr>
<tr>
<td>Discussed ideas from readings or classes with peers</td>
</tr>
<tr>
<td>Engaged in a conversation with a student who is different from the participant in terms of race, ethnicity, religious beliefs, political opinions, or personal values</td>
</tr>
<tr>
<td>Relationships with other students</td>
</tr>
</tbody>
</table>
Table 6

*Block 6: Environmental Variables, Co-Curricular Involvements*

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended a performance event</td>
</tr>
<tr>
<td>Exercised</td>
</tr>
<tr>
<td>Participated in spirituality initiatives</td>
</tr>
<tr>
<td>Examined strengths and weaknesses of their own views on a topic</td>
</tr>
<tr>
<td>Learned something that changed the way participants understand an issue or concept</td>
</tr>
<tr>
<td>Participated in community service</td>
</tr>
<tr>
<td>Created a quality relationship with community members and peers</td>
</tr>
<tr>
<td>Worked full-time or part-time</td>
</tr>
<tr>
<td>Participated in extracurricular activities</td>
</tr>
<tr>
<td>Participated in relaxing or socializing</td>
</tr>
<tr>
<td>Spent time with family/providing care for family</td>
</tr>
<tr>
<td>Time spent commuting to class</td>
</tr>
</tbody>
</table>

**Data Analysis**

The data were analyzed using a blocked form of stepwise multiple regression analysis. The researcher used the Business Analytical Center at Bowling Green State University to help analyze the data. The BAC reviewed the researchers’ questionnaire items and assisted with the data analysis. The researcher worked closely with a specialist to review the data collection and data analysis processes to ensure accurate representation of the data and the results.

**Role of the Researcher**

The researcher in this study has worked as a student affairs practitioner for 11 years. In particular, the researcher has served as an adjunct faculty member and worked in residential services, judicial affairs, leadership programs, assessment, and new student programs. The researcher is dedicated to the student affairs profession, believes in the
idea of holistic education, and trusts that student affairs services can be used to assist any population.

The researcher is not a military veteran, but has many family members who are veterans. The researcher also has close friends and interacts with a number of students who engaged in combat operations in Iraq and Afghanistan. Many of these individuals talk about the difficulty they had transitioning during their first-year of college and the challenges they faced with academic adjustments. Conversations and interactions with an array of those individuals created the motivation for this research.

Assumptions and Limitations

The researcher conducted this study based on several underlying assumptions about the data and study. First, it was assumed that the data collected by the researcher would be provided by a sufficient number of veterans--i.e., sample size would be sufficient. Secondly, it was assumed that veterans responded honestly to all questionnaire items pertaining to their first-year experience, especially regarding their first-term GPA. Third, the researcher assumed that not every veteran participating in this study aspired to earn a high grade point average as a measure of academic success. Some veterans may simply want to enroll in one class in a particular discipline for enrichment purposes and/or to learn a trade.

Limitations are inherent in all scholarly research projects, and this project was no exception. One limitation of the study was that the researcher failed to specifically ask what involvement activities in particular student veterans would likely prefer or participate in during their college experience, and whether this participation would influence their GPA.
Summary

In summary, the purpose of this study was to identify factors that influence the academic success of veterans in their first year of college. Returning war veterans face many decisions, such as where to attend college, what major will be profitable, and more simply whether to return to college for another year. Economic times and college enrollments have become more of a challenge for universities; faculty members and administrators need to understand why some veterans succeed and graduate, while others struggle. Institutions that understand why first-year veterans struggle academically may be able to change policies and practices in ways that enhance the academic success of veterans. This study provides faculty members, staff members, and policy makers with important information about which policies and practices can enhance the success of their first-year veterans in higher education.

This chapter explained and justified the quantitative approach and research design used in this study and explained the selection of the participants. The primary research questions were provided. The researcher described the population, how members of the sample were recruited, the data collection procedures, and data analysis procedures. The role of the researcher was noted, and the researcher’s biases were clearly stated. Finally, the researcher presented the assumptions and limitations of this study.
Chapter Four

Results

Colleges and universities across the country need to seek creative solutions to improve the overall success of veterans and to remove unnecessary educational roadblocks to enhance their collegiate experience. The purpose of this study was to identify factors that influence the academic success of veterans in their first year of college. The researcher focused on first-year veterans’ levels of involvement and academic success in colleges and universities in the state of Ohio.

This chapter presents the results of the data analysis from an electronic questionnaire taken by veterans. This research explores veteran’s experiences in college, inside and outside of the classroom, and establishes what engagements and activities, if any, influence their first-year cumulative GPA. This study applies Astin’s Theory of Student Involvement to explore a veteran’s level of engagement on campus, which is based on the assumption that the more involved students are with their college education, the more their talents will be developed, and uses Astin’s Input-Environment-Output conceptual framework. The variables are illustrated in Tables 1-5, in Chapter 3. They are organized into six blocks in the order in which they were entered into the backward stepwise regression. The first block contains the inputs/demographics characteristics, the second block contains between-college characteristics, and blocks three through six pertain to the environmental characteristics, which include anything a veteran student is exposed to during their first-year at an institution of higher education. This chapter reviews the data collection and response rates, explores the descriptive characteristics of the respondents, the dependent variable, and analyzes the findings of the backward
Data Collection and Response Rates

A total of 301 veterans took the web-delivered questionnaires delivered through Vovici and Qualtrics, both online questionnaire management tools, from May 2012 through April 2013. The questionnaire was sent via email to all Ohio higher education certifying officials, requesting them to forward the letter and questionnaire to first-year veterans attending their institutions. Another avenue of questionnaire recruitment used in this study was email communication to an array of Student Veterans of American Association listprocs. The first group (Group 1) included 132 responses from veterans enrolled in a higher education in Ohio, who received the questionnaire through a certifying official at their institution. The second group (Group 2) included 169 veterans across the country, who received the letter and questionnaire through the Student Veterans of American Association listproc.

Table 7

Questionnaire Results – Response Rate

<table>
<thead>
<tr>
<th></th>
<th>Emails</th>
<th>Group 1 (n=132)</th>
<th>Group 2 (n=169)</th>
<th>Total (n=301)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>1st</td>
<td>43</td>
<td>33</td>
<td>112</td>
<td>155</td>
</tr>
<tr>
<td>2nd</td>
<td>89</td>
<td>61</td>
<td>57</td>
<td>146</td>
</tr>
<tr>
<td>Total Response</td>
<td>132</td>
<td>61</td>
<td>169</td>
<td>301</td>
</tr>
</tbody>
</table>

A letter (Appendix B) requesting participation in the study, along with the link to the questionnaire, was emailed twice over the course of ten months to all certifying officials who sent the information to veterans. The results of the first emailing resulted in a 51% response rate – a total of 132 respondents. Since these mailings did not provide a
sufficient number of respondents, a second email message to the Student Veterans of American Associations was sent out twice as well. A new introductory letter (Appendix C), which emphasized the value of the veteran’s response to the questionnaire, was prepared in order to encourage a larger response rate. A second round of emails resulted in a 49% response from the remaining candidates – for a total of 169 cases. The combination of the two lists and four emails resulted in 301 responses.

The questionnaire asked all candidates to assess their level of involvement concerning academics in their first-year of college. The researcher examined the degree to which a first-year veteran engages with the academic environment and with faculty and staff. Other questions inquired about social involvements (attending an athletic event), experiences in college (community service work and relationships with people on and off campus), and how veterans managed their time during their first-year in college. The research was designed to disclose how much time first-year veterans spent on activities that are not academically focused.

**Data Preparation**

The first web-delivered questionnaire was created and released in Vovici; questions in the second web-delivered questionnaire were designed differently in Qualtrics. The researcher recoded the questionnaires individually, and combined the results from each questionnaire into one dataset. In the process of data cleaning, it was discovered that there were several invalid cases in the questionnaires. These participants completed the first two to three questions and discontinued taking the questionnaire. Those invalid cases were eliminated, leaving the number of questionnaires at 278. From the existing 278 questionnaires, 32 participants had missing cases in their questionnaire
responses. With the remaining questionnaires, the researcher replaced missing data with the mean values for all variables except for the dependent variable of cumulative GPA. A total of 246 questionnaires remained; however, any questionnaires missing the college GPA (response variable) were eliminated from the study (total of 43 respondents). The total and final number of questionnaires used for this study was 205 (n= 205). Dummy variables were created and recoded for the categories in the race/ethnicity variable (American Indian, Asian, Black, Hispanic, Bi-racial, and White) and marital status (single, married, divorced, separated). The data from these questionnaires were used in the blocked form of stepwise regression analysis and were the basis of the findings of this study. The degree of freedom is 204. The researcher ran a correlational analysis, and removed any independent variables that were related to one another at the p < .9 level or higher. The backward stepwise regression allowed the researcher to eliminate correlating variables amongst each other.

The Statistical Product and Service Solutions (SPSS) statistical software package (Statistics GradPack 21.0 2012) was used to support this study’s stepwise multiple regression data analysis. The advantages and limitations of a stepwise multiple regression have already been addressed in Chapter Three, along with the measures that were taken in this study to minimize concerns over limitations of the stepwise regression technique.

**Descriptive Characteristics of the Population**

The variables in block 1 comprised the input section of the I-E-O model that included questions pertaining to age, race, gender, marital status, number of children, children living at home, high school degree, high school GPA, branch of military, sub branch, years of service, reason for leaving, rank at discharge, use of the GI Bill, and
ROTC involvement. These variables were used in order to determine if these personal characteristics had any influence on predicting the impact of academic success of the veteran in their first-year of college. The race variable emerged as significant in the demographics block as impacting academic success.

Table 8

*Inputs – Veteran Demographics*

<table>
<thead>
<tr>
<th></th>
<th>Total (n=205)</th>
<th>Total (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 20</td>
<td>12</td>
<td>6%</td>
</tr>
<tr>
<td>21-24</td>
<td>11</td>
<td>13%</td>
</tr>
<tr>
<td>25-28</td>
<td>38</td>
<td>20%</td>
</tr>
<tr>
<td>29-32</td>
<td>57</td>
<td>30%</td>
</tr>
<tr>
<td>Older than 33</td>
<td>11</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>156</td>
<td>77%</td>
</tr>
<tr>
<td>Female</td>
<td>46</td>
<td>23%</td>
</tr>
<tr>
<td>Transgendered</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>114</td>
<td>56%</td>
</tr>
<tr>
<td>Non-White</td>
<td>88</td>
<td>44%</td>
</tr>
<tr>
<td><strong>ROTC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>13</td>
<td>7%</td>
</tr>
<tr>
<td>No</td>
<td>187</td>
<td>94%</td>
</tr>
<tr>
<td><strong>GI Bill</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>178</td>
<td>87%</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Dependents</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>87</td>
<td>44%</td>
</tr>
<tr>
<td>1 child</td>
<td>55</td>
<td>28%</td>
</tr>
<tr>
<td>2 children</td>
<td>41</td>
<td>21%</td>
</tr>
<tr>
<td>3 children</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>4 children</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>5 children</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>25</td>
<td>13%</td>
</tr>
<tr>
<td>Married</td>
<td>98</td>
<td>50%</td>
</tr>
<tr>
<td>Divorce</td>
<td>50</td>
<td>25%</td>
</tr>
<tr>
<td>Separated</td>
<td>20</td>
<td>10%</td>
</tr>
</tbody>
</table>
Table 7 shows the distribution of the sample population by age, gender, race, participation in ROTC, use of the GI Bill, number of dependents, marital status, branch of service and years of service. The sample population was made up of a majority of Caucasian and African American male veterans, between 29-32 years of age with no ROTC affiliation. The sample of veterans were using some form of the GI Bill to finance their college education, served for more than 4 years mostly in the Navy and Army, and were married. Veterans have customarily been considered non-traditional college students, considering that the typical traditional-age college student is 18-24 years of age, which corresponds with the literature on nontraditional students. To summarize, the majority of the respondents were white males between 29-32 years of age receiving some form of the GI Bill to fund their college education.

**Dependent Variable**

The first-term college GPA was selected as the dependent variable. Both individual and institutional forces affect this factor. We already know that variables such
as high school academic achievement and motivation can affect college GPA (Astin, 1997; Bean, 1985; Fischbach, 1990; Pascarella & Terenzini, 1977; Spady, 1970; Tinto, 1975). We also know that academic integration, informal faculty contact, and academic advising affect GPA (Pascarella, 1980; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1978; Spady, 1970). Therefore, GPA, the independent variable, does not belong as part of another factor and should stand alone. However, it requires a two-directional arrow to indicate that other factors play a role in GPA, but GPA also plays a role in others factors (Pascarella & Chapman, 1983; Pascarella & Terenzini, 1978). For the purposes of this study, the researcher is presuming a one-directional influence of college environment variables on cumulative GPA.

![College GPA Frequency Table](image)

*Figure 4. College GPA Frequency Table.*

Figure 4 shows the range of college GPAs for veterans attending college, with a normal frequency distribution and mean of 1.7.

In summary, the college GPA serves as a continuous dependent variable, with a
normal frequency, a mean of 1.7 and a standard deviation of 14.68.

Analysis and Findings

Regression Analysis

The previous section covered the descriptive statistics, giving the researcher a composite picture of the veterans and their experience with the military. To continue the analysis, a blocked form of stepwise regression was used to determine which variables, if any, influenced the academic success of student veterans in college. The college GPA was used as the dependent variable.

Prior to beginning the regression analysis, the researcher examined the predictor variables individually for their bivariate correlation with the dependent variable. A two-tailed Pearson $r$ correlation coefficient was computed for each predictor to assess the strength of its linear association with the criterion variable. Seven of the 51 predictors were found to have a significant ($p < .05$) bivariate correlation with the criterion variable, and thus were included in the regression model. The Pearson $r$ correlations between each of the potential variables and the criterion variable are shown in the Research Question Analysis section.

As described in Chapter Three, the questionnaire data were analyzed using a blocked form of regression analysis, a form of stepwise linear multiple regression in which predictor variables were entered by blocks aligned with the research questions above. In this study, stepwise regression was used to identify the most noteworthy set of predictor variables that were most effective in predicting what impacts the academic success of first-year veterans. Entered in block sequence, variables were added to the regression equation one at a time, using the statistical criterion of maximizing the $R^2$ (the
percentage of variance in the criterion variable explained by the regression model).

Predictor variables entered the equation if they met the $p$-value entry criteria of .05 and remained until they exceeded the $p$-value removal criteria of .10. Successive rounds of regression were run until the addition of variables no longer made a statistical improvement in $R^2$. In other words, the variables were entered in a stepwise fashion until all of their predictive power was exhausted, at which point the process was ended.

A backward stepwise regression model was used for this study. This method is appropriate when there are a large number of independent variables. This allows the researcher to control for the influence of the input variables. With each step, the model calculates an $F$ statistic, which is equal to $T$ squared, and variables with the lowest $F$ values are eliminated (George & Mallery, 2000). Backward elimination, which involves starting with all candidate variables, testing the deletion of each variable using a chosen model comparison criterion, deleting the variable (if any) that improves the model the most by being deleted, and repeating this process until no further improvement is possible. In this manner, the variables that are the weakest predictors of the dependent variable were dropped as additional blocks of variables are added into the equation. The procedure continues until the final result produces the optimum model with the most significant variables.

The variables were arranged in blocks, and were entered individually into the regression, so that the researcher could determine what influence, if any, the predictor variables had on the criterion variable. A level of $p < .05$ was used to determine the significance of each predictor variable. The variables that emerged as significant predictors of academic success are presented in Table 8. The significance was adjusted
for each variable - correlations between the independent variables and the dependent variables could determine the strength and direction of the relationship. The regression included 8 steps in Table 8. The first column indicates the name of the variable that entered at each step. The second column identifies the block of the variable associated with each step. The third column (Zero r) displays the Pearson r correlation between each predictor variable and the criterion variable. The fourth column (Step B) indicates the standardized beta coefficient of the predictor variable when it first entered the regression equation. The fifth column (Final β) shows the standardized beta coefficient for each predictor’s variable at the final step of the regression model. The standardized beta coefficient (β) indicated the relative strength of the unique contribution that each predictor in the regression model to explain the variance in the criterion variable, when controlling for variance explained by all of the variables in the model. The sixth column (F) denotes the F-value. When paired with a p-value, the F-value tests the null hypothesis (that the predictor variables in the model have no significant relationship with the criterion variable).
Table 9

**Significant Predictor Variables of First-Term GPA – Final Regression Model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Block</th>
<th>r</th>
<th>Step B</th>
<th>Final β</th>
<th>Final F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race (White)</td>
<td>Demographics</td>
<td>-.59</td>
<td>-.59</td>
<td>-.28**</td>
<td>106.86</td>
</tr>
<tr>
<td>Attended a public school</td>
<td>Between College Characteristics</td>
<td>-.16</td>
<td>-.09</td>
<td>-.13</td>
<td>57.01</td>
</tr>
<tr>
<td>Amount of credits hours taken</td>
<td>Academic Involvements</td>
<td>-.50</td>
<td>-.21</td>
<td>-.14</td>
<td>42.59</td>
</tr>
<tr>
<td>Talked to faculty about career aspirations</td>
<td>Faculty to Student</td>
<td>-.40</td>
<td>-.15</td>
<td>-.14</td>
<td>34.37</td>
</tr>
<tr>
<td>Received oral feedback from faculty about academic performance</td>
<td>Faculty to Student</td>
<td>0.14</td>
<td>.14</td>
<td>.16</td>
<td>29.30</td>
</tr>
<tr>
<td>Attended an art exhibit, play, dance, musical, theater, athletic event, or other performance</td>
<td>Co-Curricular</td>
<td>-.39</td>
<td>-.14</td>
<td>-.18</td>
<td>25.48</td>
</tr>
<tr>
<td>Exercised or participated in physical activities</td>
<td>Co-Curricular</td>
<td>.22</td>
<td>.13</td>
<td>.13</td>
<td>23.03</td>
</tr>
<tr>
<td>Time spent commuting to class</td>
<td>Co-Curricular</td>
<td>-.29</td>
<td>-.12</td>
<td>-.11</td>
<td>21.04</td>
</tr>
</tbody>
</table>

*Note.* N = 205; $\bar{x} = 1.7$; $sd = 14.68$; $R^2 = .46$; Adjusted $R^2 = .44$ *p < .05; **p < .01

**Review of the Research Questions**

The following research questions were addressed in this study of what impacts the academic success of first-year veterans.

RQ1: What demographic characteristics, if any, impact the academic success of first-year veterans?

RQ2: What between-college characteristics, if any, impact the academic success of first-year veterans?

RQ3: What academic involvements, if any, impact the academic success of first-year veterans?

RQ4: What faculty-to-student interactions, if any, impact the academic success of first-year veterans?
RQ5: What student-to-student interactions, if any, impact the academic success of first-year veterans?

RQ6: What co-curricular involvements, if any, impact the academic success of first-year veterans?

Results of Analysis by Block

Block 1 – Input Variables

The study’s first research question asked if any demographic characteristics impact the academic success of first-year veterans. The demographic variables entered in block 1 are any pre-college variables that a student veteran would bring with them before they enroll in an institution of higher education. These variables included their age, race, gender, marital status, number of children, children living at home full time, high school degree attainment, high school GPA, branch of military, sub branch of Military Occupational Specialty (MOS), years of service, reason for leaving, rank at discharge, use of the GI Bill, and ROTC involvement. The race variable (white) emerged as a negative predictor of a veteran’s academic success ($\beta = -.28, p < .01$). This was the single strongest beta weight among all the predictors and alone accounted for 34% of the total variance in the criterion variable explained by the final regression model. This finding shows that non-white veterans tend to have a lower GPA than white students while attending a college or university. Table 9 lists all predictor variables in the input block and the predictive power (final step beta-weight).

Table 10

Predictors of Veteran Academic Success and Correlation Coefficient, Input Block

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.331**</td>
</tr>
</tbody>
</table>
Predictor Variable | R
---|---
Non-White | -.592**
Gender | -.042
GI Bill | -.001
Number of children | .106
Children living at home full time | -.274
High school degree | .041
High school GPA | .145
Years of service | -.127
ROTC involvement | -.103
Single | .077
Married | -.164
Divorced | -.237
Separated | .109

Note: N = 205; x = 1.7; sd = 14.68; R² = .46; Adjusted R² = .44 p < .05; **p < .01

Block 2 – Environmental Variables

Table 11

Institutions of the Study

<table>
<thead>
<tr>
<th>School</th>
<th>Region</th>
<th>Control</th>
<th>Level</th>
<th>Frequency</th>
<th>% Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowling Green State University</td>
<td>Ohio</td>
<td>Public</td>
<td>4-Year</td>
<td>82</td>
<td>49%</td>
</tr>
<tr>
<td>College of Mount St. Joseph</td>
<td>Ohio</td>
<td>Private</td>
<td>4-Year</td>
<td>14</td>
<td>8%</td>
</tr>
<tr>
<td>Columbus College of Art and Design</td>
<td>Ohio</td>
<td>Private</td>
<td>2-Year</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Defiance College</td>
<td>Ohio</td>
<td>Private</td>
<td>4-Year</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Kent State University</td>
<td>Ohio</td>
<td>Public</td>
<td>4-Year</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>University of Mount Union</td>
<td>Ohio</td>
<td>Private</td>
<td>4-Year</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Muskingum University</td>
<td>Ohio</td>
<td>Private</td>
<td>4-Year</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Ohio State University at Lima</td>
<td>Ohio</td>
<td>Public</td>
<td>4-Year</td>
<td>33</td>
<td>20%</td>
</tr>
<tr>
<td>Ohio State University at Marion</td>
<td>Ohio</td>
<td>Public</td>
<td>4-Year</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>University of Dayton</td>
<td>Ohio</td>
<td>Public</td>
<td>4-Year</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>University of Northwestern Ohio</td>
<td>Ohio</td>
<td>Private</td>
<td>4-Year</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Central Ohio Technical College</td>
<td>Ohio</td>
<td>Public</td>
<td>2-Year</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Eastern Gateway Community College</td>
<td>Ohio</td>
<td>Public</td>
<td>2-Year</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Zane State College</td>
<td>Ohio</td>
<td>Public</td>
<td>2-Year</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>University of San Francisco</td>
<td>California</td>
<td>Public</td>
<td>4-Year</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Lakeshore Technical College</td>
<td>Ohio &amp; Wisconsin</td>
<td>Public</td>
<td>2-Year</td>
<td>4</td>
<td>2%</td>
</tr>
</tbody>
</table>

The study’s second research question asked if any various institutional (between-
college) characteristics impact the academic success of first-year veterans. Region (institutions in Ohio), level (4-year institution), and control (public institution) characteristics for each school were grouped together in the second environmental block. The control variable, public, was found to be a significant negative predictor of a veteran’s academic success ($\beta = -0.13, p < .05$). This finding indicates that veterans who attended a public university tend to have a lower GPA. Table 10 indicates all of the institutions of higher education that participated in this study. Table 11 showcases the between-college characteristics of institutions that participated in this study.

Table 12

*Between-College Characteristics*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region (In Ohio)</td>
<td>153</td>
<td>75%</td>
</tr>
<tr>
<td>Region (Outside of Ohio)</td>
<td>27</td>
<td>13%</td>
</tr>
<tr>
<td>Control (Public)</td>
<td>142</td>
<td>69%</td>
</tr>
<tr>
<td>Control (Private)</td>
<td>16</td>
<td>8%</td>
</tr>
<tr>
<td>Level (4-Year)</td>
<td>155</td>
<td>76%</td>
</tr>
<tr>
<td>Level (2-Year)</td>
<td>14</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Block 3 – Environmental Variables**

The third research question asked if any academic involvements impact the academic success of first-year veterans. Academic involvements were grouped into an environmental block (block 2), which included variables that the student veteran was exposed to during their first-year at an institution of higher education. This block included variables such as frequency of questions asked in class, class presentations, reviewed drafts of a project/paper, included diverse perspectives in class discussions, prepared/studied for a class, taken a foreign language course, studied abroad, taken an independent study course, prepared/studied for class, attended an orientation, full-time or
part-time student, amount of credit hours, graduated from high school, and high school GPA. The amount of credit hours taken emerged as a significant negative predictor variable (β = -0.14, p < .05). This finding indicates that a veteran who takes more credit hours per term (over 12-15 credit hours) is likely to have a lower GPA. Table 12 lists all predictor variables in the environmental block and the predictive power (final step beta-weight).

Table 13

Predictors of Veteran Academic Success and Correlation Coefficient, Environmental Block, Academic Involvements

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of questions asked in class</td>
<td>.019</td>
</tr>
<tr>
<td>Class presentations</td>
<td>-.272**</td>
</tr>
<tr>
<td>Reviewed drafts of a project/paper</td>
<td>.224**</td>
</tr>
<tr>
<td>Included diverse perspectives in class discussions</td>
<td>-.183**</td>
</tr>
<tr>
<td>Used an electronic medium for academic purposes</td>
<td>.020</td>
</tr>
<tr>
<td>Prepared/studied for a class</td>
<td>-.371**</td>
</tr>
<tr>
<td>Taken a foreign language course</td>
<td>.079</td>
</tr>
<tr>
<td>Studied abroad</td>
<td>-.115</td>
</tr>
<tr>
<td>Taken an independent study course</td>
<td>.068</td>
</tr>
<tr>
<td>Attended an orientation</td>
<td>.139</td>
</tr>
<tr>
<td>Full time or part time student</td>
<td>-.070</td>
</tr>
<tr>
<td>Amount of credit hours</td>
<td>-.505</td>
</tr>
<tr>
<td>Participate in a LLC</td>
<td>-.192**</td>
</tr>
</tbody>
</table>

*Note. N = 205; x = 1.7; sd = 14.68; R² = .46; Adjusted R² = .44 p < .05; **p < .01*

**Block 4 – Environmental Variables**

The third research question asked what faculty-to-student interactions impact the academic success of first-year veterans. The variables in this environmental block asked if student veterans used email to communicate with an instructor, talked about career aspirations with a professor, discussed ideas from readings with a faculty member, worked on a research project with a faculty member outside of class, relationships with
faculty members, received oral feedback from a faculty member, worked with a faculty member on activities other than course work, and their relationships with staff members. Two environmental variables--*talked to faculty about career aspirations* and *received oral feedback from a faculty about academic performance* -- were tested and proved to be significant variables. *Talked to faculty about career aspirations* was found to be a significant negative predictor of veterans’ academic success (β=-.14, p < .05). This finding indicates that a veteran might not have career aspirations or career goals in their first-year; some veterans are just taking a course to learn a new skills, etc. Therefore, this finding indicates that veterans who speak with faculty about their career aspirations have lower GPAs. The variable *received oral feedback from faculty about academic performance* was found to be a significant predictor of a veteran’s academic success (β=-.16, p < .05). This finding indicates that a veteran has a higher GPA when they receive oral feedback from a faculty member regarding their performance on class projects, papers, exams, etc. Table 13 lists all predictor variables in the environmental block and the predictive power (final step beta-weight).
Table 14

*Predictors of Veteran Academic Success and Correlation Coefficient, Environmental Block, Faculty-to-Student*

<table>
<thead>
<tr>
<th>Predictors Variable</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used email to communicate with an instructor</td>
<td>.082</td>
</tr>
<tr>
<td>Talked about careers aspirations with a professor</td>
<td>-.403**</td>
</tr>
<tr>
<td>Discussed ideas from readings with a faculty member</td>
<td>-.179</td>
</tr>
<tr>
<td>Worked on a research project with a faculty member outside of class</td>
<td>-.011</td>
</tr>
<tr>
<td>Relationships with faculty members</td>
<td>.214**</td>
</tr>
<tr>
<td>Received oral feedback from a faculty member</td>
<td>.140</td>
</tr>
<tr>
<td>Worked with a faculty member on activities other than course work</td>
<td>-.190**</td>
</tr>
<tr>
<td>Relationships with staff members</td>
<td>.074</td>
</tr>
</tbody>
</table>

*Note. N = 205; x = 1.7; sd = 14.68; R² = .46; Adjusted R² = .44 p < .05; **p < .01*

**Block 5 – Environmental Variables**

The fifth research question asked what student-to-student interactions impact the academic success of first-year veterans. This block included questions about how often student veterans worked with peers outside of class on an assignment, discussed ideas from readings or classes with others outside of class (student, peers, family, etc.), engaged in a conversation with a student who is different from them in terms of their race, ethnicity, religious beliefs, political opinions, or personal values, and their relationships with other students. None of these variables proved to be significant predictors of the dependent variable. Table 14 lists all predictor variables in the environmental block and the predictive power (final step beta-weight).
Table 15

*Predictors of Veteran Academic Success and Correlation Coefficient, Environmental Block, Student-to-Student*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worked with peers outside of class on an assignment</td>
<td>-.132</td>
</tr>
<tr>
<td>Discussed ideas from readings or classes with others outside of class</td>
<td>.261**</td>
</tr>
<tr>
<td>Engaged in a conversation with a student who is different from them in</td>
<td>.175</td>
</tr>
<tr>
<td>terms of their race, ethnicity, religious beliefs, political opinions, or</td>
<td></td>
</tr>
<tr>
<td>personal values</td>
<td></td>
</tr>
<tr>
<td>Relationships with other students</td>
<td>.330**</td>
</tr>
</tbody>
</table>

*Note. N = 205; x = 1.7; sd = 14.68; R² = .46; Adjusted R² = .44 p < .05; **p < .01*

**Block 6 – Environmental Variables**

The sixth research question sought to determine what co-curricular involvements impact the academic success of first-year veterans. The regression results showed that a total of two co-curricular variables were predictors of the criterion variable; however out of the two variables, one was a negative predictor. This block includes how often student veterans attend a performance event, exercise, participate in spirituality initiatives, examine strengths and weaknesses of their own views on a topic, learns something new that changed the way a student veteran understands an issue or concept, participate in community service, participate in a Living and Learning Community, create a quality relationship with community members and peers, preparing/studying for class and/or an academic involvement, working FT/PT, participating in extracurricular activities, participating in relaxing or socializing, spending time with family/providing care for family, and commuting to class. The *exercising or participating in physical activity* variable emerged as a positive predictor of veterans’ academic success (β = .13, p < .05).
This finding indicates that veterans who participate in exercising or physical activities are more likely to have a high GPA than those who do not. The time spending commuting to class variable also emerged as a significant negative predictor of a veteran’s academic success ($\beta = -0.11, p < 0.05$). This finding indicates that veterans who spend more than 3-5 hours commuting to campus/class have a lower GPA. Table 15 lists all predictor variables in the environmental block and the predictive power (final step beta-weight).

Table 16

*Predictors of Veteran Academic Success and Correlation Coefficient, Environmental Block, Co-Curricular*

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attends a performance event</td>
<td>-.395**</td>
</tr>
<tr>
<td>Exercises</td>
<td>.224**</td>
</tr>
<tr>
<td>Participates in spirituality initiatives</td>
<td>-.252**</td>
</tr>
<tr>
<td>Examine strengths and weaknesses of your own views on a topic</td>
<td>.314**</td>
</tr>
<tr>
<td>Learns something that changed the way you understand an issue or concept</td>
<td>-.021</td>
</tr>
<tr>
<td>Participates in community service</td>
<td>.074</td>
</tr>
<tr>
<td>Created a quality relationship with community members and peers</td>
<td>.201**</td>
</tr>
<tr>
<td>Working FT/PT</td>
<td>-.124</td>
</tr>
<tr>
<td>Participating in extracurricular activities</td>
<td>-.209**</td>
</tr>
<tr>
<td>Participating in relaxing or socializing</td>
<td>.310</td>
</tr>
<tr>
<td>Spending time with family/providing care for family</td>
<td>.006</td>
</tr>
<tr>
<td>Commuting to class</td>
<td>-.293</td>
</tr>
</tbody>
</table>

Note: n=205; $\bar{x} = 1.7$; sd=14.68; $R^2=.46$; Adjusted $R^2=.44$ p < .05; **p < .01

**Relative Contributions of the Variable Blocks**

The amount of total variance in the criterion variable explained by the final regression model was 44%. Based on an analysis of the $R^2$ change attributed to each block of variable in the final model, Table 16 show a summary of the relative contribution of each block toward the total explanation of variance in the criterion.
variable. The race variable accounted for 34% (largest contribution) of the variance in the criterion, $R^2$ change = .34. The second block added another .2% to the explained variance, $R^2$ change = .36. The third block added .2%, $R^2$ change = .38. The fourth block added another .3% to explain the variance, $R^2$ change = .41. The sixth block added another .3% to explain the variance, $R^2$ change = .44. Detailed results of the analysis of the relative contribution of each of the eight variables blocks appear in the Appendix.

Table 17

*Incremental Contributions to $R^2$ by Variable Block*

<table>
<thead>
<tr>
<th>Variable Block Added</th>
<th>Cumulative $R^2$</th>
<th>$R^2$ Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics (1)</td>
<td>.34</td>
<td>.34</td>
</tr>
<tr>
<td>Between College Characteristics (2)</td>
<td>.36</td>
<td>.36</td>
</tr>
<tr>
<td>Academic Involvements (3)</td>
<td>.39</td>
<td>.38</td>
</tr>
<tr>
<td>Faculty to Student (4)</td>
<td>.42</td>
<td>.41</td>
</tr>
<tr>
<td>Co-Curricular (6)</td>
<td>.46</td>
<td>.44</td>
</tr>
</tbody>
</table>

*Note.* $N = 205; \bar{x} = 1.7; sd = 14.68; R^2 = .46; Adjusted R^2 = .44 p < .05; **p < .01*

To summarize, a backward stepwise regression analysis was conducted to discover what variables, if any, significantly influenced a student veterans’ first term GPA. Six blocks of variables were entered into the regression analysis and only seven variables in five blocks were determined to be significant.

**Summary**

A quantitative analysis was conducted to examine which academic and co-curricular variables are significant in the first term GPA of student veterans. The study applied Astin’s Theory of Student Involvement and used his Input-Environment-Output (I-E-O) conceptual framework. Data were collected via an online questionnaire to student veterans in the state of Ohio that completed their first term of college.

The final model of the backward stepwise regression analysis resulted in seven predictor variables: race, attended a public school, amount of credit hours taken, talked to
faculty about career aspirations, received oral feedback from a faculty about academic performance, attended an art exhibit, play, dance, musical, theater, athletic event, or other performance, exercised or participated in physical activity, and time spent commuting to class. For the regression model as a whole, the final step results showed the $R^2 = .440$, $p<.001$, which indicates that 44% of the variance in the criterion variable (GPA) was explained by this study’s composite model. The standard deviation of 14.68 could be credited to recoding and combining the two individual questionnaires into one complete dataset.

A student veteran’s race, the amount of credit hours taken, talking to faculty about career aspirations, receiving oral feedback from a faculty about academic performance, attending events on campus, exercising or participated in physical activities, and time spent commuting to class emerged as significant variables that influence the first-term GPA of student veterans.

The implications of these findings deserve discussion, with particular attention to the advancement of research and theoretical knowledge, policy development, and professional practice. Implications of the research in addition to concluding thoughts and a summary of the entire research project are discussed in Chapter Five.
Chapter 5: Discussion

Chapter 4 presented the results of the data analysis based on the electronic questionnaire and responses from 301 participants. This chapter presents a summary of the study, an analysis of the findings (organized by research question), implications for theory and practice, limitations of the study, suggestions for future research, and contributions of the study to the literature.

Summary of the Study

The purpose of this study was to identify factors that predict the academic success of veterans in their first year of college. The researcher explored veterans’ experiences in college, inside and outside the classroom, and sought to identify engagement activities that predict their first-term cumulative GPA. Student veterans transitioning from the role of soldier to the role of student have continued to face significant obstacles. As a result, there is a need for continued awareness and improved researched-based methods of identifying services that can best assist this population. Addressing student veterans’ concerns within educational institutions may better serve veterans.

The researcher examined the influence of input and environmental variables on first-term GPA among veteran students. Schlossberg’s (1984) theory of adult transitions served as the theoretical framework for this study. An adaptation of Astin’s I-E-O Model served as the conceptual and data analysis framework for this study. The I-E-O model was originally conceptualized to show the effects of college on undergraduate students, and this present study explored the effects of student veterans’ first year in college on their academic performance, as measured by their GPA.

A quantitative analysis was conducted to identify which academic and co-
curricular variables, if any, have a statistically significant influence on the first-term GPA of student veterans. Data were collected via an online questionnaire from student veterans during their first term in college. The data gathered from this questionnaire were analyzed using a blocked form of backward regression. Frequencies, means, and standard deviations were calculated using basic statistical procedures. Results indicated that the following seven variables were statistically significant predictors of first-term GPA among student veterans: race; the number of credit hours taken; talked to faculty about career aspirations; received oral feedback from a faculty about academic performance; attended an art exhibit, play, dance, musical, theater, athletic event, or other performance; exercised or participated in physical activity; and time spent commuting to class.

Analysis of the Findings

The regression analysis identified seven significant predictor variables that influence the first-term GPA of student veterans: (a) student veterans that self-identify as non-white, (b) the number of credit hours taken, (c) talking to faculty about career aspirations, (d) receiving oral feedback from a faculty member about academic performance, (e) attending events on campus, (f) exercising or participating in physical activities, and (g) time spent commuting to class.

Input Variables

Research Question 1: What demographic characteristics, if any, impact the academic success of first-year veterans?

The input variables of Block 1 were entered into the regression to determine whether any demographic characteristics impact academic success. The variables in Block 1 included age, race, gender, marital status, number of children, number of
children living at home full time, high school degree attainment, high school GPA, branch of military, sub-branch Military Occupational Specialty (MOS), years of service, reason for leaving, rank at discharge, use of the GI Bill, and ROTC involvement. The race variable (non-white) emerged as a negative predictor of student veterans’ academic success. This indicates that student veterans of color tend to have a lower GPA than do white student veterans attending a college or university.

Even though minority enrollments in higher education have been at an all-time high, the graduation rate for minorities has remained low. According to Aaronson, Fried, and Good (2012), African American college students tend to obtain lower grades than their White counterparts, even when they enter college with equivalent test scores. The results of this study suggest there are negative factors that influence non-White students' intellectual abilities and play a role in this underperformance. These socioeconomic factors include racial climate on campus, educational history, and finances. These factors can sometimes be perceived as psychological threats and impact minority students’ “situational” and “self” resources (Schlossberg, Lynch and Chickering, 1989). Resources that consist of their past experiences, attitudes, and awareness of higher education, or lack thereof, could predict how student veterans cope with the complexities of campus climate. These factors could also in turn provoke responses that impair both academic performance and psychological engagement with their academics.

Steele (1997) pointed out that inadequate resources, few role models, and preparation disadvantages can make it more difficult to identify with academic domains. For example, the racial climate at some colleges and universities may influence their trust, their engagement with campus activities, and ultimately their GPA. If student
veterans of color do not feel welcome, or if they experience perceived racial harassment or discrimination on campus, they may drop out or underperform. In other words, non-white student veterans may experience a greater likelihood of underperforming academically as a result of problems arising from isolation, alienation, and lack of support.

Another possible explanation of race as a negative predictor of student veterans’ academic success is educational history and preparation. According to Venezia, Kirst, and Antonio (2004), many minority students who enroll in college have not been adequately prepared for college-level curriculum. Poor preparation in K-12 education has left many students with an insufficient academic foundation to succeed in college. This lack of preparation often leads to poor academic performance and frustration, which increases the likelihood that students will drop out.

According to Haycock (2001), another possible explanation of race as a negative predictor of student veterans’ academic success is the large number of minority students who are concentrated in high-poverty schools that lack academic and financial resources and teachers who are inadequately prepared. Student veterans are interested in professional careers and higher education; they hold aspirations far greater than those being advanced by educators and parents around them. When student veterans perceive little or limited support and sense barriers to desired goals, they are likely to fail. Many non-white student veterans enter college having had much different socialization experiences, including social discrimination, institutional discrimination, and inadequate preparation for higher education.

A third possible explanation of race as a negative predictor of student veterans’
academic success includes cultural differences and financial difficulties. Because military members, as a whole, are more ethnically diverse and often come from lower socioeconomic backgrounds than the general population, they are more likely than other students to be the first in their family to attend college (MacLean & Elder, 2007).

According to Blackwell (1982) and Nettles (1988), non-white parents are more often inhabitants of urban environments, have fewer years of education, work at lower status jobs, earn less, and are more often divorced or separated. Additionally, non-white students in college do not fare as well as other students in terms of persistence rates, academic achievement, postgraduate study, and overall psychosocial adjustments (Allen, Epps, & Haniff, 1991; Astin, 1982; Fleming, 1984; Hall, Mays, & Allen, 1984; Nettles, 1988; Thomas, 1981). As a result, non-White families may not possess the background or understanding to provide the necessary support and nurture minority student veterans’ efforts to succeed in higher education.

**Environmental Variables**

Research Question 2: What institutional (between-college) characteristics, if any, impact the academic success of first-year veterans?

Region (institutions in Ohio), level (four-year versus two-year institution), and control (public institution versus private institution) characteristics for each school were grouped together in Block 2. The institutional control variable (public institution) was found to be a significant negative predictor of veterans’ academic success. This finding indicates that student veterans who attended a public college or university tend to have lower GPAs than do student veterans who attended a private institution.

**Institutional size.** There are many differences between public and private
colleges (Bowling Green State University, Ohio State University at Lima, and the College of Mount St. Joseph); however, the results of this study indicated that the size of the institution plays a critical role in helping student veterans succeed. Even though state schools seem to be affordable, are highly ranked, and offer an undergraduate academic experience comparable to private schools, some factors negatively influence academic success. State universities, unlike their private counterparts, are funded by the state government. According to Rawlings III (2012), the health of these universities is contingent upon state support, and they are operated according to strict state regulations.

One factor that has been shown to influence motivation to succeed academically is the size of the student body at public institutions. Size (e.g., the total number of students enrolled) contributes to many of the problematic issues that develop at public universities. For example, mistakes on transcripts or on a tuition invoice (as well as the speed with which these types of logistical and documentation errors are corrected), can be exacerbated at larger institutions.

Classes at public institutions fill quickly, so student veterans might not be able to get the exact schedule they need or want. Most public universities provide a limited number of sections for each course, and class sizes may be very large, which means that the environment may not be as personalized or as nurturing as it might be at private or smaller colleges. Access to faculty members also may be limited, because each faculty member at larger institutions may be responsible for instructing hundreds of students, resulting in less, or at least limited, time available to devote to each student. Additionally, some faculty members may be more focused on conducting research and publishing than teaching, further limiting their availability. Finally, if student veterans are introverted or
not inclined to join student organizations, attending a larger school places them at an
even higher risk of feeling lonely or isolated. These social, personal, logistical, and
emotional factors are more likely to continue for a prolonged period of time at larger
institutions, where classes are large, students’ number in the tens of thousands, and
students often remain anonymous. Across time, these factors may naturally have a
detrimental effect on GPA.

In addition, the availability of student services and other similar resources at these
institutions, as opposed to private institutions, has been problematic. Many state
institutions have heralded themselves and been recognized as “veteran friendly”
campuses; however, this moniker does not guarantee that student veterans will persist and
succeed academically. Claims that institutions are “veteran friendly” and that they have
larger and healthier student veterans associations have attracted student veterans, but
these same institutions may have failed to retain them as a result of inadequate support. It
is not uncommon that some institutions market themselves as “veteran friendly” in order
to attract veterans (or, more specifically, the state and federal funding that is attached to
them). However, upon examination, these institutions lack the resources and support
systems that student veterans need to be academically successful. This misleading, so-
called “military friendly” pitch made by some institutions to entice veterans could be
another reason why student veterans tend to underperform at public institutions. As a
result, these student veterans struggle and earn significantly lower GPAs.

Research Question 3: What academic involvements, if any, impact the academic
success of first-year veterans? Academic involvements were grouped into Block 2, which
included variables that student veterans were exposed to during their first year enrolled at
an institution of higher education. The variables in this block included frequency of questions asked in class, frequency of class presentations, reviewed drafts of a project/paper, diverse perspectives in class discussions, prepared/studied for a class, taken a foreign language course, studied abroad, taken an independent study course, prepared/studied for class, attended an orientation, full-time or part-time student, number of credit hours, graduated from high school, and high school GPA.

**Number of credit hours.** The number of credit hours taken emerged as a significant negative predictor of GPA. This finding indicates that veterans who enroll in a higher number of credit hours per term are likely to earn lower GPAs. Researchers have suggested that beginning college enrolled in fewer courses is consistent with the principles underlying a developmental approach to academic success, an approach that is appropriate for many student veterans attending college for the first time (Crookston, 1972; Gordon, 1984; O'Banion, 1972; Winston, Miller, Ender, Crites, et al., 1984). The number of credit hours in which student veterans choose to enroll could be attributed to underestimating the rigors of higher education (e. g., enrolling in a greater number of courses without accurate reflection about the amount of work required) and financial ambivalence (e. g., the attitude that since tuition is paid for by the government, there is no need for accountability).

In addition, the number of credit hours in which student veterans are enrolled could influence GPA, because the number of credit hours represents students’ commitment to academics relative to other time-consuming activities, such as work or family. Student veterans tend to enroll in fewer and less difficult courses because of their many responsibilities--for example, managing households (including children and older
relatives), working full time, and other consuming roles. The amount of time student veterans have to devote to attending class and completing assignments is limited, so student veterans select courses carefully to ensure they succeed academically. Student veterans take lighter credit loads in order to have time for their many other commitments outside of school.

Student veterans tend to struggle academically for a variety of reasons. Some veterans have been out of school for too long and fail to accurately anticipate academic difficulties; others may have cognitive, social, or emotional disabilities that inhibit learning; and others may come to college ill-prepared. According to Zusman (2005), academic standards are likely to be increased during the next few years; therefore, students embarking on their college experience, especially student veterans, would be wise to understand more completely the academic expectations required of them (the ability to think for themselves, create meaning out of what they learn, organize information, integrate individual skills into whole sets of processes, and apply new learning to new or novel situations). Likewise, they also would be prudent to gain a better understanding of the amount of time and energy required to meet these requirements.

According to a press release from The White House, Office of the Press Secretary (2013), student veterans have received the message that attending college and earning a college degree is a worthwhile investment. As a result, enrollment rates increased, and student veterans have used their GI Bill benefit to offset the cost of tuition. However, because the government pays their tuition, student veterans often enroll in more courses than they can reasonable handle. Financially, student veterans can afford to enroll in courses on a full-time basis with their GI Bill money; however, they often are not
academically or emotionally prepared during their first year, and therefore have difficulty transitioning.

Research Question 4: What faculty-to-student interactions, if any, impact the academic success of first-year veterans? The variables in this environmental block included whether student veterans used email to communicate with an instructor, talked about career aspirations with a professor, discussed ideas from class readings with a faculty member, worked on a research project with a faculty member outside of class, developed relationships with faculty members, received oral feedback from a faculty member, worked with a faculty member on activities other than coursework, and developed relationships with staff members. Two environmental variables (i.e., talked to a faculty member about career aspirations, and received oral feedback from a faculty member about academic performance), were statistically significant predictors of first-term GPA.

**Oral feedback from faculty members.** The variable received oral feedback from faculty members about academic performance was found to be a significant positive predictor of veterans’ academic success. This finding indicates that student veterans tend to have higher GPAs when they receive oral feedback from a faculty member regarding their performance on class projects, papers, and exams than when they do not receive such feedback. One characteristic of effective oral feedback is personalized comments that assist students in understanding their academic performance level (Denton, 2014). Hattie’s research (2008) revealed that feedback is among the most powerful influences on achievement. When faculty members provide specific, constructive feedback to individual students, it yields a deeper understanding. Schlossberg (1989) stated that the
“supports” category includes emotional support sources and networks. The availability and willingness of faculty members who give feedback and positive reinforcement could confidently help student veterans cope with their academic transitions. Chickering and Gamson (1987) recommended that students need appropriate feedback on performance to benefit from college.

Faculty members have discretion over feedback that could complicate or simplify the lives of student veterans. Student veterans face obstacles when entering college for the first time, and they also face obstacles staying in college because of the complicated blend of academic, social, family, and cultural challenges they face. Because of their work and family obligations, student veterans may need additional positive reinforcement and feedback on class assignments, and more importantly, they also may require positive reinforcement for their decision to return to college, pursue a degree, and accomplish their educational goals.

Student engagement is no less important for the success of student veterans than for traditional students attending college. In fact, student-faculty interaction is a key factor for student persistence and success (Chickering & Gamson, 1987; Knowles et al., 1998; Kuh, 2001; Robinson & Hullinger, 2008; Williams, 2004). Face-to-face interaction leads students to view their instructors as “role models, mentors, and guides for continuous, lifelong learning” (NSSE, 2010a, p. 37). Research has indicated clearly that student-faculty interaction plays an integral role in achievement of successful outcomes for student veterans. As student veterans engage in meaningful learning, they continue to seek out answers to questions that influence their lives. However, not all student veterans desire face-to-face interactions. Many look forward to the opportunity just to be a student.
and simply get answers in a timely manner, attend class, move through their courses seamlessly, and move on with life. Regardless of whether student veterans desire face-to-face interaction, or the degree to which they prefer it, the results of this study indicated that feedback regarding student veterans’ academic performance can be a valuable tool in helping them persist in college and achieve their academic and educational goals.

**Talking to faculty members about career aspirations.**

Talking to faculty members about their career aspirations was a statistically significant negative predictor of veterans’ academic success. This indicates that student veterans who speak frequently with faculty members about their career aspirations tend to have lower GPAs. One explanation for these results is that student veterans often are in a phase characterized by exploration about their major and their career (Cross, 1981; Hill, Gordon, & Kim, 2002). Indecisiveness regarding their career aspirations can be overwhelming, and faculty members may be perceived as pressuring student veterans to make premature, unrealistic, and uninformed decisions about their career path. Uncertainty about their career goals and the reality of not living up to their aspirations can impact both the morale and the grades of student veterans. Talking to faculty members about their difficulties and delays in making a career decision can lead to stress and poor academic performance among student veterans. In short, talking with faculty members about their career path, about their major, and about their indecision can be related to a number of internal and external barriers and conflicts that student veterans encounter.

According to Rendon (1994), successful students remember incidents when they experienced validation from faculty members who actively reach out to them and affirm
them as capable. However, most student veterans are well versed in establishing a goal, defining the steps necessary to achieve it, balancing priorities, and holding themselves accountable (NASPA Report, 2013); they do not need guidance and oral feedback about how to leverage these skills toward performing academically in the classroom. Student veterans are often among the best-prepared students in the classroom (NASPA Report, 2013). The challenge that faculty members face is helping these students translate the skills and attitudes they have developed through their military service into an academic context.

Research Question 5: What student-to-student interactions, if any, impact the academic success of first-year veterans? The variables in this block included how often student veterans worked with peers outside of class on an assignment; discussed ideas from readings or classes with others outside of class (e.g., other students, peers, family members, etc.); engaged in a conversation with a student who is different from them in terms of their race, ethnicity, religious beliefs, political opinions, or personal values; and how supportive their relationships are with other students. None of these variables proved to be significant predictors of GPA.

Transitioning from a military lifestyle to an institution of higher education, where student veterans often struggle to relate to non-military peers, can intensify problematic issues. For example, student veterans have been accustomed to a former lifestyle of intense pressure, regimented routine, goal orientation, and a disciplined combat mindset. Living in college residence halls or enrolling in classes with younger, less disciplined, and in many cases irresponsible students, is at best unappealing to veteran students, and at worst extremely frustrating. There is a cultural disconnect that often keeps student
veterans from becoming involved with their non-veteran student peers and taking full advantage of all that the collegiate experience has to offer. Student veterans view their peers as apathetic, and they may feel slightly less supported by other students on campus; therefore, student veterans may not seek out interactions with other students.

Research Question 6: What co-curricular involvements, if any, impact the academic success of first-year veterans? The regression results indicated that three co-curricular variables were statistically significant predictors of GPA; however, out of these three variables, two were negative predictors. The variables in Block 6 included how often student veterans attend a performance event, exercise, participate in spirituality initiatives, examine strengths and weaknesses of their own views on a topic, learn something new that changed the way they understand an issue or concept, participate in community service, participate in a living and learning community, create quality relationships with community members and peers, prepare/study for class and/or an academic involvement, how often they work full-time or part-time, participate in extracurricular activities, participate in relaxing or socializing, spend time with family/provide care for family, and commute to class.

From this block, one variable emerged as a statistically significant predictor of GPA: the amount of time spent attending an art exhibit, play, dance, musical, theater, athletic event, or other performance activity variable appeared as a negative predictor of veterans’ academic success. This finding indicates that student veterans who participate in involvement activities are more likely to have lower GPAs, which contradicts traditional involvement theory. However, it is important to note that the design of this particular question regarding student veterans’ participation in involvement activities
raised serious concerns about its validity. The results of this particular question cannot be considered a valid description of the student veterans’ involvement.

When student veterans first enter college, they must transition to the overwhelming, independent, and fast-paced lifestyle of a college student. Clark identified (2005) obstacles that freshman college students have to overcome, range from forming new social networks, changing study habits, and learning to be self-sufficient. These components could affect a student veteran’s ability in becoming acclimated to the college community and achieving academic success. To feel anchored on campus, students may become more involved by attending a performance, joining a club, participating in student government, or joining a sports team. These social opportunities facilitate relationships with other peers from different class years and, as a result, possibly reduce stress related to the rigors of college academics. However, athletic events, student organizations, and other campus activities sometimes compete for time that student veterans should spend studying, which can result in lower grades. Although Astin (1994) has suggested that involvement and engagement increase persistence, research conducted by Hartnett (1965) found that “over involvement” can be associated with lowered academic performance.

Some researchers have argued that the type of organization (e.g., student organizations, Greek letter organizations, intramurals) influences the academic success of students (Baker, 2008). Baker (2008) conducted a study to examine the impact of various types of organizations on the academic performance of underrepresented students and found that the type of organization makes a difference. For example, scholarship requirements that some organizations place on their members, particularly for Greek
letter organizations, might impact a student’s motivation to do well academically. Many sororities and fraternities require a minimum GPA to simply gain membership into the organization. Baker’s findings suggest that while student veterans can benefit from involvement, the nature of the organization and the nature of the event must be taken into consideration. For example, student veterans may be less likely to attend a performance activity considering their work engagements and family obligations. These results support Hartnett’s (1965) conclusion that too much involvement in extracurricular activities outside of the classroom can lead to lower academic performance, but challenges Astin’s (1984) belief that more involvement is better.

**Exercising.** The second co-curricular variable from Block 6, exercising or participating in physical activity, also emerged as a positive predictor of veterans’ academic success. More than 72% of student veterans in this study indicated that they participated in exercise or physical activities “very often.” Exercise promotes a positive sense of self and accomplishment. This positive sense of self, derived through exercise, may help student veterans meet small, successive goals and to transition successfully through their first year in college. According to Sargent and Schlossberg (1988), reconstruction of a valued self-identity is essential to transition, and frequent physical exercise may facilitate this reconstruction. Transitions occur over time and entail change and adaptation. For example, developmental, personal, relational, situational, societal, or environmental changes often require individuals to alter their perspective, change their behavior, or modify their thoughts. Schlossberg (1989) stated that an individual must employ a number of methods of coping with the transition, which constitutes the “strategies” competent. Student veterans that frequently exercise and participate in
physical activity could experience calmer transitions, which could potentially result in modest improvements in the classroom.

**Time spent commuting to class.** The variable time spent commuting to class also emerged as a significant negative predictor of veterans’ academic success. This finding suggests that the more time student veterans spend commuting to class, the lower their GPA is likely to be. Student veterans in this study reported that they live off campus (74%) and commute to campus; therefore, the most obvious concerns that commuter students share are those related to transportation: parking, traffic, fixed transportation schedules, inclement weather, vehicle maintenance, transportation costs, and locating alternative means of transportation when their primary means fails.

Keeling (1999) described commuter students as “reinvented students” and suggested that they inhabit multiple roles beyond “student”:

Students’ lives, like those of their parents and caregivers, are absolutely more complicated today (by jobs, debt, and transportation, for example) and the ranking of college… or of studying, or classes, among their immediate priorities has clearly changed… “Student” is no longer every student’s primary identity… “Student” is only one identity for people who are also employees, wage workers, opinion leaders or followers, artists, friends, children… parents, partners or spouses. (p. 4)

In addition to the increased complexity associated with commuting, Astin (2001) reported that commuting has been negatively correlated with attainment of a bachelor’s degree. Commuting also has been associated with negative effects on self-assessment of emotional health. In short, “substantial commuting seems to increase the level of stress
experienced by undergraduate students” (p. 390). No matter the mode of transportation, commuting to and from campus places demands on commuter students’ time and energy. As a result, student veterans frequently concentrate their classes into blocks, and have little free time to spend on campus, which constrains their ability to get involved academically or socially in their college experience.

**Implications for Practice**

The results of this study led to two primary recommendations for practice regarding student veteran involvement and student veteran transitions.

The first recommendation for practice is to make data-driven decisions when determining the best options for assisting student veterans. By using data on student veterans’ involvement more effectively, faculty members and staff members can create opportunities to enhance student veterans’ involvement in ways that meet their needs. Rather than expecting student veterans to adjust their lifestyles and schedules, it is the responsibility of colleges and universities to design curricular and co-curricular mechanisms specifically and intentionally to involve non-traditional students in learning. In addition, faculty members and staff members should proactively support student veterans during their first year by developing a plan to guide them through academic and personal challenges, and to encourage student veterans to take ownership and accountability for their own success. When working with student veterans, higher education faculty members and administrators need to consider that such involvement may take many forms, such as absorption in academic work, participation in nontraditional extracurricular activities, and interaction with faculty members and other institutional personnel.
A second recommendation for practice is to develop transition programming for student veterans regarding their career path. The transition to college is not a quick, simple process for student veterans. Goodman, Schlossberg, and Anderson (1997) explained that students need to become familiar with norms and expectations, relinquish past roles, understand the transition, and move into a new life phase. For example, a one-day or one-week veteran-specific orientation to campus resources and activities could help student veterans translate military skills (e.g., adaptability and mission focus) to civilian life.

Being a student is only one of several important and time-consuming roles veterans juggle. Most student veterans work either full-time or part-time to pay fees to attend institutions of higher education. Student veterans’ time is a limited resource that directly impacts their ability to engage in co-curricular activities that are essential. To assist in their transition, institutions could sponsor a Student Veterans Expo/Fair to provide resources related to career counseling, advising, health care, study skills, note taking, test preparation, and time management. Administrators need to implement services strategically and intentionally that are tailored to the needs of student veterans, based on the understanding that student veterans select their campus involvement activities carefully.

**Limitations of the Study**

Every study is limited in some ways. This study was subject to the following seven limitations: The first limitation of this study was that the researcher did not use a random sampling procedure; therefore, the results cannot be generalized to all veterans attending their first-year of college across the country. Due to the limited sample size, the
researcher cannot extend the results obtained for the given sample to the national student veteran population.

The second limitation of this study was a result of the sample itself; participation was voluntary, so only those candidates who chose to respond to the questionnaire did. Defining generalization can be a concern, for generalizability identification of sample size is essential (Delice, 2010). It would have been helpful to have a larger sample that included more veterans who attended higher education. A larger sample may have produced more significant predictors, either negative or positive, which would have been helpful in determining the best predictors of GPA among student veterans, and therefore shaping the educational environment for veterans.

The third limitation of this study was the fact that the information was self-reported. The researcher assumed that the participants were honest and that their responses were accurate. Reality can be distorted in many ways when seen through a questionnaire, which may be systematic, introducing bias. Bias can spoil research by indicating false associations or failing to detect true relationships (Fadnes, Taube, & Tylleskär, 2008).

Since the questionnaires were anonymous, this may have alleviated the problem of respondents inflating their GPAs or otherwise responding inaccurately to questions.

The fourth limitation of this study was a problem with the development of the online questionnaire. The questionnaire elicited self-reported data to measure levels of involvement. The credibility of self-reports as a means of valid data collection, especially regarding self-reported grade point average (GPA), was a concern. Participants likely could have inflated their estimated GPA, which could have influenced the overall results.
The fifth limitation of this study was the result of a series of problematic logistical issues. The researcher experienced many roadblocks during the data collection phase of this study. The online questionnaire was initially created and released in Vovici. During the first round of data collection, the licensure contract expired and the researcher was required to move the survey to Qualtrics. As a result, student veterans were confused as to which survey they should complete and resistant to take the questionnaire.

The sixth limitation was the manner in which the questionnaires were received by the student veterans. Certifying officials are staff members that serve as liaisons between the student veterans and the U.S. Department of Veterans Affairs. Certifying officials build strong relationships with student veterans. They help student veterans process paperwork and offer advice. Student veterans are sometimes reluctant to read and entertain requests from emails (e.g. questionnaires) if they did not originate from their university’s certifying official. However, emails send to the Student Veterans of American Associations via the listproc enhanced the response rate.

The final limitation concerns has to do with the presence of flaws in the questionnaire. The value of the data collected for this study hinges on whether student veterans provided true and accurate responses. Problems with validity can result from the student veterans’ inability to provide accurate information. One item on the questionnaire asked how often student veterans participate in an array of co-curricular activities; this item was presented in an extremely complicated format. This procedure raised concerns about the accuracy and difficulty of the question. Student veterans may have found this particular item confusing or even alienating (because of its content). In addition, it is likely that many student veterans did not read the long list of alternatives carefully and
Self-report measures are necessarily based on the assumption that participants do their best to provide truthful answers. In some cases, however, student veterans do not wish to divulge information about themselves. In other words, the content of the questionnaire – in particular, the item focusing on how often participants were involved in co-curricular activities raised concerns about its validity. The results of the analyses based on this particular item cannot be considered a valid depiction of the student veterans’ involvement.

**Relationship of the Results of the Study to Transition Theory and Involvement Theory**

Research that has been conducted on the academic success of student veterans has been extremely limited, so the results of this study expand the foundation of knowledge about this population. Much literature on involvement theory and transition theory of college students has been published, and the results of this study showcase several factors that differentiate student veterans’ academic experiences from other student populations.

Schlossberg’s (1984) original theory highlighted four types of transitions: (a) anticipated, (b) unanticipated, (c) chronic “hassles,” and (d) nonevent. Anticipated transitions are those that individuals can prepare for, while unanticipated transitions are irregular and typically involve crises. Chronic “hassles” are detrimental to individuals’ self-esteem and can prevent them from taking necessary steps to make a change (Schlossberg, 1984). Finally, a fourth type of transition may take the form of a non-event, or an anticipated transition that never occurred.
This study confirmed the assumptions that underlie these types of transition. The transition of matriculating/arriving to campus was an anticipated transition for student veterans. While some student veterans may experience minor difficulties acclimating to campus, most student veterans find the process of transitioning relatively easy. The challenges that emerged following matriculation were most likely unanticipated and sometimes problematic. For example, student veterans are selective about the campus life activities in which they invest their time. They are older than non-veteran students, and therefore tend to have responsibilities outside of higher education that put constraints on their time.

Schlossberg (1984) explained that chronic “hassles” can prevent individuals from making a change. Student veterans in this study did not get involved on campus and seldom sought help and support from faculty, staff, and peers. Because student veterans were reluctant to seek support, it was exclusively their responsibility to change their situations. As a result, student veterans in this study did not enhance their relationships with administrators or peers. The researcher found nonevents to be closely related to changes in one’s roles/routines that occur due to a non-event transition. For example, student veterans come from the military, a structured environment, to college, a relatively unstructured environment. The difficult transition implies a sense of vulnerability in that the success of transition ultimately depends on the individual to adapt to a new system after being told what to do and how to do it for an extended timeframe.

According to Astin’s (1994) involvement theory, the more that students are involved in college, the greater will be their learning and personal development. Traditional involvement in co-curricular activities, however, has not necessarily led to a
greater sense of confidence among students, especially students who are veterans.

Traditional first-year initiatives and programming have failed to captivate and engage student veterans. For many years now, administrators have viewed the role of institutions in fostering involvement as passive; that is, institutions have created mechanisms that allow students to get involved, such as student organizations, learning centers, and co-curricular activities. However, this approach has reflected a “field of dreams” mentality – e.g., “…if you build it, they will come.”

Administrators and faculty members have operated under the premise that all students fit the profile of a traditional first-year student. As a result, they have emphasized and encouraged campus involvement. However, unlike in the movie *The Field of Dreams* (Motion picture, Universal Studios) and despite institutional efforts to promote involvement, many student veterans do not “come” because of other life commitments. Even though feedback from faculty members did have a positive influence on academic achievement, traditional involvement theory does not support the multiple roles student-veterans balance in their first-year of college.

**Recommendations for Future Research**

This study has made a significant contribution to the literature by providing new information through the use of original questionnaires that elicit information about student involvement and its influence on the first-term GPA of student veterans.

The results of this study led to four primary recommendations for future study. The first recommendation for future study is to seek and identify the most beneficial services offered to student veterans. While this study acknowledges the importance of student development in conjunction with involvement theory, there is still a need for
additional research on effective support programs and services for student veterans.

The second recommendation for future study is to conduct further research on the specific types of involvements that might interest student veterans. This study revealed a number of areas in which additional research would be beneficial in order to understand the educational environment that best prepares veterans to attend higher education institutions.

The third recommendation for future study is to conduct research aimed at the intersection of student-faculty interactions. This could be accomplished by exploring both the frequency and satisfaction of interactions from student perspectives and faculty perspectives. As universities continue to experience student veterans utilizing their GI Bill benefits, faculty members and staff members will be required to accommodate this underserved population.

The fourth recommendation for future study is to conduct research on more specific subpopulations of student veterans. Although Schlossberg’s transition theory provided the primary theoretical foundation for this study, very little research has focused on the transitional experiences of specific subpopulations of student veterans, such as women veterans, disabled veterans, and others.

The fifth recommendation for future study is to conduct research using a qualitative approach. This approach would allow researchers to better understand the lived experiences of student veterans as they transition into higher education. Investigating the ways in which student veterans are influenced by any of the demographic variables explored in this study could provide valuable insight. Demographic factors such as age, race, gender, and socioeconomic status, as well as
factors related to individuals’ military experiences, may all influence veteran student transitions.

**Contributions to the Literature**

While a substantial amount of literature has been published on student veterans from the World War II era and a fair amount on student veterans from the Viet Nam era, little research and discussion has been published on modern-day veterans of Operation Iraqi Freedom and Operation Enduring Freedom. Even less research has been conducted on the factors that influence the academic success of student veterans when they return from war and embark upon higher education. This study provided a more specific understanding about the relationship among demographic variables, educational variables, and student veterans’ characteristics. It also provided insight into the factors that predict the academic success of student veterans in higher education by adding to the research literature on academic involvements and student veterans’ relationships with faculty members. The results of this study may be of value not only to future researchers interested in student veterans in higher education, but also to those who desire to develop sensitivity to and ways of supporting student veterans on college campuses.

**Conclusions**

This study was the result of an effort to identify factors that predict the academic success of veterans in their first year of college. The findings confirm that there are ways for colleges and universities to work with these students and help them to achieve academic success.

Welcoming student veterans to college campuses is not a new concept. After World War II, millions of veterans who would have become unemployed opted instead
for education. Ultimately, many veterans wanted higher education, and since that time, the importance of higher education in achieving success in the labor market has gradually increased.

Student veterans’ who transition from the role of soldier to the role of student have continued to face significant obstacles. Policies, programs, practices, and services that remove these difficulties increase the chances of student success. Student veterans comprise a unique student population, and there is no one-size-fits-all approach to meeting their educational and transitional needs. There are no simple solutions to the challenges that student veterans face either.

Addressing student veterans’ concerns at higher education institutions may serve society. Higher education may be a helpful transitional mechanism for student veterans as they transition from soldier to civilian. By providing student veterans with educational tools and transitional experience through higher education, their lives could be improved, and appreciation for student veteran transitions through education can be demonstrated in the process. As colleges and universities face the challenges of recruiting and retaining students as well as the pressures of increased accountability and success, there needs to be a system in place to identify students who possess the skills and abilities to earn degrees. Veterans are frequently older and more mature than many traditional-age college students, and they have been tested in hostile and adverse environments. These students also bring a revenue source that promises payment of tuition and fees (i.e., the U.S. Government).

Many of the research challenges I faced during the course of this study--from developing a researchable topic to locating study participants to analyzing data--were not
unusual but also nevertheless challenging. As a researcher, I read as many research reports and journal articles as I could on the topic of student veterans; however, the literature was extremely scarce. I looked for a niche in which I could propose a study that would potentially make a difference. In other words, I wanted to offer something new to the field.

During the stages of data collection, trying to gather information from a “hidden population” that prefers to be left alone was problematic and demanding. However, during the course of two years and through trial and error, I recruited 301 participants for this study. Leveraging the power of a network certainly came in handy, as the Student Veterans of America was a healthy and strong organization that advocated for my research and helped me secure my participants. I have realized that the Student Veterans of America provides an important vehicle for veterans to connect with peers, faculty members, and staff members as well as cultivate a sense of camaraderie. A well-structured, active, campus-based student veteran organization could provide opportunities for veterans to meet with students who have had similar experience while also serving as a point of connection to the campus.

Future researchers should be aware that it was difficult to get colleges and universities to participate, let alone assist. There were a number of barriers, particularly since my research required gathering sensitive data, and this presented an additional challenge regarding the results.

The final challenge I faced during this seven-year project was “listening” to my data and not looking at the data with any preconceived ideas. I allowed the data to come alive, to speak to me, and to drive my conclusions.
Throughout the process of conducting this research study, I learned that colleges and universities need to consider the following measures to ensure that student veterans, their dependents, and their family members have the same opportunities for educational success accorded to the general student body. For example, the acknowledgement of both Veteran’s Day and Memorial Day should coincide with a college commemoration ceremony. With the potential for annual decreases in state funding, colleges and universities should review and be prepared for any impact this may have on the overall college or university budget. Veterans who have suffered emotional trauma and physical disabilities naturally will require more services and assistance. Most important is the goal of continuing the work of identifying the issues and challenges student veterans face on college campuses.

The uncomfortable environment on today’s college campus could be keeping many veterans away. Members of the academic community should be concerned that veterans are now more likely to avoid campus life altogether. The results of this study suggested that student veterans do not desire special treatment but rather a sense that faculty members appreciate their circumstances, including family obligations, work obligations, and academic challenges. Their health, both physical and mental, will continue to be an important concern, and I am concerned that colleges and universities are unprepared to provide the services needed to implement these accommodations.

Significant increases in the number of veterans attending institutions of higher education suggest that everyone in higher education needs to learn more about student veterans. The student veteran population will continue to increase, and higher education institutions should work more diligently to address their needs. To succeed and grow,
student veterans attending colleges and universities for the first time need meaningful relationships with faculty members and staff members. By considering Schlossberg’s transition theory and Astin’s involvement theory, higher education administrators and faculty members can develop plans of action that will provide improved service to student veterans and meet the many needs they bring with them as students.
References


MacQuarrie, B., & Sennott, C. (2007, March 16). School is part of plan to give veterans a


Palm, E. (2008). The veterans are coming! The veterans are coming! *Inside Higher


Quinland, A. (2008, March 31). Because it’s right: It’s hard to serve your country in Baghdad or Kabul. It shouldn’t be hard to pay for college once you’ve come back home. Newsweek, 68.


Appendix A

Variables Grouped by Blocks

**Block 1: Input Variables (Demographics)**

<table>
<thead>
<tr>
<th>Variable Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
</tr>
<tr>
<td>High school degree</td>
<td></td>
</tr>
<tr>
<td>High school GPA</td>
<td></td>
</tr>
<tr>
<td>Branch of military</td>
<td></td>
</tr>
<tr>
<td>Years of service</td>
<td></td>
</tr>
<tr>
<td>Reason for leaving the branch</td>
<td></td>
</tr>
<tr>
<td>Rank at discharge</td>
<td></td>
</tr>
</tbody>
</table>

Table 2

**Block 2: Environmental Variables, Academic Involvements**

<table>
<thead>
<tr>
<th>Variable Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of questions asked in class</td>
<td></td>
</tr>
<tr>
<td>Class presentations</td>
<td></td>
</tr>
<tr>
<td>Reviewed drafts of a project/paper</td>
<td></td>
</tr>
<tr>
<td>Included diverse perspectives in class discussions</td>
<td></td>
</tr>
<tr>
<td>Used an electronic medium for academic purposes</td>
<td></td>
</tr>
<tr>
<td>Involved in a learning community</td>
<td></td>
</tr>
<tr>
<td>Taken a foreign language course</td>
<td></td>
</tr>
<tr>
<td>Studied abroad</td>
<td></td>
</tr>
<tr>
<td>Taken an independent study course</td>
<td></td>
</tr>
<tr>
<td>Prepared/studied for class</td>
<td></td>
</tr>
</tbody>
</table>

Table 3

**Block 3: Environmental Variables, Faculty-to-Student Interactions**

<table>
<thead>
<tr>
<th>Variable Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Used email to communicate with an instructor</td>
<td></td>
</tr>
<tr>
<td>Talked about careers aspirations with a</td>
<td></td>
</tr>
</tbody>
</table>
professor

| Worked on a research project with a faculty member outside of class |
| Relationships with faculty members |

Table 4

**Block 4: Environmental Variables, Student-to-Student Interactions**

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worked with peers outside of class on a assignment</td>
</tr>
<tr>
<td>Discussed ideas from readings or classes with others outside of class (student, peers, family, etc.)</td>
</tr>
<tr>
<td>Engaged in a conversation with a student who is different from them in terms of their race, ethnicity, religious beliefs, political opinions, or personal values</td>
</tr>
<tr>
<td>Engaged in supportive relationships with peers</td>
</tr>
</tbody>
</table>

Table 5

**Block 5: Environmental Variables, Co-Curricular Involvements**

<table>
<thead>
<tr>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attends a performance event</td>
</tr>
<tr>
<td>Exercises</td>
</tr>
<tr>
<td>Participates in spirituality initiatives</td>
</tr>
<tr>
<td>Examine strengths and weaknesses of their own views on a topic</td>
</tr>
<tr>
<td>Learns something new about a concept academic involvement</td>
</tr>
<tr>
<td>Participates in community service</td>
</tr>
<tr>
<td>Builds relationships with administrative staff and offices</td>
</tr>
<tr>
<td>Created a quality relationship with community members and peers</td>
</tr>
<tr>
<td>Preparing/studying for class and/or an academic involvement</td>
</tr>
<tr>
<td>Working</td>
</tr>
<tr>
<td>Extracurricular activities</td>
</tr>
<tr>
<td>Relaxing or socializing</td>
</tr>
<tr>
<td>Spending time with family/providing care for family</td>
</tr>
<tr>
<td>Commuting to class</td>
</tr>
</tbody>
</table>
Appendix B
Veterans Academic Success Questionnaire Instrument

1) During the current school year, please rate how often you have done each of the following.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very Often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked questions in class/participated in discussions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Made a class presentation</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Reviewed a paper/project before submitting it</td>
<td></td>
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</tr>
<tr>
<td>Included diverse perspectives in class discussions or assignments</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked with other students on projects during class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked with peers outside of class on a class assignment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used an electronic medium (listserv, chat, discussion boards, IM, texting, blogging, etc.) to discuss or complete an assignment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used email to communicate with an instructor</td>
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<td></td>
</tr>
<tr>
<td>Talked about career aspirations with a professor</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Discussed ideas from your readings or assignments with faculty outside of class</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Received oral feedback from a professor on your academic performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked with faculty members on activities other than course work (committees, orientation, and student life activities)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussed ideas from your readings or classes with others outside of class (students, peers, family, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engaged in a conversation with a student who is different from you in terms of their race, ethnicity, religious beliefs, political opinions, or personal values</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2) During the current school year, how often have you done each of the following?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very Often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended an art exhibit, play, dance, music, theater, athletic event, or other performance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercised or participated in physical activities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participated in activities to enhance your spirituality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examined the strengths and weakness of your own views on a topic or issue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learned something that changed the way you understand an issue or concept</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3) Which of the following have you done or plan to do before finishing your freshman year?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Done</th>
<th>Plan to</th>
<th>Do not plan to</th>
<th>Have not decided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Very Unsupportive</td>
<td>Unsupportive</td>
<td>Supportive</td>
<td>Very Supportive</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Community service or volunteer work.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Participate in a living and learning community or some other formal</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>program where groups of students take two or more classes together.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work on a research project with a faculty member outside of class.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Take a foreign language course.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Study abroad.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Take an independent study course.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

4) **Indicate the quality of your relationships with people during this current school year.**

<table>
<thead>
<tr>
<th>Relationship Type</th>
<th>Very Unsupportive</th>
<th>Unsupportive</th>
<th>Supportive</th>
<th>Very Supportive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with other students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Relationships with faculty members.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Relationships with administrative staff and offices</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Relationships with community members.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Relationships with family and friends.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

5) **How many hours do you spend in a typical 7-day week doing each of the following?**

<table>
<thead>
<tr>
<th>Activity</th>
<th>less than 1 hour</th>
<th>at least 1 hour but less than 5 hours</th>
<th>at least 6 hours but less than 10 hours</th>
<th>10 hours or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing/studying for class.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Working (full-time/part-time).</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Participating in co-curricular activities (student organizations, sports, student gov't,</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Activity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>fraternity/sorority life).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relaxing and socializing (watching TV, hobbies, partying).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spending time with family/providing care for dependents living with you (parents, children, and spouse).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commuting to class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6) Please select your **PRIMARY** College, University, Technical or Two-Year Community school from the list below.

- Air Force Institute of Technology
- Antioch College
- Art Academy of Cincinnati
- Ashland University
- Baldwin-Wallace College
- Bluffton University
- Bowling Green State University
- Capital University
- Case Western Reserve University
- Cedarville University
- Central State University
- Cleveland Institute of Art
- Cleveland Institute of Music
- Cleveland State University
- College of Mount St. Joseph
- Columbus College of Art & Design
- Myers University
- Defiance College
- Denison University
- Franciscan University of Steubenville
- Franklin University
- Heidelberg College
- Hiram College
- John Carroll University
- Kent State University
- Kenyon College
- Lake Erie College
- Laura & Alvin Siegal College of Judaic Studies
- Lourdes College
- Malone College
- Marietta College
- Miami University of Ohio
- Mount Union College
- Mount Vernon Nazarene University
- Muskingum College
- Northeastern Ohio Universities College of Medicine
- Notre Dame College
- Oberlin College
Ohio Christian University
Ohio Dominican College
Ohio Northern University
Ohio State University - Columbus
Ohio State University - Lima
Ohio State University - Mansfield
Ohio State University - Marion
Ohio University
Ohio Wesleyan University
Otterbein College
Shawnee State University
The College of Wooster
The University of Findlay
Tiffin University
Union Institute & University
University of Akron
University of Cincinnati
University of Dayton
University of Northwestern Ohio
University of Rio Grande
University of Toledo
Urbana University
Ursuline College
Walsh University
Wilberforce University
Wilmington College
Wittenberg University
Wright State University
Xavier University
Youngstown State University
Belmont Technical College
Central Ohio Technical College
Cincinnati State Technical and Community College, Cincinnati, Ohio
Clark State Community College
Columbus State Community College
Cuyahoga Community College
Edison Community College
Hocking College
James A. Rhodes State College
Eastern Gateway Community College
Lakeland Community College
Lorain County Community College
Marion Technical College
North Central State College
Northwest State Community College
Ohio State University Agricultural Technical Institute
Owens Community College
Rio Grande Community College
Sinclair Community College
Southern State Community College
Stark State College Of Technology
Terra Community College
Washington State Community College
7) How would you evaluate your entire educational experience at this institution?
   ○ Excellent
   ○ Good
   ○ Fair
   ○ Poor

8) Did you complete your first-year in college?
   ○ Yes
   ○ No

9) If yes, what was your approximate first-year college GPA?
   ○ 4.0 (all A's)
   ○ 3.9
   ○ 3.8
   ○ 3.7
   ○ 3.6
   ○ 3.5 (mostly A's)
   ○ 3.4
   ○ 3.3
   ○ 3.2
   ○ 3.1
   ○ 3.0 (all B's)
   ○ 2.9
   ○ 2.8
   ○ 2.7
   ○ 2.6
   ○ 2.5 (mostly B's)
   ○ 2.4
   ○ 2.3
   ○ 2.2
   ○ 2.1
   ○ 2.0 (all C's)
   ○ 1.9
   ○ 1.8
   ○ 1.7
   ○ 1.6
   ○ 1.5 (mostly C's)
   ○ 1.4
   ○ 1.3
   ○ 1.2
   ○ 1.1
   ○ 1.0 (all D's)
   ○ 0.9
   ○ 0.8
   ○ 0.7
   ○ 0.6
   ○ 0.5
   ○ 0.4
   ○ 0.3
10) Are you a full-time or part-time student?
○ Full-time
○ Part-time

11) Did you use some form of your G.I. Bill to earn your degree?
○ Yes
○ No

12) Did you graduate from high school?
○ Yes
○ No

13) What was your approximate high school GPA?
○ 4.0 (all A's)
○ 3.9
○ 3.8
○ 3.7
○ 3.6
○ 3.5 (mostly A's)
○ 3.4
○ 3.3
○ 3.2
○ 3.1
○ 3.0 (all B's)
○ 2.9
○ 2.8
○ 2.7
○ 2.6
○ 2.5 (mostly B's)
○ 2.4
○ 2.3
○ 2.2
○ 2.1
○ 2.0 (all C's)
○ 1.9
○ 1.8
○ 1.7
○ 1.6
○ 1.5 (mostly C's)
○ 1.4
○ 1.3
○ 1.2
○ 1.1
○ 1.0 (all D's)
○ 0.9
○ 0.8
○ 0.7
○ 0.6
○ 0.5
○ 0.4
○ 0.3
○ 0.2
14) How old are you?
   - Younger than 18
   - 18-20 years old
   - 21-24 years old
   - 25-28 years old
   - 29-32 years old
   - Older than 33

15) What is your gender?
   - Male
   - Female

16) What is your race?
   - Asian Pacific Islander
   - African-American
   - White, non-Hispanic
   - Native American
   - Biracial
   - Hispanic/Latino
   - Multiracial
   - Other

17) What is your marital status?
   - Single, never married
   - Married
   - Divorced
   - Separated
   - Widowed

18) How many children do you have?
   - None
   - 1
   - 2
   - 3
   - 4
   - 5
   - More than 5 children

19) What branch of service were/are you affiliated with?
   - Army
   - Navy
   - Air Force
   - Marines
   - Coast Guard
   - National Guard

20) How many years of service did you obtain?
   - 1
   - 2
   - 3
   - 4
   - 5
   - More than 5 years of service

21) Which of the following best describes your reason for leaving?
   - Injury
   - Politics within the military
22) What was your rank at discharge, or (if active) what is your current rank?
- Private
- Sergeant
- Sergeant Major
- Major

23) With which generation(s) of veterans, other than your own, do you most strongly identify? (Indicate all that apply)
- Iraq/Afghanistan
- Gulf War (Desert Storm)
- Vietnam
- Korea
- WW II
- Other

24) From which generation(s) of veterans, including your own, have you found support for your transition to civilian life?
- Iraq/Afghanistan
- Gulf War (Desert Storm)
- Vietnam
- Korea
- WW II
- Other

25) If you would like to be entered into a drawing to win a gift card, please enter your email address below. This information will only be used to select winners; emails will not be used in the analysis of the results or passed along to any mailing lists.

____________________________________________________________
Appendix C

Introductory Letter to Questionnaire Population

Subject: Veterans – Help Your Fellow Veterans Succeed in College.

Dear Veteran:

This questionnaire is to promote veterans’ academic success. By completing this questionnaire, you are helping improve the quality of life for other veterans.

You are admired for your courage and dedication to our country and everything you sacrificed for us. I think highly of veterans in my family, in my community, and especially those student veterans earning a college degree. I believe that any veteran should earn a degree without struggling financially, emotionally, or academically on or off campus. My goal is to improve the college experience for student veterans and help them succeed academically. Help me improve the experience for first-year veterans in college.

You are being asked to participate in this questionnaire on veteran’s academic success in college. The information in this questionnaire is being collected as part of my doctoral dissertation at the University of Toledo. The questionnaire is being sent to all first-year veterans in higher education in the state of Ohio. This information will be useful to college and university faculty and staff, education policy makers and law makers in order to improve the first-year experience for veterans in college.

By clicking here, you will find a questionnaire soliciting information about your experiences; it should take you less than 10 minutes to complete, and I am not asking for your name, social security number, or any other personal information. All the information obtained will be kept strictly confidential, and your choice to complete the questionnaire is voluntary.

Again, thank you for your service and I hope you sense my research is important to our veterans. If you know of other first-year veterans in the state of Ohio pursuing a degree, feel free to pass my introductory email and questionnaire link to them.

Please contact me with questions regarding my research at claire.wetterau@rockets.utoledo.edu or contact my dissertation chair, Dr. Ron Opp at ron.opp@utoledo.edu.

Best,

Claire Semer
Ph.D. Candidate, University of Toledo
Subject: Veterans – Help Your Fellow Veterans Succeed in College.

Dear Veteran:

This questionnaire is to promote veterans’ academic success. By completing this questionnaire you are helping improve the quality of life for other veterans.

I believe that any veteran should earn a degree without struggling financially, emotionally, or academically on or off campus. My goal is to improve the college experience for student veterans and help them succeed academically. Approximately two weeks ago you received an email from me requesting your assistance. I asked you to participate in this questionnaire on veteran’s academic success in college. The information in this questionnaire is being collected as part of my doctoral dissertation at the University of Toledo. The questionnaire is being sent to all first-year veterans in higher education in the state of Ohio. This information will be useful to college and university faculty and staff, education policy makers and law makers in order to improve the first-year experience for veterans in college.

By clicking here, you will find a questionnaire soliciting information about your experiences; it should take you less than 10 minutes to complete and I am not asking for your name, social security number, or any other personal information. All the information obtained will be kept strictly confidential, and your choice to complete the questionnaire is voluntary.

Again, thank you for your service and I hope you sense my research is important to our veterans. If you know of other first-year veterans in the state of Ohio pursuing a degree, feel free to pass my introductory email and questionnaire link to them.

Please contact me with questions regarding my research at claire.wetterau@rockets.utoledo.edu or contact my dissertation chair, Dr. Ron Opp at ron.opp@utoledo.edu.

Best,

Claire Semer
Ph.D. Candidate, University of Toledo
Appendix E

The University of Toledo Institutional Review Board Approval

To: Ron Opp, Ph.D. and Claire Semer  
   Department of Higher Education

From: Barbara K. Chesney, PhD., Chair  
       Kamala London, Ph.D., Vice Chair  
       Walter Edinger, Ph.D., Chair Designee

Signed: Date: 06/07/12

Subject: IRB #107896  
Protocol Title: Exploring the Academic Success of Student Soldiers

On 06/07/12, the Protocol listed below was reviewed and approved by the Chair and Chair Designee of the University of Toledo (UT) Social Behavioral & Educational Institutional Review Board (IRB) via the expedited process. The Vice Chair and Chair Designee noted that a waiver of written consent has been granted. This action will be reported to the committee at its next scheduled meeting.

Items Reviewed:
• IRB Application Requesting Expedited Review  
• IRB Approved Cover Letter (version date 06/07/12)  
• IRB Approved Survey(s) (version date 06/07/12)

This protocol approval is in effect until the expiration date listed below, unless the IRB notifies you otherwise.

Only the most recent IRB approved Consent/Assent form(s) listed above may be used when enrolling participants into this research.

Approval Date: 06/07/12  
Expiration Date: 06/06/13  
Number of Subjects Approved: 300

Please read the following attachment detailing Principal Investigator responsibilities.