THE RELATIONSHIP BETWEEN STUDENT SUPPORT AND ACADEMIC SUCCESS FOR STUDENT VETERANS AT A SAMPLE OF IVY LEAGUE INSTITUTIONS

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Dedication

This dissertation is dedicated to all the Soldiers, Marines, Sailors, and Airman who served this great nation with distinction since its inception. In particular, this is dedicated to the men with whom I shared the battlefield; our valor will be remembered while our enemies forgotten. Finally, I thank God for SSG Cherry, SGT Beasley, SGM Banks, and MSG Matos-Colon who paid the ultimate price to defeat the enemy.

> "It is foolish and wrong to mourn the men who died. Rather, we should thank God that such men lived." GEN George S. Patton Jr.

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Abstract

Student veterans (SVs) represent a diverse and understudied sample of the college student population. Educational institutions are attempting to ascertain actions required to facilitate SV success on their campuses. The purpose of this study was to analyze a sample of the SV population at Ivy League institutions to understand the SVs' engagement, academic resource use, and non-academic resource use. This dissertation examined the frequency of use of specific resources provided by institutions and their effect on SV grade point average (GPA) and feelings of inclusion. This cross-sectional quantitative research dissertation created a unique survey instrument to ascertain the answers to four specific research questions. A total of 183 respondents participated in the study, and statistical tests were conducted on raw data collected. Chi-square analysis was conducted between the SVs and the national data of traditional college students to identify statistically significant differences in collaborative learning and student-faculty interaction. Differences in collaborative learning were found in "explain[ing] course material to one or more students," "prepar[ing] for exams by discussing or working through course material with students," and "work[ing] with other students on course projects or assignments." SVs reported at a higher level that they "sometimes" engaged in these activities. In terms of student-faculty interactions, the SV sample yielded significant differences in "talk[ing] about career plans with a faculty member" and "work[ing] with a faculty member on activities other than coursework" compared to national comparisons. Again, SVs reported higher responses of "sometimes" compared to their national peers. One-on-one interactions with faculty members and remedial skills programs were academic supports used by SVs that had moderate correlations with self-reported GPA. Yet, this correlation did not have a large coefficient (only 0.011) when a multiple regression model was conducted. This dissertation also measured the use of non-academic supports and their relationship with feelings of inclusion. Most veterans reported feeling included on campus (78.7%). Engagement with the educational benefits resource officer showed to be moderately correlated with feelings of inclusion. A binary logistic regression model revealed that use of this specific resource yielded a 15.5% higher chance of inclusion. This dissertation also asked the respondents to report requested resources they wish to be provided by their institution. Qualitative research coding methods were utilized to create frequency counts of these responses. Generally, responses indicated that most SVs did not request additional resources provided by their HEI; however there was evidence of a desire for a (a) Student Veterans Resource Office, (b) creation of student veterans groups, and (c) further remedial academic skills programs. As a result of the present study's findings, campus leaders can better focus their resources to improve the GPA and feelings of inclusion in the SV population: encouraging collaborative learning, increasing student-faculty interaction, maintaining efforts to process educational support programs provided by the Department of Veterans Affairs, and creation of both remedial academic training and student veteran resources offices are all courses of action to take. With the number of SVs attending higher education on the rise, colleges and universities will need to adapt current practices to refine services to best SVs on campus.

THE RELATIONSHIP BETWEEN STUDENT SUPPORT AND ACADEMIC SUCCESS

FOR STUDENT VETERANS AT A SAMPLE OF IVY LEAGUE INSTITUTIONS

CHAPTER 1: INTRODUCTION

A small and unique subsection of the college student population are student veterans (SVs). SVs are diverse in terms of college experience. Some have previous college credits and will transfer their military transcript into an institution, while others arrive on campus with no credit hours (Falkey, 2014). While 73% of higher education students in the United States fall under the non-traditional definition of college students, residential liberal arts colleges have approximately 82% traditional college students on their campuses (NCES, 2017). When SVs arrive at these residential liberal arts colleges, they face many challenges that traditional college students do not. Some of these challenges include physical disabilities such as Traumatic Brain Injury, and mental disabilities such as Post-Traumatic Stress Disorder (PTSD; Falkey, 2014). Beyond disabilities, studies also show that SVs may bring a need for remedial education especially in terms of mathematics, reading, and writing (Bannier, 2006). Research has shown the need for remediation is not exclusive to that subset as some traditional students also arrive to postsecondary institutions with comparable needs (Rey, 2009)

Institutions are beginning to address some of the issues facing veterans on campus by creating resource centers for SVs (American Council on Education, 2020). Anecdotally, my personal experience as a veteran in college is best described as welcoming; however, higher education institutions (HEIs) have not truly tapped into my needs as a student veteran. Conversations with other SVs indicate that my personal experience is common. Based on this personal experience and the lack of study on support structures for veterans on campus, this study sought to ascertain potential courses of action that can be taken by institutions to better support veterans on campus. Solutions need to address both academic challenges and non-academic challenges. Anticipated outcomes occurring from instituting supports for veterans on campus could include increases in the grade point average (GPA) of the SVs and in graduation rates.

Non-academic challenges and consequences of military service, such as PTSD and the difficulty of transitioning out of the military, have been widely studied in the psychology and counseling disciplines. Conversely, little research has been conducted to identify what additional services should be offered to facilitate veteran graduation. Psychology and counseling research on SVs has shown empirically that rates of PTSD, lack of comradery on campus, and a feeling of disconnectedness with peers currently plague the veteran community during their time as college students (Elliott et al., 2011). Higher education institutions need to address supports for these non-academic challenges, as current research has shown that higher education is one of the main transitional devices used by veterans to enter the civilian world (DiRamio et al., 2008).

Understanding the need for campus support for SVs and their integration into college communities requires background awareness on the process of separation or discharge from military service for veterans. Different definitions of military terms help provide context for this research. Discharge from the Department of Defense means the service member is released and no longer has additional responsibilities to their specific branch of the military; separation, on the other hand, means that the service member is released from their branch of service and still holds responsibilities to that branch. Those responsibilities may include time in the Individual Ready Reserve, which may require the service member to reenter the military in the event of large-scale conflict. Regardless of the service member's status in terms of discharge or separation, the process can take anywhere from 30 days to up to 12 months, depending on the service member's individual situation. On the final day of service, the service member is provided a DD-214, which is a physical document stating the type of discharge or separation, days of service, awards received, and military education completed. Once service members receive their DD-214, they are on their own in terms of direction, financial resources, and support. This sudden freedom can be daunting. The contents of the DD-214, specifically the type of separation or discharge, determines what educational resources are available for the veteran. Specifically, any discharge or separation that occurs as a result of Honorable, General Discharge Under Honorable Conditions, Medical Separation, or Other Than Honorable discharge will result in the veteran being eligible for Department of Veteran Affairs resources including medical and educational benefits. Service members receiving a Dishonorable Discharge are unable to receive educational benefits.

Due to the overwhelming lack of support given to veterans post-separation or discharge from the military, colleges and universities often become the first step for veterans in transitioning into society. Reintegration challenges specific to veterans have been studied in great length by psychological researchers. For example, research found that approximately 60% of SVs have a disability rating through the Department of Veterans Affairs (VA; Student Veterans of America, 2021. Hester (2017) found the lack of access to mental health services provided by the VA has led to increased suicide rates in reintegrating veterans. Beyond suicide, multiple aspects of reintegration are problem areas for veterans. A case study by Elnitsky et al. (2017) identified the domains of individual efficacy, interpersonal, community, and societal interactions to be factors that can either assist or detract from a veteran's ability to successfully integrate back into society. Transitioning to civilian life is complicated for veterans who often view the military as a family, which they now have lost due to their discharge or separation

(Ahern et al., 2015). Ahern and colleagues (2015) also found that veterans felt out of touch with on the college campuses they entered post-separation. This alienation was exacerbated as the cultures of HEIs are built on a different ethos than that of the military.

In terms of academic challenges, most research to date on SVs focused on GPA and graduation rates (Student Veterans of America, 2021). According to a census conducted by the Student Veterans of America, 80% of SVs attend 4-year public and private institutions, earning an average GPA of 3.39. Furthermore, graduation rates for SVs at 4-year colleges (54%) align with the national average for student graduation (53%) and are higher than other adult learners (39%). The completion rates for SVs, however, mask some of the life challenges they face compared to traditionally aged students. For example, many SVs have families by the time they arrive on campus, while others arrive with service-related disabilities. As returning adult students, these competing forces in SVs lives tend to make completion of college significantly more difficult.

This population currently needs colleges and universities to focus more of their resources on understanding SVs' distinct challenges (Herrmann et al., 2008), and recent research identified resources that could support SVs. For example, Vanterpool (2021) explored ways that student veteran resource offices can enhance the SV experience at HEIs by offering support in writing resumes and networking with potential employers post-graduation. Furthermore, assisting in understanding and accessing eligible VA benefits were identified as a key resource that HEIs could provide. Lopez (2013) studied demographic variables of SVs, identifying potential forms of campus programming to provide support. Their study argued that SVs add diversity to college campuses, as approximately one in five SVs are Black or Hispanic, and the majority of SVs

(62%) are first-generation college students, with 39% eligible for federal Pell grants alongside their GI-Bill benefits.

Beyond this research focused on SV support, however, HEIs are left with little guidance on how to use existing resources to better support the academic and non-academic challenges of this student population. This study will attempt to fill this knowledge gap by collecting survey data from currently enrolled SVs to determine their needs and the services they access, using this information to offer suggestions for change. According to the VA (2019), the recent changes made to the Post-9/11 GI-Bill has the potential to increase SV enrollment throughout all levels of higher education. Growth in the SV community will exacerbate the academic and non-academic issues specific to this population.

The intended population for this study includes SVs at 4-year public and private Ivy League institutions. Many HEIs have created student veteran resource offices (SVROs) to support the SV population. A review of the mission and vision statements of seven SVROs located at Ivy League institutions highlights how each of these offices vary drastically. For example, some offices highlight their academic supports such as tutoring, while others emphasize non-academic supports, such as mentoring and providing access to on campus mental health resources. Importantly, not all 4-year colleges and universities have created SVROs. This study will survey SVs at institutions that are part of the Ivy League Veterans Council (ILVC), some of which have created SVROs.

Statement of the Problem

Historically, HEIs have had concerns working with veterans on campus. The post-World War II era witnessed a sharp increase in veterans utilizing the 1944 GI-Bill, requiring cultural changes on college campuses (Clark, 1998; Kim & Rury, 2007). For example, the college culture prior to WWII was one of high society; post-WWII, students from different walks of life were able to attend due to the GI-Bill (Clark, 1998). The current use of Post-9/11 GI-Bill benefits mirror the original GI-Bill with an uptick in veterans taking advantage of the opportunity (VA, 2020). HEIs have been unprepared to recruit SVs and the needs they bring to their campus (Ackerman et al., 2009). Specifically, there has been a lack of support services to assist veterans in administrative challenges, social anxiety, and transitioning into a civilian environment.

To address these shortcomings in support, some HEIs have created SVROs to cope with soldier-to-student challenges. Due to policy and structural differences across universities, it is unclear how the operations of these offices have been accessed and what further services might be offered in the future based on student veteran needs.

Attention to issues of diversity and inclusion on college campuses has increased over the last decade. Some SVs-of-color are included in these efforts, and are also supported if they are low-income students or first-generation students. However, there is a lack of attention to SVs as a population of focus in diversity, equity, and inclusion efforts. Understanding more about how to support SVs can build on other programming to support inclusion on campus.

HEIs and educational research related to academic success has a diverse set of dependent variables. Dependent variables of academic success have often been measured using retention rates, completion rates, GPA, and labor market outcomes for their students; research pertaining to SVs has focused on GPA. For instance, Semer and Harmening (2015) examined significant factors at HEIs affecting SV’s GPA. To further expand on Semer and Harmening’s (2015) work, this dissertation will used GPA in this cross-sectional quantitative design.

Theoretical Framework

Tinto's (1975) Integration Model informed the structure and shape of this study. SVs often have a non-traditional route to college as adult students who are transitioning (or have transitioned) through reintegration into society after military service (Terry, 2018). Due to this non-traditional route, Tinto's (1975) model of student retention assists in identifying concepts of SV integration on campus; thus, Tinto's (1975) model was adapted for the present study to support the data analysis of this study.

Tinto (1975) formulated a theoretical model explaining the process of interaction between institutions and individuals that ultimately contributes to student reasons for dropping out of college. Tinto (1975) focused on social and academic integration for students on campus and how these elements contributed to retention. Tinto noted that HEIs are made up of social and academic systems that lead directly to dropout decisions. He also included the concept that individuals can focus more on academics or social integration, which could also affect dropout decision rates.

This study uses Tinto's (1975) theory to specifically focus on SVs. His model focuses on social and academic integration, and the current study centers on the academic and non-academic resources provided to SVs. GPA will be assessed to better understand the resources' effects on academic success, and their non-academic success will be measured by self-reported feelings of inclusion. The literature review in Chapter 2 provides more depth on both these theories.

Research Questions & Research Hypotheses

The goal of this study is to better understand the types of resources being provided to SVs, and the effectiveness of those resources towards academic and non-academic success. Despite little research existing on various facets of potential academic success (Osagie, 2016) and non-academic success (Vanterpool, 2021), there has been no research that measured these resources' effectiveness from an SV perspective. Therefore, the following research questions (RQs) and research hypotheses (RHs) have been crafted to this end:

RQ1: How are SVs engaging in collaborative learning and student-faculty interactions?

RH1: SVs will more engage with classmates and faculty at higher rates than traditional students.

RQ2: Which resources provided by HEIs were most effective for SVs in terms of academic success?

RH2: SVs will place high importance on one-on-one interaction with faculty and will show a higher predictive property on GPA.

RQ3: Which resources provided by HEIs were most effective for SVs in terms of non-academic success?

RH3: Non-academic resources that veterans require will primarily focus on GI-Bill processing, faculty advising, and creation of a club to support social interaction. The providing of these resources will show a higher predictive property on non-academic success and inclusion.

RQ4: Which resources do SVs desire HEIs to provide to increase their academic and non-academic success?

RH4: SVs will request more one-on-one meeting time with faculty and administration to further their academic and non-academic success.

Research Hypotheses

Each of the above research questions have corresponding research hypotheses derived from anecdotal evidence as well as literature listed in Chapter 2 of this study. RH1 states that

SVs have higher engagement with peers and faculty than their traditional student counterparts. To prove or disprove this hypothesis, data will be collected using items derived from National Survey of Student Engagement (NSSE). This hypothesis was developed as SVs are viewed as adult learners and are intrinsically motivated to engage in college as their motivations for attending differ from their traditional student counterparts. Furthermore, some literature has shown that feelings of comradery continue within veterans' post-military service thus supporting this hypothesis.

RH2 states that SVs will place high importance on one-on-one instruction. These three academic services appeared in literature (Vanterpool, 2021). One-on-one instruction time occurs in the context of office hours provided by professors, as these interactions provide the veterans a chance to ask questions without the eyes of traditional undergraduate students focused on them.

RH3 states non-academic resources that veterans require primarily will focus on GI-Bill processing, faculty advising, and creation of a club to support social interaction. GI-Bill processing is the cornerstone of non-academic services provided by HEIs. Without proper and timely processing, SVs will be unable to pay tuition and fees associated with their college enrollment. Furthermore, SVs rely on their Basic Allowance for Housing to pay rent, as they are generally too old or prefer not to live in dormitories at their respective HEIs. Second, SVs the researcher works with indicate that faculty advising was imperative to their success. This support was important to SVs given their lack of familiarity with the processes of enrollment, as well as which courses should be prioritized in order to matriculate as fast as possible. SVs reported a desire to complete their degree programs quickly, as they are entering the job market later in life compared to their traditional student counterparts (LePorte, 2013). Finally, RH3 states that formal offices or informal clubs can encourage social interaction between SVs.

RH4 states that SVs will largely prefer non-academic success programming to support higher levels of inclusion. From my experience with fellow veterans, they view undergraduate education as “another deployment” or “the mission that needs to be accomplished.” In this case, the veterans indicated that while the academic stressors of undergraduate education at their public and private ivy institutions were high, their military service background, values, and military training helped them complete their coursework. Since the military is a goal-oriented organization that places an interest on mission success, the SVs seem able to use their previous experiences to handle the difficult course load and content. Conversely, they indicated that social integration, and its related independent variables, is currently underserved by HEIs. This problem of underservice is exacerbated by the fact that the SVs feel this is the most important aspect of success and inclusion. Therefore, RH4 predicted a larger group of SVs in the survey population will feel the same about the desire for inclusion.

Significance of the Study

This study made four significant contributions to the body knowledge in this area. First, it will provide empirical data to inform practitioners, educators, and policymakers on how to best serve the SV subset of the student population. There are multiple studies that examine GPA of SVs (see Falkey, 2014; Fuentes, 2013; O’Rourke, 2013), but none that examine what best supports SVs in their academic programs. Second, the study will yield campuses with SVRO statistical data to better inform their use academic and non-academic resources. While not all respondents will attend HEIs with an SVRO, the results of this study can still inform practice regarding which supports are most valued by SVs. For HEIs contemplating the addition of an SVRO on campus, the findings from this study can inform their understanding of SVs’ needs and provide a successful organizational model for an office. All HEIs in the present study belong to the ILVC and have marketing material describing their institution as "veteran friendly." Espousing that their campuses are veteran friendly presupposes that these HEIs are investing resources to help SVs; however, these offices may not know exactly which resources are most effectively helping support the veterans on campus. Third, this study provides HEIs a feedback loop on their efficacy in terms of their SV programs. By conducting a survey gauging SV priorities, the resulting data can provide HEIs with a needs-based assessment for this population. Finally, this study helps transform institutions into better sources of support for SVs attempting to transition to civilian life.

Since studies have shown that higher education is often the first stop in a veteran's transition to civilian life (e.g., Ackerman et al., 2009), HEIs can prioritize their efforts more effectively when use the veteran experience to inform offerings. Society will ultimately benefit from veterans being better equipped to fulfill their potential as college graduates. Utilizing quantitative methods, variables will be analyzed to ascertain the different types of resources desired by SVs, and those they identify as most helpful in supporting their time as college students. Further comparison between responses and existing literature will be conducted to highlight the correlation with testable measures of academic success, such as GPA and graduation rates. Furthermore, non-academic resources will be compared to findings in existing literature to determine if survey responses align with testable measures of diversity and inclusion. This in-depth analysis will provide HEIs and their SVs organizations with specific areas needing support to improve the academic and non-academic progress of the SVs. Faculty and administration will also benefit from this study, better tailoring their organizations to aid this traditionally underserved population.

Definitions of Terms

There are multiple terms which need definition and clarification for this study to be consumed by the academic population. These definitions fall into two categories: terms that need specification and military jargon.

Terms Requiring Specification

The following terms will be used throughout this study.

Post 9/11 GI-Bill. The Post 9/11 GI-Bill is the legislation offering veterans of the armed forces financial compensation for their education. This term will be used and further defined primarily in Chapter 2 when describing the history of the legislation. Furthermore, this bill provides context for the situation in which SVs find themselves. The original GI-Bill emerging in 1944 has undergone several iterations over time (LePorte, 2013), thus requiring the distinction of the present bill here.

Separation and Discharge. Discharge from the Department of Defense means the service member is released and no longer has additional responsibilities to their specific branch of the military; separation, on the other hand, means that the service member is released from their branch of service and still holds responsibilities to that branch.

Student Veteran. Within this study, the term student veteran (SV) is defined as students who are enrolled in undergraduate programs and meet all the requirements of the definition of veteran previously mentioned.

Student Veteran Resource Office. This term references any formal organization within the HEIs whose mission and vision statements are worded to specifically assist SVs. Web-based research shows that approximately 60% of HEIs contain some form of a student veteran resource center. The author's current institution, William & Mary, has a Student Veteran Resource Center, which is also a member of the ILVC. The ILVC is a 501(c)3 that connects student veteran resource centers between ivy league institutions. Participants in this study will primarily come from institutions who belong to the Ivy League Veterans Council; however, some respondents will be SVs at HEIs unaffiliated with the Council.

Transition. This term refers to the process which veterans undergo directly following their separation from the military. The term will primarily be used when discussing the constructs within the conceptual model, as it is a common term to describe the transition process that all college students (regardless of veteran status) undergo.

Veteran. This study will use the term veteran based on the Department of Veteran Affairs' (VA) definition with some notable additions. United States Code defines a veteran as "a person who served in the active military, naval, or air service, and who was discharged or released therefrom under conditions other than dishonorable" (Title 38, 2019. This definition will be expanded to include not only active service in the United States Army, Navy, Marine Corps, Air Force, Coast Guard, and Space Force, but will also include service in the Reserves, Air or Army National Guard, or worked in a uniformed role within military academies in the United States.

Military Jargon

Several military-originated terms that influence SVs are also used in the study.

DD-214. A Department of Defense Form #214 (DD-214) is the form given to veterans that describes all military training, time of service in the military, type of discharge, and date of separation from the military. This is the most important form for transitioning veterans, as it is used for medical insurance, GI-Bill benefits, and is given to employers after final separation.

Discharge Type. This is the type of discharge a veteran earned upon separation. There are various types of discharge ranging from dishonorable to honorable, retirement, or medical retirement. This type of discharge is important mainly as employers and HEIs wish to know which type of discharge was earned from the veteran. HEIs' desire to know the discharge type occurs as certain discharges will make SVs ineligible to use GI-Bill Benefits; specifically, Bad Conduct and Dishonorable Discharges are barriers to veterans utilizing VA benefits.

End Time of Service. End Time of Service (ETS) is the term used by members of the military to describe the date on which they leave the military. The ETS date is also used in military parlance to present the date of release from military service.

Notice of Basic Eligibility. Notice of Basic Eligibility (NOBE) is the form provided by the military, informing the VA of the services the veteran is eligible for based on their time of service and discharge type.

Permanent Change of Station. Permanent Change of Station (PCS) refers to military members changing their duty station. For instance, a soldier can PCS from Ft. Bragg, NC to Ft. Belvoir, VA.

Literature Review Summary

Chapter 2 of this dissertation provides an in-depth look at the related literature supporting the problem statement, research questions and hypotheses, and data analysis. A review of the GI-Bill and its various iterations provide historical context, which is the largest non-academic success resource provided to SVs. Chapter 2 provides the overall strategy of collecting and analyzing primary and secondary sources to form the theoretical underpinning of this dissertation. In addition, an extensive review of the characteristics and attributes of SVs describes both the position of SVs in HEIs and obstacles they face within the higher education environment.

Literature related to student transition and integration issues facing SVs is included to better understand the obstacles they encounter as they seek to achieve their personal academic goals. Explaining these challenges further bolsters the significance of this quantitative research study. Next, the theoretical framework underpinning this study is reviewed in detail. Tinto's (1975) Integration Model provides a framework for analyzing student veteran integration. Tinto's (1975) work, originally conceived to explain dropout rates that I adapted to specifically cater to the SV population. Finally, Chapter 2 reviews the academic and non-academic support elements currently provided to SVs at HEIs throughout the nation. A summary of the current research on the existence and prevalence of these supports in higher education is included.

Methods Summary

Chapter 3 outlines the research design of this quantitative dissertation. This dissertation used a cross-sectional online survey research approach to answer the RQs provided above. A sample of current ILVC student veterans (n =183) responded to a survey that collected information on academic and non-academic success resources utilized by SVs. Of the 11 institutions in the ILVC, five had students that responded to the survey.

The data instrument, which was specifically designed for this dissertation, was an online survey measuring two constructs and includes measurement of approximately 10 items (see Appendix C) related to academic and non-academic supports. The instrument also asked SVs to report on their feelings of inclusion on campus. Qualtrics was used for online survey data collection. Chapter 3 also discusses the data analysis processes used after data collection. Specifically, descriptive statistics, logistical regression, and multiple regression occurred to answer the RQs and assess the validity of the RHs. Chapter 3 also reviews the ethics process utilized in conducting this research. Finally, limitations, delimitation, and assumptions are discussed in detail.

CHAPTER 2: REVIEW OF RELATED LITERATURE

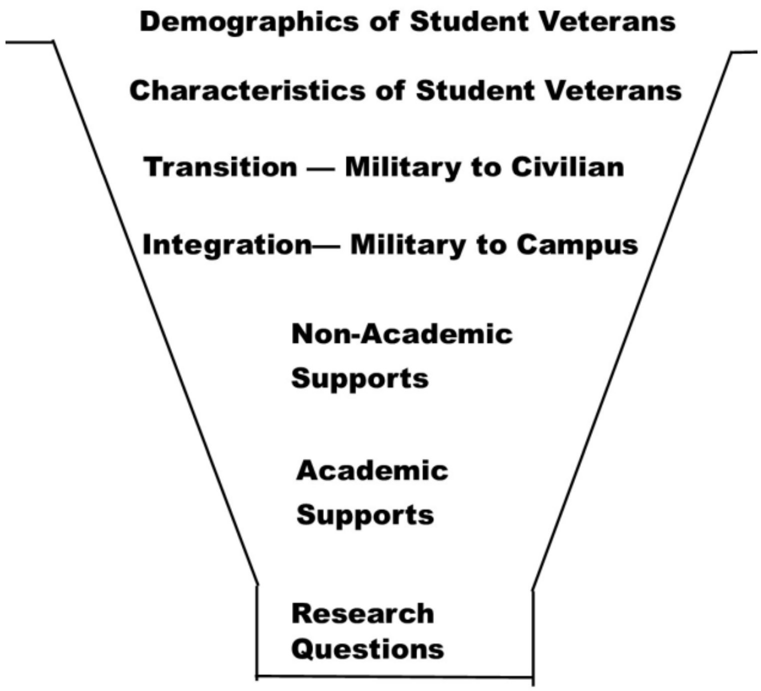
This chapter reviews the literature on college student veterans (SVs). The research presented will cover characteristics of SVs, the transition of individuals from service members to SVs, the integration of SVs into Higher Education Institutions (HEIs), and the non-academic and academic supports offered to and used by SVs.

Literature Review Strategy

The following literature review was compiled through the use of refereed journal articles, dissertations, books, reports, government resources, databases, and websites. When searching for literature in various databases, the following search terms were used: veteran; student veteran; academic success; non-academic success; retention; GI-Bill; nontraditional student; adult learner; and Grade Point Average (GPA). Databases included are the William & Mary Swem Library Electronic Database, ProQuest, and ERIC. Figure 1 shows the construction of the research funnel followed by the author during this process.

Figure 1

Research Funnel



SV Characteristics

Given the increasing number of SVs using their GI-Bill benefits, it is important to highlight the demographical differences of these students compared to their civilian counterparts. According to Ackerman et al. (2009), SVs vary in a multitude of ways from other college students. Situationally, approximately 73% of SVs are male with the remaining 27% are female (VA, 2019); this contrasts with traditional students in terms of biological sex. According to the National Center for Education Statistics (NCES, 2017), most students in colleges and universities are female (57%). These distinctions of the SV population are likely to mirror the sexual breakdown of the military, bringing more males to campuses.

Beyond biological sex, most of the SV population enter higher education after their time in military service. Approximately 85% of SVs are 24 to 40 years old, which is older than traditionally aged college population of 18 to 22 years old (DataLab, 2022). This dissertation focused on residential 4-year institutions with traditionally aged students representing most undergraduates; this puts SVs on campus in the minority as adult-aged students (over 25). When noting these age differences, it is imperative to consider the differences in experience SVs bring and their responsibilities outside of the classroom. For example, Radford & Wun (2009) reports 47.3% of college SVs are married with children. To underscore this further, approximately 14.5% of the SVs with children are single parents.

In addition to age, there are distinct socioeconomic differences between SVs and traditional students. Eighteen to 24-year-olds entering college for the first time are often supported financially by their parents. In contrast, due to their age and previous work experience, SVs are adults who often financially support themselves, receiving benefits provided by the VA. A significantly higher number of SVs utilized the Post-9/11 GI-Bill than any other educational benefit provided by the VA. Table 1 below shows the breakdown of educational benefits used by SVs in 2019.

Table 1

Educational Program Usage by SVs

Program	2019	%
Post-9/11 Veterans Educational Assistance Program	714,346	90.04
Montgomery GI-Bill - Active Duty	22,166	2.79
Montgomery GI-Bill - Selected Reserve	44,356	5.59
Reserve Educational Assistance Program	299	.03
Survivors' and Dependents' Educational Assistance	12,075	1.52
Post-Vietnam Era Veterans Educational Assistance Program	78	.009

SVs are also more likely to be first-generation college students, with 68% of SVs being the first in their immediate families to enter the college environment (VA, 2020). Comparatively, 46% of 4-year college students are first-generation (Deye, 2021).

Further distinguishing themselves from other students, most SVs are treated as transfer students by their HEIs as they arrive at 4-year institutions due to credits earned during service (O’Herrin, 2011) or credits earned due to their military experience (American Council on Education, 2009). The Department of Defense (DOD), alongside the VA, have created multiple preprograms to assist SVs in transferring their military experience into college credits.

A segment of colleges within the higher education industry cater to this population (e.g., Central Texas College, Governor’s College, Oklahoma University, etc.) and market actively at Walter Reed Hospital and Ft. Sam Houston. This practice recruits soon-to-separate service members to bolster university budgets via tuition revenue, also ensuring veterans receive a college degree. Completing an associate degree allows SVs to transfer into 4-year institutions with 2 years completed. Given this possible route at the time of separation, a full 43% of SVs enter public 2-year institutions compared to the 21% that directly enter 4-year HEIs (Radford & Wun, 2009). Sparks (2020) conducted an exploratory study and found that veteran transfer students are marginally less likely to succeed than non-veteran transfer students. There is no current data on which disciplines SVs study in HEIs. However, regarding usage of benefits, Holian and Adam (2020) found that 43% of SVs used undergraduate education benefits and another 36% used benefits towards a graduate program.

Veteran Transition

According to the literature, the major issue that veterans encounter when arriving on college campuses is their ability to transition into civilian society (Rumann & Hamrick, 2010).

Veterans might experience challenges with social interaction, relating to others, and might often experience a loss of identity (DiRamio & Spires, 2009; Rumann & Hamrick, 2010). Most veterans have over six years of time in their military service, during which they become deeply immersed in a culture focusing on values such as meritocracy, esprit de corps, and comradery (VA, 2020). The process of separation from military service is generally a 30– to 90–day process, which provides the veteran a limited amount of time to fully integrate into the social and cultural norms of civilian space. Furthermore, little to no attention is given via the DOD or VA to what the veterans experience in terms of their transition out of the service. Often, veterans are solely provided their DD-214 and reminded of support options offered by the VA. This lack of support combined with the immediate nature of separation often sets up veterans to fail once separation is completed (Alvarez, 2008a). Consequences of a failed transition can be dire; according to The U.S. Department of Housing and Urban Development (2021), 37,252 veterans throughout the nation are currently experiencing homelessness.

Due to these circumstances, most veterans see higher education as an opportunity to not only to receive a degree, but to acclimate to their new non-military culture. Even though attending college is an exciting opportunity for veterans, the transition to civilian life is sometimes complicated by attending an HEI directly after military service. This is largely due to differences in culture between the military and higher education; military culture espouses intense feelings of honor and duty, versus higher education's culture focused on individual educational growth (Ackerman et al., 2009 Demers, 2011). For example, the Army's values of loyalty, duty, respect, selfless service, honor, integrity, and personal courage are the core tenants of the moral compass infused into each soldier (Army Values, 2022). These values are emphasized across the service branches; however, through a web-based research, these values are not found in many mission statements of HEIs that are providing the sample for this quantitative study. For example, consider the mission statement of William & Mary (n.d.-b):

> A preeminent, public research university grounded in the liberal arts and sciences since 1693, William & Mary is a vibrant and inclusive community. Through close mentoring and collaboration, we inspire lifelong learning, generate new knowledge, and expand understanding. We cultivate creative thinkers, principled leaders, and compassionate global citizens equipped for lives of meaning and distinction. William & Mary convenes great minds and hearts to meet the most pressing needs of our time. (para. 2)

This institution's mission statement emphasizes inclusiveness, teamwork, and creation of knowledge. These core tenants of the mission statement are important; however, they are misaligned with those espoused in branches like the US Army (e.g., loyalty, duty, respect, etc.). This concrete example showcases the potential shift SVs face when transitioning from military service into a HEI like William & Mary.

While some institutions' mission and vision statements may not align with values of the military, some HEIs have begun to create *values* statements. For example, William & Mary recently created a statement of values page (William & Mary, n.d.-b). According to their website, William & Mary's values include belonging, curiosity, excellence, flourishing, integrity, respect, and service. A comparison of these values shows closer alignment with the military (e.g., US Army). However, based on web-based research, several schools (including William & Mary) seem to be the exception to the rule; of the 11 HEIs being researched only four have values statements that are closely aligned with the military values mentioned.

Naphan and Elliot (2015) found that SVs reported a large appreciation for the structure found in the military and missed the group cohesion that characterizes the military ecosystem.

Furthermore, SVs report that traditional college students have no understanding or respect for their prior military lives (Olsen et al., 2014). This lack of social cohesion felt by SVs on campus was reflected in their inability to relate to traditional students. A sense of culture shock contributed to a decrease in veteran graduation rates at HEIs throughout the nation. With SVs' issues associated with transition at hand, HEIs have found themselves needing to allocate resources to alleviate some of these stressors, better supporting SVs.

The issue of transition for SVs into the college environment is multifaceted. The major stressors facing SVs include the inability to interact with or relate to traditionally aged college students, coupled with their self-experienced loss of identity formerly entrenched with being a soldier (Lewis & Sokolow, 2008). Collins (1998) argued that combining the SV population and the traditional student population leads to a multitude of issues. Collins (1998) states that the difference in values between civilians and veterans can cause a culture gap that can hinder SV success.

In terms of identity, the military promotes the role of the group over the individual, values teamwork, and believes in meritocracy (Demars, 2011). Conversely, on college campuses, there is a strong emphasis on individual performance, inclusion of various student identities, and rewards for personal achievement versus team accomplishments. Some argue that college environments shut out dissenting opinions. Clashing worldviews often place SVs in a difficult position, which could prevent them from showing their authentic self to others (Collins, 1998). For example, Lim et al. (2018) studied faculty and SV interactions and found that faculty and staff had multiple points of misunderstanding and misjudgment of SVs. Lim et al. (2018) suggested faculty assign SVs as leaders within the class to alleviate some of the cultural differences between veterans and their traditional student counterparts. Promoting leadership roles among SVs leads to higher feelings of inclusivity among SVs (Lim et al., 2018).

Contributing to SVs' feelings of exclusion on campus is the fact that a significant percentage of SVs served in a combat setting. This combat experience, according to Demers (2011), gives SVs a different perspective on the world than that of the traditional student. SVs have been found to better cope with high stress levels compared to traditionally aged college students (Elliott et al., 2011). The personal experiences of combat deployments affect the daily lives of SVs, particularly in terms of their physical or mental disability status (Elliott et al., 2011). The numbers of disabled veterans on college campuses are not well known, as many veterans do not self-report issues such as PTSD; however, Grossman (2009) offers that approximately 4% of SVs have some form of visible or non-visible disability. To further complicate combat deployment's effects on SVs is the sense of loss many feel. Whether it is lost time with family while deployed, or loss of fellow service members killed in action, this sense of loss has been well-documented in the SV population (Demers, 2011).

The second major contributor to transitional issues is bureaucracy found in both the VA and within HEIs. During service in the military, there is a distinct lack of bureaucratic structure. The rank structure (e.g., service members having the titles of Sergeant, Lieutenant, etc.) undermines the existence and power of a typical bureaucratic structure found in other civilian organizations (Naphan & Elliott, 2015). Military decisions are made and followed in a vertical structure with little to no discussion of efficacy. The only metric used by service members in terms of orders is whether the order is lawful. All service members understand that they must follow all lawful orders and are required to disobey unlawful orders (e.g., an order given without authority; U.S. Congress, 1958). This lack of logic is apparent in how the VA and HEIs operate.

In terms of the VA, accessing educational benefits can be an arduous task for which many veterans are not equipped. Specifically, there is a difference on whether the SV should utilize the GI-Bill or Veteran Readiness and Employment Chapter 31 benefits Vocational Rehabilitation Program. Without speaking directly to a benefits subject matter expert, the process can create delays, and in some cases, discourage veterans from attending college (Ackerman et al., 2009).

Colleges and universities present their own bureaucratic hurdles. Few HEIs have instituted student veteran resource offices (SVROs) to assist. According Cook and Kim (2009), only 22% of HEIs have created these resource offices. To their credit, many HEIs have hired administrative personnel to process the GI-Bill or Vocational Rehabilitation paperwork to ensure both the HEI receives the tuition revenue and that the SV receives their Basic Allowance for Housing. Yet Semer & Harmening (2015) highlighted how SVs are wildly underprepared for how to apply and use their educational benefits, with many veterans receiving incorrect information upon their separation from the service (Wasley, 2007).

As reviewed in this section, there are major challenges that SVs face during their transition out of the military. Social interaction, the speed of separation, change in values, and a loss of structure and identity forces SVs to make several transitions simultaneously. Coupled with the lack of organized support from the DOD and the VA, successful transition is a daunting task. If done poorly, veterans may face consequences such as homelessness. To assist SVs in transition, this study will examine theoretical frameworks focusing on transition.

Theoretical Framework of Transition

In terms of transition, the bulk of SV-related literature is based on Schlossberg's (1995) Transition Theory. This theory, focusing on all students attending college, is predicated upon a definition of transition as an event or nonevent that results in changed relationships, routines, assumptions, and roles. Schlossberg (1995) identified three types of transitions: anticipated events, unanticipated events, and nonevents. Anticipated events are those that have an expected nature (e.g., when the service member separates from the military). Conversely, unanticipated events are events that are unpredictable (e.g., a combat injury that coerces mandatory separation). Finally, nonevents are transitions that occur because something did not happen. For instance, perhaps the VA has yet to process essential paperwork that would aid the veteran with benefits. This systematic failure may result in the veteran being unable to claim educational benefits, and result in the missed opportunity to go to college (i.e., a nonevent).

An important facet of Schlossberg's (1995) theory involves the individual's ability to cope with the occurring transition. The ease or difficulty that an individual faces is determined by their assets and liabilities in terms of the four "Ss" of the model. In this theory, the assets are positive sides of the four Ss and the liabilities are the negative outcomes in the four Ss. The four "Ss" include: Situation, or the circumstances of the transition; Self, or the individual's transition management abilities and outlook; Support, or the network of support available; and finally, Strategies, representing the individual's ability to use multiple coping strategies (Schlossberg, 1995). Every individual must account for the four Ss and assign positive, negative or neutral scores to each.

Situation

Situation addresses the type of transition (e.g., anticipated, unanticipated, nonevent; Bailey-Taylor, 2009); a trigger or action sets this transition into motion. For example, a trigger for SVs would be both the separation from the military and the entrance into the college environment. Timing is also an important element in the situation: the individual must subjectively evaluate the transition in their life. Schlossberg (1995) argues that the individual's positionality entering a change has a significant influence on outcomes and on the success of transition. Specifically, if the transition is sudden and the individual cannot plan, there is significant probability of the transition going poorly.

Depending on the type of transition, an SV may or may not have had any input on the timing of the transition. Control is the next function of *situation*, concerning whether the SV had control of their situation (Schlossberg, 1995). Within the positionality of the SV, they may or may not have had control of separation; however, they might be able to control which HEI they choose to attend. Regarding admission decisions, studies (e.g., Taylor et al., 2016) have shown that most HEIs are more willing to accept veterans on campus due to transfer credit, guaranteed tuition revenue, and SVs' high value as part of the community. While the SV has little influence over the decision, their likelihood of acceptance makes this experience a small threat to control.

The *situation* also includes whether an individual is experiencing a role change. This type of change influences this transitory process as every SV is transitioning from a military environment that builds a strong identity based on contributions to the team or squad to that of a college student identity based on individual efforts and performance (Griffin & Gilbert, 2015). Once arriving on campus, SVs are put into a precarious position of having to rapidly discard their old identity and pick up their new role as a college student. The final component of *situation* is the duration of the transition or how long the individual will take to transition.

Self

Schlossberg (1995) defined *self* by the attributes, characteristics, and personality traits of the individual. First, Schlossberg (1995) emphasized the importance of physical and mental health of the individual. As stated earlier, SVs could have many physical and mental health disabilities that are different from that of traditional students (Griffin & Gilbert, 2015). Next, Schlossberg (1995) suggested that the individual reflect on their personality strengths and weaknesses. Strengths of SVs include but are not limited to work ethic, strong moral compass, warrior ethos, teamwork, team building, and loyalty (Demars, 2011). Finally, Schlossberg addressed personal and demographic characteristics such as gender, age, socioeconomic status, race, and other individual factors that could influence an SV's ability to transition effectively.

Strategies

Strategies is the third S of Schlossberg's (1995) model and describes the coping mechanisms individuals need to successfully transition (Bailey-Taylor, 2009). Coping mechanisms include the number of strategies the individual has and their ability to use them. The ability to adapt application of these strategies is crucial. Finally, Schlossberg (1995) focused on the ability of individuals to creatively cope by changing the situation or managing reactions to stress related to the transition.

Support

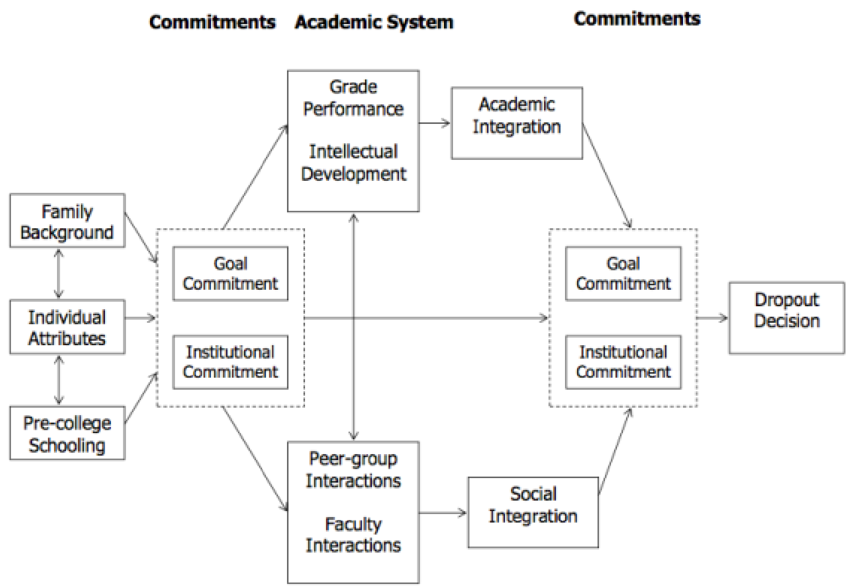
Support is the final S and illustrates the types and amount of support available to the transitioning individual (Schlossberg, 1995). Supports include financial, friends, institutions, communities, and peers (Bailey-Taylor, 2009). Beyond the types of supports, however, Schlossberg (1995) focuses on the means of receiving the support, whether it be in-person or electronic. Finally, support can be positive, negative, or neutral.

Transition Into Integration

Once service members transition into their civilian role and as SVs, they also must integrate on campus. Tinto's (1975) Student Integration Model, originally postulated for all college students, highlights the role of integration. Figure 2 illustrates Tinto's (1975) Model of how student integration occurs on campus, and consequences (e.g., dropping out) if not done successfully. For SVs, integrating on campus occurs concurrent to the veteran's integration into civilian life.

Figure 2

Tinto's Integration Model



Note. This model was produced by Tinto in 1975, summarizing his integration model. From "Dropout from Higher Education: A Theoretical Synthesis of Recent Research", by V. Tinto, 1975, *Review of Educational Research, 45*(1), p. 95.

Tinto (1975) argued that an incoming student entering college has three different attributes affecting integration: family background, individual attributes, and pre-college schooling. Family background includes social status, high school experience, and socio-economic status. Individual attributes include demographics such as race and ethnicity. Finally, pre-college schooling includes high school education, community college education, or vocational training. This study will also include military training under the umbrella of vocational training.

Once consideration of these attributes occurs, Tinto's (1975) model shifts focus onto commitments. The first element of *goal commitment* refers to the student's level of expectation, as well as the intensity with which this expectation is held. For example, if a student ultimately desires a master's degree, this signals a student's commitment to their institution at least through their undergraduate level studies, as it is a prerequisite for the master's degree. The second form of commitment is institutional. *Institutional commitments* refer to the financial, dispositional, and time commitments that an individual makes when choosing a certain institution. An example of this includes the financial benefits of a student graduating from medical school. Since there is a significant financial gain by graduating, the student will be more committed to the institution and to completing their degree. Another example could be that of a legacy student; the legacy student may have more commitment to that institution, as members of their immediate family also graduated from a particular institution (Fend, 2020).

Tinto (1975) further theorized two forms of integration that occurs on college campuses. The first system is *social integration*. Here, social integration is achieved by the creation of a social environment that aids in a student's sense of belonging (Strayhorn, 2012). Specifically, Tinto (1975) focused on peer group interactions and faculty interactions with the student. These two factors in social integration have a dynamic relationship with the other half of the model that focuses on *academic integration*. The academic system of the institution consists of grade performance and intellectual development of students. While both systems of integration are important in building commitment on the individual's behalf, these systems often compete for importance. For instance, if a student were to spend too much time on the social side of college life, such as intermural sports, that could take away from the academic system which focuses on academic performance. According to Tinto (1975), successfully balancing both systems of social and academic integration can lead to a lower level of dropout decisions in students.

A focus on both goal and institutional commitment supports students during their academic careers (Tinto, 1975). The strength of the academic and social integrations for students might affect both individual goal and institutional commitment (Tinto, 1975). As illustrated, there is a high correlation between integration and commitment of the student in terms of successfully matriculating through a HEI. According to Tinto (1975), if an individual's commitment to the institution is at the low end, there is a higher probability the student will dropout. However, students may transfer to a different institution to find a stronger level of institutional commitment if their personal goals are strong. On the other hand, if both goal commitment and institutional commitment are low, there is a chance that the student may drop out of higher education all together.

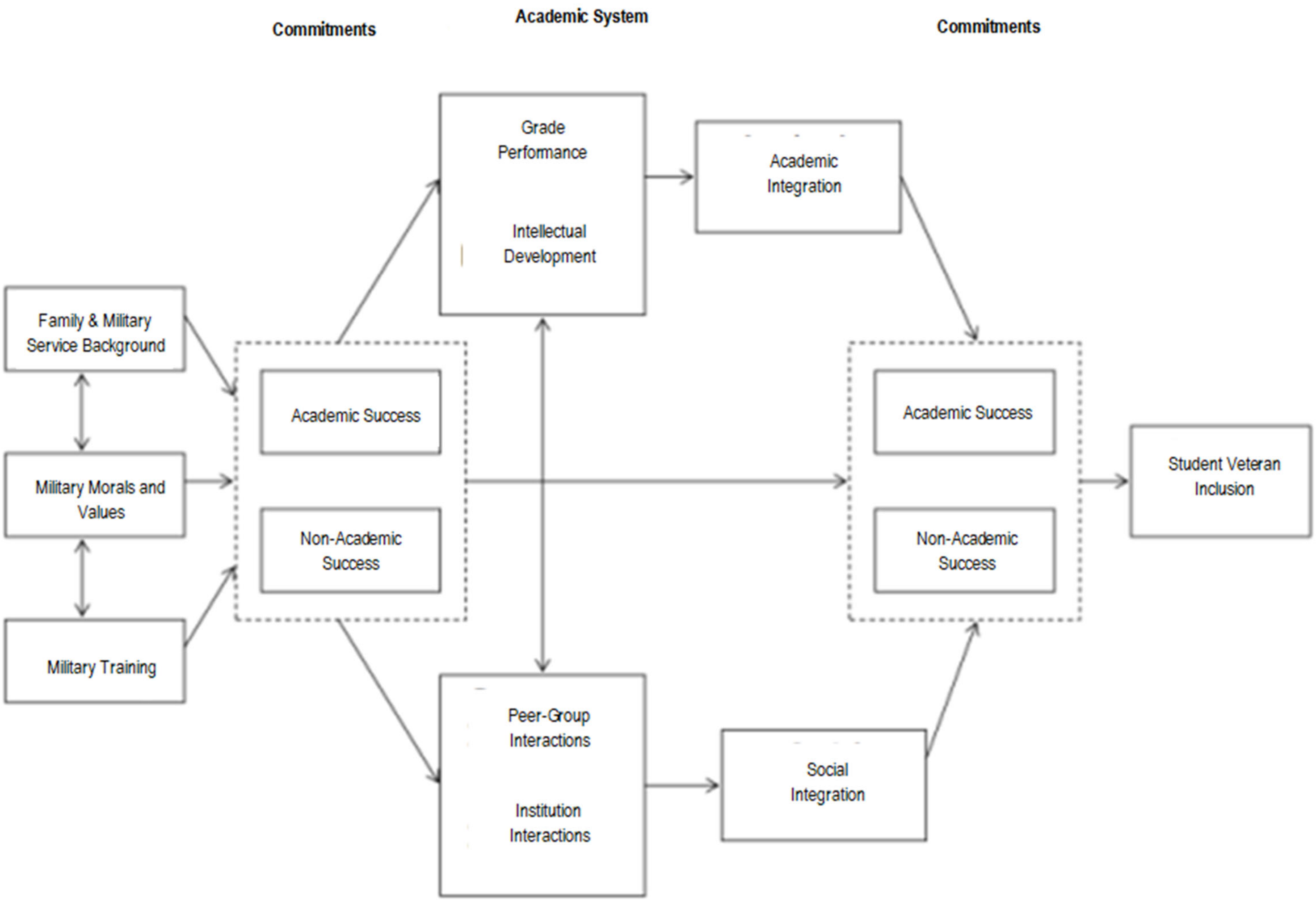
SV Model of Integration

For this study to accurately test and answer the research questions, Tinto's Student Integration Model was adapted to address the student veteran population. Figure 3 showcases this adjusted model, now titled a "Student Veteran Model of Integration." In this adapted model, in addition to the attributes that face nearly all college students, the model is distinct by including military service background, military morals and values, and military training. As adult learners, military service contributes the veteran's prior experiences, influencing how learners connect new learning with prior experiences. Attributes of military service background include number of years of military service, frequency of combat deployments, rank at time of separation, and branch of military service. Despite being unique attributes of individual military service, these distinctions will not be included in data collection, as the study assumes these variations will not have large enough effects on the dependent variables. The author includes military service background under family background, as Tinto (1975) perceived family background to be an important attribute of college students; some SVs come from families with a long history of military service. While family background remains an important antecedent for SVs, SVs have also been molded by their individual service background. Therefore, the survey instrument will ask questions regarding the service background of the respondents, as well as family background. This approach allows for an examination of differences in responses based on combat or non-combat experiences.

In addition to individual attributes, military morals and values are included. Even though each branch of service has its own morals and values, the overall theme is the same amongst the branches. Among all five branches, morals and values center on loyalty, duty, respect, self-less service, honor, integrity, and personal courage. While some traditional students may hold these values and morals, they are characteristics expected of all SVs. Finally, military training is included in Tinto's (1975) construct of Pre-College Schooling; SVs might have specific training that could add to their proficiency in their undergraduate program.

Figure 3

Student Veteran Model of Integration



The second section of Tinto's Model focused on how committed students are committed to both their personal growth and to the university or institution. Within the context of this study, the author distinguishes SV commitment by their academic and non-academic success. Understanding more about SVs' commitment to these successes and the value they place on each will help inform the services they need for success. One measure of academic success is Grade Point Average (GPA). As noted above, Durdella and Kim (2012) investigated the GPAs of SVs versus their traditional student counterparts, finding these groups had marginally similar grade point averages. Thus, GPA serves as an independent variable of interest in this study to gauge outcome success. Non-academic success is influenced by peer-group interactions and actions of the institution (Tinto & Pusser, 2006). Peer-group interactions here focuses on the social interactions between SVs and other students on campus. One source of these interactions are clubs created to bring SVs together. Institutional interactions comprise communication coming directly from the institution to the SVs and interactions with various offices on campus (e.g., financial aid, student affairs). Institutional interactions can also include faculty members' one-on-one communications with SVs, interactions with administrative services to process GI-Bill paperwork, and the student-advisor relationship.

This study focuses on measuring the impact and relationship between the academic and non-academic success constructs, the influence on SVs, and the relationship between the two. Tinto (1975) theorized that academic and social systems compete for student integration on campus, and this study centers on determining whether academic and non-academic systems are more important to the SV population. Of interest in this study is what SVs identify to be most helpful in addressing their needs, and how existing services influence SV outcomes. Ultimately, these competing systems affect how SVs' integration occurs on campus.

The academic and social integrations of SVs influence their academic success. Thus, investigating how these two factors influence student outcomes is central to this research study. Once the factors have been reexamined after data analysis, the dependent variable (SV inclusion) can be evaluated. While definitions of inclusion vary across HEIs, this study will use the definition from the University of Michigan (n.d.), which defines its mission towards inclusion as:

> We commit to pursuing deliberate efforts to ensure that our campus is a place where differences are welcomed, different perspectives are respectfully heard and where every individual feels a sense of belonging and inclusion. We know that by building a critical mass of diverse groups on campus and creating a vibrant climate of inclusiveness, we can more effectively leverage the resources of diversity to advance our collective capabilities (para. 4).

While Tinto (1975) was focusing on inclusion and its relationship to drop out rates, this study will instead focus on feelings of inclusion based on non-academic resources provided to SVs.

Exploration of Support

A key outcome of this research is to better understand the on-campus factors influencing SV decisions regarding staying enrolled or not. Schlossberg's (1995) Transition Theory highlights how the move from a member of the military to SV influences the type of experiences veterans have on campus. The literature on student support informs this study.

Non-Academic Supports

In addition to the support provided by the various GI-Bills, other non-academic supports are available on campus. Altschuler and Yarab (2018) posited that there are multiple functions SV service centers offer that might assist SVs, including peer support, counseling, advising, and outreach. These offerings can contribute to SV success, both inside the classroom and on campus. Furthermore, Lange et al. (2016) stated that veteran support services should provide practical and useful services that recognize the individual SV's needs. Creating a cohesive community is a role the veteran service center encourages SVs to embrace on campus (Kaplan, 2020). Lim et al. (2018) stated that clarifying institutional misunderstandings about SVs' diverse backgrounds could prove a valuable non-academic support.

Engagement of SVs has also shown to be a valuable asset in promoting inclusion of SVs. According to Kirchner and Pepper (2020), the creation of a structured engagement system in HEIs can assist veterans in transition into higher education. Their qualitative study placed focus on information sharing, community building, and professional development for SVs (Kirchner & Pepper, 2020). Unfortunately, their work did not look at the efficacy of these types of engagement. To fill this gap in knowledge, the present study will attempt to quantify engagement's ability to increase feelings of inclusion. Another type of non-academic support provided by institutions are career transition services. Robertson and Eschenauer (2020) found that confidence in readiness for transition from school to vocation increases when SV resource centers provide such services.

History of GI-Bill Benefits

Beginning with the Morrill Land Grand Act of 1862 and followed by the 1944 Serviceman's Readjustment Act, the ideology of supporting veterans in higher education was born. The Morrill Land Grant Act provided aid in the form of charging land grant institutions to provide the nation with training grounds for the military, while the Serviceman's Readjustment Act was the first open push of veterans onto college campuses (Altschuler & Blumin, 2009). Shortly after the Serviceman's Readjustment Act was implemented, the name of "GI-Bill" was adopted, due to soldiers and veterans commonly referred to as G.I.s. The original GI-Bill was created by President Roosevelt to assist in the adjustment of veterans from wartime operations to support their integration into the civilian economy (Thelin, 2004).

To support this transition, returning veterans were first given $300 (roughly $4,737 in 2022) toward their tuition with an additional $50 ($790 in 2022) a month for veterans to support themselves financially while attending higher education (Altschuler & Blumin, 2009). While the GI-Bill was instrumental in providing SVs educational financial resources, the aims of the bill were wider than student veteran support. Among the other priorities were the creation of hospitals and other rehabilitation facilities, government-backed loans to purchase a home or farm, and giving the VA the ability to assist veterans in getting employment (Altschuler & Blumin, 2009).

Even though the other benefits of the GI-Bill were beneficial, the educational benefits are considered the most influential in terms of assisting SVs and higher education. The effects of an influx of approximately $5.5 billion in tuition revenue brought new life into campuses after WWII (Olson, 1973). After WWII, the student populations in higher education changed dramatically (Clark, 1998). HEIs were no longer bastions of the elite; veterans entered campus changing the culture, expanding the degree programs, and demanding HEIs to now support millions of new students (Clark, 1998). After the passage of the GI-Bill, the community college system expanded to help accommodate the surge in college enrollments. Truman's vision was to provide access to higher education in every community and to charge lower rates of tuition, thus allowing more veterans to receive vocational certificates and associate degrees (Rumann & Hamrick, 2010). The effects of Truman's order continue today as community colleges enroll more veterans than traditional 4-year institutions (Radford & Wun, 2009). As mentioned, Radford & Wun's (2009) quantitative study highlighted how 43% of SVs attend public 2-year institutions and only 21% attend public 4-year institutions. Furthermore, 12% of SVs attend private nonprofit institutions, with an additional 12% attending private for-profit HEIs (Radford & Wun, 2009). In 2019, the Department of Education showed that 6% of all undergraduate students identified as currently serving in any component of the military or identify as a veteran of military service.

After WWII, there were two major revisions to the GI-Bill in response to the Vietnam War and the Cold War. The first change following Vietnam was the Veterans' Readjustment Benefits Act, and the second, occurring after the Cold War, was the Montgomery GI-Bill, which was later updated in 1984 (Alschuler & Blumin, 2009). The former increased financial benefits to all veterans over a 10–year period, with the stipulation that the veteran serve in the military for a minimum of 6 months. The Montgomery GI-Bill offered an optional benefit in which veterans were permitted to give up a percentage of their pay for 1 year; in return, these veterans would then receive that money back when it was time to separate and go to college (Alschuler & Blumin, 2009). The reserved funds could then be used for tuition and housing at an HEI of their choosing. In tandem with the Montgomery GI-Bill, which only funded veterans of active duty, the Montgomery GI-Bill – Selective Reserve was created in 1984 to support Reservists and National Guard members.

In response to Operation Iraqi Freedom and Operation Enduring Freedom, the Post-9/11 GI-Bill was signed into law in 2008. This law specifically focused on veterans of the war on terror as it provided financial support for college and housing for individuals with 90 days of service after September 10, 2001. Specifically, it afforded full tuition and fees for attendance at an in-state institution. However, it did reduce benefits for out-of-state institutions: the VA determined the mean tuition price for all public schools in a state, and that amount of money was provided for veterans' tuition to an out-of-state tuition. The housing allowance was also changed in the Post-9/11 GI-Bill. Cost of living for the zip code in which the HEI's campus was located was used to calculate the amount of housing allowance given to a veteran. Finally, there was a $1,000 stipend provided to each student per year to cover books and supplies. The length of the benefit was also changed to 36 months. If the SV lost funding in the middle of the semester, the SV would pay prorated tuition. Fifteen years after separation, any unused educational benefits would be forfeited (Department of Veterans Affairs, 2019). Furthermore, the Post-9/11 GI-Bill provided the tuition benefits directly to the institution. This changed college options to SVs and allowed for the possibility of attending more expensive institutions (Caspers & Ackerman, 2012). This growth in numbers is evident as enrollment numbers in elite institutions have raised 13% over the last decade (Caspers & Ackerman, 2012).

The current form of the GI-Bill is called the Forever GI-Bill and was signed into law in 2017 by President Donald Trump. The actual program, named the Survivors' and Dependents' Educational Assistance, expanded upon the Post-9/11 GI-Bill by eliminating the 15-year rule on length of time between separation and use of benefits. It increased the number of work-study programs available and gave veterans priority enrollment in educational counseling (Department of Veterans Affairs, 2017). Additionally, it allowed educational benefits that were forfeited by a service member who was killed in action to be transferred to an individual in the service member's immediate family (Department of Veterans Affairs, 2017). These changes made in the Forever GI-Bill are retroactive, covering all service members regardless of separation.

Multiple studies have shown that the number of college SVs arriving on campus is rising (e.g., NCES, 2017). According to the VA, there has been an increase in educational spending from 2015 to 2019. In addition, the VA College Toolkit reports that between the years of 2015 and 2019, approximately 550,000 veterans have claimed their earned benefits. Deye (2014) approximates the number of SV undergraduates comprising 4% of the overall student population. Beyond that, with the anticipated military drawdown under the Biden Administration, the VA is expecting a larger number of veterans to be separating from military service in the next decade.

Academic Supports

There is scant research on the type of academic supports that best serve SVs (Jones & Fox Garrity, 2017). Most of the research that exists in the field examines the existence of SV service centers (a non-academic source of support); however, there has been little research that quantitatively examines how these centers improve academic achievement. Although studies such as Durdella and Kim (2012) examined specific types of college experience variables, such as collaborative work or extracurricular engagement, there is little research that shows how these affect GPA.

As there is no research examining academic achievement and SVs, the literature on nontraditional student success informs this study. Tinto (1975) states there are multiple characteristics that differentiate academically excelling nontraditional students from those that do not. An important distinction when examining academic performance is between retention and success. Berger et al. (2012) explains that retention is a goal of the institution while success belongs to the student. Focusing on student success, Tinto (1975) states that academic success should not only be based on fixed metrics such as GPA, but on how the individual students view themselves in terms of being successful. Factors Tinto (1975) focused on were graduation, transferring to a higher ranked HEI, or getting an opportunity to become involved in their chosen profession. For this current study, the main areas of interest of SV integration focuses on GPA and feelings of inclusion.

Studies have shown multiple barriers that are specific to nontraditional students. Schatzel et al. (2011) concluded that cost, family, time, and conflicts with work were the leading contributors to a lack of academic success. In addition, nontraditional students often find themselves residing in a dichotomy: not only do they have to be adults with responsibilities, but they must also excel in the academic environment (Petty, 2014). This two-lives approach is exacerbated by potential feelings of ostracization, as they struggle to relate to their 18–24-year-old colleagues (Exposito & Benheimer, 2012). Along with social incongruence, if the nontraditional student is unprepared for their current environment, the possibility of early academic struggles may result in program dissatisfaction (Bean & Metzner, 1985).

To combat these barriers faced by nontraditional students, research suggests continuous enrollment could be a path towards success (Donhardt, 2012). Scoring academic successes (e.g., providing feedback, grades, etc.) early and often, primarily in the first year, has shown promise in increasing success and retention (Sperry, 2015). Donhardt (2012) found that overcoming the financial difficulties of higher education is a strong predictor of academic success in nontraditional students. Fortunately for the SV population, financial factors are mostly alleviated by the nonacademic support of the GI-Bill (VA, 2020). Course attendance is also shown to raise matriculation rates (Bautsch, 2014). While there is little research to determine the relationship between SVs and class attendance, it is reasonable to predict that due to the military instilled values, SV attendance would be high. Finally, GPA, specifically high school GPA, has been shown to be the best predictor of academic success of first-generation college students entering higher education (Sawyer, 2013). This study intends to understand how the combination of non-academic and academic supports influence SV experiences and what offerings veterans view as integral to their success.

Summary

This chapter reviewed the literature informing this study and its research questions. First, this chapter defined and described the characteristics specific to the SV population. From biological sex, socioeconomic status, educational benefits used, and educational goals, this chapter provides the reader an overall snapshot of the subjects of this study. Secondly, the literature review explored the specific difficulties faced by SVs in transitioning both from the military and integrating into the higher education environment. Coverage of the application of Schlossberg's (1995) Transition Model as a theoretical framework for examining the transition process occurred.

Once the SV transitions, both out of the military and into a HEI, SVs face more challenges of integration into their new environment. Thus, Tinto's (1975) Integration Model serves as an additional lens through which to examine SV integration. Even though Tinto (1975) examined the integration process contributing to student dropout rates, this study focuses instead on an integration framework with the outcome variables being GPA and feelings of inclusion.

Finally, this chapter examined the current educational landscape in terms of academic and non-academic supports provided to SVs. This study will, in turn, use this foundation and statistically quantify the existence and efficacy of these supports in the surveyed respondents.

CHAPTER 3: METHODS

This chapter outlines the research methods used within this dissertation. It includes the research design, characteristics of the sample, explanation of the instrument, methods of data collection, types of data analysis, and methods of accounting for missing data and outliers. This chapter concludes with delimitations, limitations, and assumptions within this dissertation, ethical issues that may arise, and the timeline of study.

Summary of Research Design

Quantitative research involves the examination of a phenomena by collecting numerical data that are then analyzed by using statistics and other mathematically based methods (Creswell & Creswell, 2018). A quantitative design was chosen for this study for a multitude of reasons. As Chapter 2 demonstrated, a significant amount of research into the student veteran (SV) population at higher education institutions (HEIs) used qualitative research designs (e.g., DiRamio et al., 2008). Knowledge in both the qualitative and quantitative realms are often needed to fully understand phenomena in the environment; therefore, this dissertation research fills a gap in the literature by conducting a survey-based study.

Qualitative research finds its strengths in understanding reasons, trends, and motivations of individuals studied; quantitative research focuses on data using measurable variables that test for statistical significance and quantifiable relationships among variables in a sample (Creswell & Creswell, 2018). For this research study, the use of quantitative methods and its reliance on statistical methods supports data analysis in addressing the guiding research questions that sought to understand the influence of a range of variables on experiences of SVs.

My background in finance, economics, organizational management, and mathematics provides a knowledge and experience base well-suited for quantitative analysis. Furthermore, members of the dissertation committee have been chosen specifically for their knowledge in quantitative research methods to ensure that this dissertation provides valid and reliable knowledge to add to the extant literature base on the SV population.

This quantitative dissertation used a survey research design to answer its four research questions (RQs). The research questions guiding this study follow:

RQ1: How are SVs engaging in collaborative learning and student-faculty interaction?

RQ2: Which resources provided by HEIs were most effective for SVs in terms of academic success?

RQ3: Which resources provided by HEIs were most effective for SVs in terms of non-academic success?

RQ4: Which resources do SVs desire HEIs to provide to increase their academic and non-academic success?

Survey research design provides the best design to answer the RQs for many reasons. First, survey research is often deployed in social science research to explain phenomena and create new knowledge (Creswell & Creswell, 2018). Furthermore, survey research is a systematic process that first collects data and then analyzes that data to answer specific research questions, determining whether the research hypotheses were correct (Creswell & Creswell, 2018). Third, quantitative survey research creates replicable and practical knowledge, which increases both validity and reliability (Boeren, 2018; DeVellis, 2022). Specifically, ecological validity, or the measure of how a test predicts behaviors in a real-world setting, is high in survey research designs (Creswell & Creswell, 2018). The survey instrument in the present study was assessed in terms of reliability by using a pilot study. The method for this pilot survey is discussed later within this chapter.

As noted above, the bulk of prior social science research focused on SVs used qualitative research methods. These studies provided value in identifying how SVs experienced the transition to college (Alshuler & Yarab, 2018), how they succeeded as measured by their GPA (Durdella & Kim, 2012), and their levels of inclusion (Kaplan, 2020; Kirchner & Pepper, 2020). This early work provides a basis for the constructs used in this quantitative study focusing on identified resources and their influence on academic and non-academic success.

Given the lack of prior surveys used to study SVs, an original instrument was created to collect data. The survey instrument provided a multi-pronged approach to address the research questions. First, the instrument collected demographic information to ascertain background attributes of the respondents. This demographic information included three sections: individual respondent demographic information (respondent's age, biological sex, race, military experience, HEI, year in college, and age); family background (family college experience and family members' military experience); and pre-college experiences (High School GPA, number of credits transferred into their current HEI, and types of financial benefits and scholarships currently being used).

Next, the instrument measured levels of engagement between the respondent and their respective HEI. These items have been taken from the National Survey of Student Engagement (NSSE). NSSE (n.d.-a) annually collects data from undergraduate students and attempts to ascertain how freshman and senior students participate in programs and activities HEIs provided.

Finally, the instrument examined academic supports provided by HEIs to the SVs. These items, derived from literature and HEIs' student veteran resources offices (SVROs), asked SVs which of these resources they used during their academic careers. Following this same process, the second set of questions in the survey outlined existing non-academic resources and queried respondents about their personal utilization at their HEI. Unfortunately, each of the HEIs who provided respondents do not provided the same resources as each other. While there are some resources that are common throughout all HEIs, some resources are specific to only a few of the institutions (e.g., Student Veterans Resource Office). Respondents were asked about usage of resources that are available at all HEIs. Finally, the instrument asked about participants' GPA and feelings of inclusion.

As a predictive study, this dissertation sought to use the above noted resources, showcasing their potential relationship on the outcome variables of GPA and inclusion. Multiple regression modeling identified the services most influential in SV support, in terms of GPA and feelings of inclusion. By conducting these statistical analyses, this study helps inform institutional policies and procedures. The two outcomes, or dependent variables, of GPA and feelings of inclusion yielded significance as is presented in Chapter 4. Future research is needed to ascertain the extent and effect of that relationship.

Data collection occurred using a sample of SVs enrolled at HEIs affiliated with ILVC. This group was chosen for multiple reasons. First, the sample of the ILVC was easy to access, as the author's affiliated institution is part of this organization. Secondly, chapters of the ILVC are in elite institutions, which provided a look at resources offered at upper echelon institutions within higher education. Finally, the ILVC contains a large enough sample of student veterans to conduct valid and reliable data analyses. Data analysis employed a range of statistical tests and models to answer each of the research questions guiding this study. Details on both data collection and analysis follow.

Data Collection

Data collection included information gathered from an administered survey sent to eligible participants through gatekeepers at the participating ILVC institutions. The distribution of the survey instrument was influenced by multiple checkpoints. SVs attending one of the 11 institutions participating in the ILVC were asked to participate in the survey. William & Mary's participation in the ILVC served as a point-of-entry to the approximately 650 SVs that are enrolled in a ILVC institution. Membership in the ILVC is done on the HEI level, meaning that while SVs at HEIs are members of their respective on-campus SV groups, it is those veterans groups that belong to ILVC. The ILVC is an organization, founded in 2015, with the expressed purpose of advocating for undergraduate recruitment of military veterans, campus integration, academic growth of SVs, networking, and post-graduate success of SVs (Ivy League Veterans Council, n.d.). Leadership of the ILVC is comprised of veterans volunteering to oversee the ILVC's nonprofit administration. The ILVC consists of 11 chapters at "elite" HEIs throughout the nation. Greater explanation of their location and size is provided in the sample section discussed later.

The survey instrument, with instructions and informed consent, was provided to each of the ILVC gatekeepers. These gatekeepers handled distribution of the anonymous online survey link to SVs on their campuses. This purposive convenience sampling method was used to solicit participation in this study. Purposive sampling was selected, as the purpose of the study pertains to the chosen sample; results obtained will answer the present study's research questions. Furthermore, a convenience sampling method was used, as finding contact information for individual SVs who meet the listed characteristics is strenuous. Most HEIs in the ILVC indicated they could not provide email addresses for their SV populations due to the Family Educational

Rights and Privacy Act. Thus, through approval from gatekeepers, they were requested to distribute the survey to the approximately 600 SVs on the 11 campuses involved.

Dillman et. al.'s (2009) work on mail and internet surveys helped guide best practices for conducting the online survey. From his foundational work, details regarding dates and times of reminder emails were provided to these gatekeepers, with the intention of helping the response rate to the instrument. The use of gatekeepers aided in the response rates as these individuals are known in their respective SV communities, and therefore trusted by the SVs they serve (Dillman et al, 2009; Gürsakal & Bozkurt, 2017). A Qualtrics online survey collected responses and prepare them for transfer to IBM SPSS Statistics 24 for data analysis.

A review of the 11 participating ILVC HEIs occurred to assess the type of resources used on the various campuses in support of SVs. The research team reviewed the compiled list to identify both academic and non-academic resources as available resources to list on the survey instrument.

Population & Sample

This dissertation viewed all SVs currently enrolled in higher education as the population of this quantitative work. By comparison, the sample in this research included the SVs enrolled in the HEIs affiliated with the ILVC.

A total of 11 HEIs served as gateway to the approximate 600 SVs who are the targeted sample of this study. These institutions were selected as they are the participating chapters of the ILVC. Table 2 shows the number of SVs participating in the ILVC.

Table 2

Approximate Number of Student Veterans in the Ivy League Veterans Council

Institution	2013	2014	2015	2016	2017	2018	Change Since 2013	% of Current Undergraduate Enrollment
Brown	12	11	10	12	17	17	5	0.24%
Columbia	0	360	408	375	422	443	83	21.10%
Cornell	1			12	24	41	40	0.28%
Dartmouth	14		17	23	25	36	22	0.82%
Harvard		4		3	6	8	4	0.12%
MIT	2		1	4	10	11	9	0.24%
Princeton	1	1	1	1	5	12	11	0.22%
UPenn	35	35			14	15	-20	0.15%
Yale	2	3	4	11	12	10	8	0.17%
Stanford		10	16	21	23	30	20	0.42%
Total	67	424	457	462	558	623	182	

Note. Missing values indicate missing data from ILVC records

Table 2 represents the undergraduate SV population at each of the HEIs. Table 2 does not include data past 2018 or the number of SVs at William & Mary, as the university joined the council in 2019. Therefore, the number of potential respondents is higher than indicated in Table 2. Data were not available on the specific number of SVs that exist at these 11 HEIs between 2019 and 2021, making the survey population unknown at time of study. As noted in Chapter 1, this dissertation focuses on individuals who are undergraduate students, identify as SVs who served in the Active Duty Component of the Department of Defense, and are full-time students. A survey question is included to filter out ineligible participants by asking about inclusion criteria. Respondents found ineligible were sent to the end of the survey and thanked for their participation. Furthermore, the population included veteran alumni from these institutions; as seen in Appendices B and C, an additional question is included for respondents who have graduated. This item helped ascertain how long, in terms of semesters, the matriculated student veteran spent at their respective HEI.

Participants in this survey study were not restricted by race, ethnicity, age, sexual orientation, disability status, or biological sex. This lack of restriction on participants was made to parallel the DOD's policies for entry into the armed forces. This study departs from the DOD's policies, however, in terms of disability status due to the strong possibility that the change of disability status resulted from time of service, and for some SVs may have been the reason for separation from their military service.

Participants

Participants in this study come from a specific subset of the college student population; namely, the participants came from the SV population at one of the 11 HEIs that are members of the ILVC. The population of interest for this study was veterans who served on active duty. This stipulation recognizes the different military backgrounds of active-duty veterans, reservists, and National Guard veterans. Active duty was chosen as the category of SVs to include because this status provides the greatest level of transition from the military to college and will have implications for how SVs integrate on campus (Schlossberg, 1995; Tinto, 1975). All previous research found during the literature review viewed SVs as a unified block whose branch of service was not emphasized; however, members of different service status lead lives much different from one another. For example, Reservists and National Guardsmen are only on active duty during their initial entry training, commonly known as basic training. After completing training, they are released from active duty and return to their lives as citizens and are only called to active service in times of emergency. Even when called to active duty during periods of emergency, such as a combat deployment or natural disaster, Reservists and National Guardsmen return to their civilian lives when their service requirement is fulfilled.

Beyond experience based on their service status, members of the Reserve and National Guard have different educational experiences. When members of these components are not serving in active-duty roles, they are free to attend HEIs directly after IET. This prior educational experience could affect the incoming knowledge base of these SVs. Reservists and National Guardsmen could have completed IET directly after high school, transferring into a HEI 1 year later than traditional students; while active duty component service members have a larger break in education between K-12 and higher education, given their status.

Active duty service members move directly from IET to their duty station. The active duty component commits service members to a certain number of years of consecutive military service. While the years of commitment are different based on branch of service and rank, these service members immediately begin work in their units and stay there until they permanently change of station or until their contract is complete. Prior to their separation from the service, they enter the first phase of transition back to civilian life; namely, the approaching transitions phase of Schlossberg's (1995) model. According to the Department of Veterans Affairs (2020), 55% of SVs claiming educational benefits come from the active-duty component. Most veterans using benefits were once active duty, and those who decide to attend HEIs are entering as adult learners; it is important to understand how their college experiences are influenced by the resources (both academic and non-academic) available to support them. It remains unknown how having a SVRO on campus serves as a resource for formerly active-duty SVs.

A final criterion for selection of SVs included in the study was that the active-duty veterans were in the enlisted ranks (e.g., Officer, Sergeant, etc.) during their time of service. This requirement of serving in the enlisted ranks avoided including any Officer or Warrant Officer in any branch of the Department of Defense, as these positions have an educational requirement. For example, prior to accepting their commission, an officer must hold a bachelor's degree. Warrant Officers must hold an associate degree prior to their commissioning. Due to this educational requirement of the higher ranks, they fall outside the present study's inclusion requirement of undergraduate college students at a four-year institution. Many SVs, like their traditional student counterparts, enter four-year institutions with college credits in hand. No data are currently available on the percentage of SVs holding college credit prior to entering HEIs, however, after discussions with enrollment professionals, anecdotally this number is well above 75%.

Description of Data Source

The ILVC provides access to 11 HEIs throughout the country, representing approximately 600 potential participants (ILVC, n.d.). The ILVC is a 501(c)3 organization founded in 2015. Its mission is to address and resolve underrepresentation of SVs at elite HEIs. The ILVC attempts to accomplish this bold mission by acting as a conduit between SVs and public and private Ivy League HEIs. By looking at these public and private Ivy League HEIs, this dissertation sought to see how elite institutions are devoting resources to this unique and underrepresented population of student veterans.

Reciprocity

Incentives were provided for participating in this survey. The ILVC has requested that reciprocity be made to respondents in the form of a lottery to acknowledge the time commitment for SVs. Four amazon gift cards, worth $50 each were offered as an incentive for members of the sample to participate. Beyond this lottery, I shared with potential participants my former military service and my status as an SV. As stated in Chapter 2, veterans have a strong feeling of comradery with fellow veterans, and the intention of my disclosure was to hopefully increase the response rate to the survey.

Settings and Locations

Due to the effects of COVID-19, the participating HEIs involved in the ILVC and their students were online during the summer 2021 term. Furthermore, traveling to each of the 11 HEIs to distribute the survey by paper was not possible due to distance and the pandemic. Therefore, distribution of the instrument to the participants occurred virtually. The instruments were not distributed physically through the United States Postal System, nor were there in-person visits to the HEIs being studied to have respondents complete the instrument.

Instrumentation

As previously stated, an original and unique instrument was created to answer the three research questions. This instrument was cross-sectional in nature as it examined data collected at a certain point in time with no post-test at a later date (Creswell & Creswell, 2018). There are no existing instruments that assess SVs' use of institutional resources and their relation to GPA and feelings of inclusion. This survey instrument alone collected data from participants. Using both the literature review in this study and conducting web-based research, I compiled a list of resources (see Appendix A); this list contains the independent variables in the present study. The following sections describe the process of creation, testing, and execution of the instrument.

Constructs and Item Development

In developing a survey, it was first necessary to review the process for item development. DeVellis (2022) outlines a set of eight scale development guidelines that include:

1. Construct definition,

2. Generating an item pool,
3. Determine the format of measurement,
4. Have initial item pool reviewed by experts,
5. Consider inclusion of validation items,
6. Administer items to a pilot sample,
7. Evaluate the items,
8. Optimize scale length.

In the following section, I detail each of these guidelines and review how they informed my survey development.

Construct Definition. Tinto's (1975) Student Integration Model was utilized as a guide for this dissertation; the phrases academic success and non-academic success have been identified as the constructs to be studied. To measure these constructs, GPA is the dependent variable aligning with academic success. Non-academic success was assessed through yes-or-no responses, asking the participants to self-report their feelings of integration and inclusion (Tinto, 1975) in the student population.

Generating an Item Pool. To judge the latent constructs of *academic* and *non-academic success*, multiple items were identified to create an item pool. Web-based research was conducted to identify the current resources that the participating HEIs in the ILVC are providing to SVs (see Appendix A). This examination of the HEI websites and items found inside the literature review determined the types of academic and non-academic resources are being provided to SVs. For example, a non-academic resource provided by each of the HEIs is the existence and meeting of a SVs group. Therefore, this resource was created into an item on the survey instrument for respondents. In the same fashion, items were generated and included in the final instrument, located in Appendix C.

Determine the Format for Measurement. The third step in instrument creation is the format of measurement (DeVellis, 2022). This instrument defined the pool of items in diction that are familiar to both students and SVs. It was important that this instrument was easily understood, as reduction of confusion contributes to the validity of the survey. The language for each item was easily understood, responses to each item were easily understood, and the data collection was continuous.

Initial Item Pool Reviewed by Experts. Prior to data collection, the entire instrument in its entirety was reviewed by both the dissertation chairwoman, dissertation committee members, two research methodologists in the field of quantitative research, and content experts on SVs. One of the research methodologists is a faculty member at the William & Mary while the other is a statistician working for the DOD.

Consider Inclusion of Validation Items. A validation scale or validation items will not be included. Furthermore, Jacoby et. al (1987) explained that the addition of either a validation scale or validation items could have a negative impact on response rate in a cross-sectional survey research design.

Administer Items to a Sample. In lieu of use of validation items, a pilot survey of SVs from institutions within the Commonwealth of Virginia (HEIs not affiliated with the ILVC) was conducted. A reliability analysis on the instrument's findings was conducted prior to administration to a sample. Participants of this pilot were provided from the Virginia Assembly of Veterans. In the mid 2000s and early 2010s, the Virginia Assembly of Veterans was active within the higher education system of the Commonwealth. The Virginia Assembly of Veterans was focused on 2- and 4-year institutions at almost all the HEIs within the Commonwealth, serving a role similar to the ILVC by providing communication, facilitation of activities, and sharing of resources to participating HEIs. Recently resurrected, there are approximately 150 SVs who are active in the Virginia Assembly of Veterans. Even though the Virginia Assembly of Veterans is not formally structured and has within its membership respondents outside of the present study's inclusion criteria, this organization can request SVs to complete the pilot instrument. Questions were added to the pilot instrument to filter out respondents from William & Mary, and the survey will mirror the requirements of the final survey; specifically, participants must have been active duty.

When issuing this pilot instrument there was a N:P ratio (DeVellis, 2022) of at least 6:1, meaning that for each item in the instrument, there were at least six participants. The solicited feedback from the pilot was used to assess the current items for clarity and conciseness. Additionally, the pilot evaluated whether to add new items to the instrument. At the end of the pilot instrument, questions were asked about clarity, ease of use, and any potential content that feel should be included on the final instrument. The final survey instrument was adjusted to reflect the findings of pilot data analysis. The final instrument was included in the submission to the William & Mary Educational Institutional Review Committee (EDIRC), ensuring it did not violate human subject policies.

Evaluate Items. DeVellis' (2022) penultimate step is to evaluate the included items. Statistical analyses were used to identify items with statistical significance in terms of predictive power of future multiple regression models. Feedback from both the pilot and the gatekeepers of the ILVC helped provided feedback regarding the survey instrument's items.

Optimize the Scale Length. The final step in the process in creation of the instrument is optimizing the length. Research suggests that instrument length could have an effect on response rate (DeVellis, 2022). The instrument in Qualtrics was adjusted to show four blocks of questions. The blocks of the instrument are demographics, engagement, academic success resources, and nonacademic success resources.

Survey Administration

As mentioned, an online Qualtrics survey was used for this study. Due to the inability to directly contact participant email addresses, the gatekeepers at the participating 11 HEIs forwarded the anonymous link to the individual participants. These gatekeepers were asked to distribute the link on a Tuesday morning, with follow-ups on Thursday afternoon, and Sunday evening. This timing was selected based on insights garnered from a methodologist at William & Mary who suggested these are the best days and times to distribute the links, as it provides a varied date and time approach to increase participant completion of the survey. These conversations were supported by Dillman et. al. (2009), who was instrumental in producing seminal, foundational research on online surveying in quantitative research. The final distribution plan was as follows (all times are in Eastern Standard Time): Tuesday morning at 0800hrs, Thursday afternoon at 1700hrs, and Monday at 0000hrs. Despite this intended distribution schedule, some of the gatekeepers opted to send out the reminders less frequently to align emails to the SVs on their campuses with regularly schedule monthly newsletters.

Data Storage

During the duration of this dissertation, data were kept secure in several ways. Primarily, data collection and analysis were conducted on a desktop computer located at the School of Education at William & Mary. The School of Education is often locked and secured by the

William & Mary Police. Furthermore, the office in which the desktop is located is always locked unless I am present. Only the administration at the William and Mary and I have access to the office. Additionally, the desktop computer securing the data was password protected. The University Information Technology affiliates and I have access information to this computer. Finally, the desktop is connected to the William & Mary network, meeting all electronic firewall policies associated with the university. Outside work on the data was conducted only on my password-protected computer, which is kept in a locked, secure place. This system of ensuring confidentiality and participant protection will be detailed to EDIRC for approval before completion of the study.

Data Analysis

Data analysis was conducted following the guidance of multiple research works in quantitative methods (Creswell & Creswell, 2018; Morgan et al., 2019; Urdan, 2005). First, data were collected using the survey instrument in Appendix C. Secondly, data were migrated into IBM SPSS Statistics 24. Next, the data was cleaned prior to data analysis.

Data Cleaning, Diagnostics, and Screening

Once the instrument was distributed, data were collected from the Qualtrics website associated with the instrument. These data was then be downloaded into IBM SPSS Statistics 24 to clean the data, assess the existence of outliers, and to identify any missing data. The plan if $n <$ 5% missing data for any item, then listwise deletion occurred was to correct the issue; however, $n >$ 5% multiple imputation or direct estimation methods was used to account for items with a larger percent of missing data. In Qualtrics, the "force response" feature was turned on for the instrument's questions, thus decreasing the likelihood of missing data. Self-reported GPA was recorded as continuous data, which had a minimum (0.0) and maximum range (4.0). Respondents were not allowed to answer the question outside the range.

Once the data were collected and cleaned, multiple statistical analyses was conducted. Descriptive statistics occurred to ascertain frequency counts, central tendency, and standard deviation for items related to demographics, academic, and non-academic resources. These plots and charts were appropriate for the data source as they will give a visual representation, adding ease in interpreting the output. Any items that had a skewness and kurtosis < 1 were considered normally distributed (Field, 2013). For those exhibiting skewness, further examination of the raw data was conducted to determine reasons for skewness and kurtosis, and any effect the reasons may have on validity of the outcome variables.

Skewness was expected, as the sample of SVs was different than the assumed normal distribution of traditional students and of SVs at non-ivy league institutions. As stated in Chapter 1, the expected skewness for RQ1 was the sample leaning towards increased engagement with students and faculty. The findings from the study show this was not the case. However, a skewness in self-reported college GPA did occur.

This dissertation used responses to the survey instrument to predict the outcome variables of GPA and feelings of inclusion. To predict, this dissertation used two regression models. Multiple linear regression modeling examined relationship between the independent variables found in Appendix A, and their linear or curvilinear relationship to the outcome variables of GPA; logistic regression modeling examined the relationship between independent variables in Appendix A and the outcome variable of inclusion.

Alignment of the Research Questions, Data Sources, and Data Analyses

See Table 3 for this study's research questions, their data sources, and data analysis.

Table 3

Research Questions, Data Sources, and Data Analysis

Research Question	Data Source	Data Analysis
RQ 1: How are SVs engaging in collaborative learning and student-faculty interaction?	Survey Instrument	Descriptive Statistics Chi-Square (χ^2)
RQ 2: Which resources provided by HEIs were most effective for SVs in terms of academic success?	Survey Instrument	Descriptive Statistics Reliability Analysis Pearson's *R* Multiple Regression Examine Regression Weights
RQ 3: Which resources provided by HEIs were most effective for SVs in terms of non-academic success?	Survey Instrument	Descriptive Statistics Reliability Analysis Pearson's *R* Logistic Regression Examine Logits and Odds Ratios
RQ 4: What resources do SVs want HEIs to provide?	Survey Instrument	Frequency Counts Explain Responses

Research Question 1

For the first research question, "How are SVs engaging in collaborative learning and student-faculty interaction?", data were collected through Qualtrics and imported into SPSS. Descriptive statistics were used to ascertain central tendency and variation between responses for the eight items pulled from the NSSE survey instrument. Once analyzed, responses were summarized to provide readers with an understanding of how SVs prefer to engage with faculty and traditional students in their classes. To address RQ1 a Chi-Square analysis was conducted. At its core, a Chi-Square test is used to examine the difference between an observed frequency count and an expected frequency count (Urdan, 2005). I used a Chi-Square to examine how many times, or the frequency, that the ILVC sample answered a particular item in a particular way. These frequencies were then compared to what we should statistically expect given the actual responses of the NSSE sample. By conducting this data analysis, this dissertation then displayed the residuals, or differences, between these two numbers.

Research Question 2

To answer the second research question, "Which resources provided by HEIs were most effective for SVs in terms of academic success," a multiple regression model was built based on the responses to the survey instrument to assess their relationship to the dependent variable of GPA. Fundamentally, a multiple regression model is used to predict an outcome, or dependent, variable based on the manipulation of predictor, or independent variables (Urdan, 2005). Regression models ultimately assign values, or coefficients, to show the strength of each predictor variable on the outcome variable.

However, after completing the multiple linear regression, diagnostics occurred to determine the validity of the regression model and to reduce Type 1 Error (Morgan et al., 2019). To ensure that the regression model met both the linearity and homoscedasticity assumptions, residual plots, as well as a Breusch Pagan test, was conducted (Morgan et al., 2019). To ensure there was an independence of errors, a Durbin-Watson was calculated (Morgan et al., 2019). Finally, to ensure a lack of multicollinearity, Variance Inflation Factor was used (Morgan et al., 2019). If there are issues with any of these assumptions, proper remedies will be executed. Ultimately, there were no assumptions violated. I used these tests to reject or fail the second research hypothesis based on the multiple regression model.

Research Question 3

The third research question asked, "Which resources provided by HEIs were most effective for SVs in terms of non-academic success?" This question was answered by similar processes used to answer the second research question. The major difference between the second and third research questions was that instead of multiple regression, logistic regression was used. This change occurred because the dependent variable of feelings of inclusion is measured categorically instead of continuously. With this change in analysis, the assumptions of logistic regression were absent of multicollinearity among predictors, outliers, and there was an independence of errors (Morgan et al., 2019). These assumptions were tested using the same strategy as the multiple regression in the second research question. The results of the logistic regression was displayed in both Logits and Odds in Chapter 4 (Morgan et al., 2019). Another difference between the regressions was the lack of a linear relationship in logistic regression (Morgan et al., 2019). Instead of the line of best fit of multiple regression, the logistic function displayed the slope of the curvilinear line between the independent variables and the dependent variable of non-academic success.

Research Question 4

To answer the final research question, "What resources do SVs want HEIs to provide?", the survey instrument collected text entry responses from the SVs on what they desire in resources to support them better on campus. These short answers were coded using qualitative methods, an interpretative approach (Creswell & Creswell, 2018). Qualitative coding is a process of categorizing data in order to better ascertain patterns and themes within the responses (van Manen, 2021). This process is also imperative in increasing validity, enabling transparency, accurately representing the data, and finally decreasing bias (van Manen, 2021). The text entry responses were first read in raw form. Codes were then created in order to assign specific words or phrases to responses which were worded differently in their raw form. Once this basic coding was conducted, quantitative frequency counts were tallied to better collate the responses of the SVs. This qualitative approach to RQ4 provided an opportunity for post-hoc analysis.

Delimitations, Limitations, Assumptions

To better recognize the potential flaws in this research study, key delimitations, limitations, and assumptions are described below. Beyond self-reporting of these flaws, recognizing and accurately describing these problems may inform future researchers of how to better conceive their own individual research.

Delimitations

There are a few delimitations of this dissertation. First, the present study's sample of SVs within HEIs was limited to those attending one of the 11 HEIs participating in the ILVC. In general, the population of college SVs represents only 1% of all college students (Department of Veteran Affairs, 2020). Of this small population, I surveyed approximately 183 SVs. This delimitation of the sample bounds the representativeness of SVs in the study. Even though the sample of 183 was small in relation to all SVs enrolled at 4-year HEIs, the sample size met all requirements of multiple and logistic regressions.

There were demographic delimitations as well. The present study was limiting participation criteria to veterans with active-duty experience who are full-time students in a 4-year institution, further delimiting the sample size. Despite these demographic restrictions, reliability in the study was possible based on the sample size requirements for the statistical tests.

The instrument was also a source of delimitation. Items within the instrument were identified from web-based research and informal conversations with veterans. Although these methods of data collection were strong, there is a possibility of specification error (DeVellis, 2022).

Limitations

Distribution of the instrument is a limitation, as convenience sampling is often viewed as a weaker sampling method (Creswell & Creswell, 2018). Despite multiple attempts to receive email databases from other HEIs, FERPA regulations complicated the release of student email addresses to an outside researcher.

The timing of data collection for this dissertation was a strong limitation. At the time of data collection during the Fall of 2021, the effects of the COVID-19 pandemic were still impacting the higher education industry. Fewer students were attending higher education in person, potentially decreasing their connection to the college campus community. The survey instrument was distributed to college email addresses and was posted on Facebook by the gatekeepers. SVs may not have checked their email during the summer months.

Honesty of respondents' answers is a concern in survey research. One of the items inside the instrument asked for the GPA of the respondent, which was self-reported. The instrument was anonymous in an attempt to curb this limitation; however, if the respondents were not honest about their GPA, the resources used and provided by the HEIs would not be a valid measure of academic success.

My own personal bias is a limitation given my experience as a SV in an undergraduate degree program. To protect against any bias, the instrument was reviewed by quantitative researchers who are not of the student veteran community and a pilot test of the instrument was conducted to test the instrument.

Assumptions

The major assumption of this dissertation was that the academic and non-academic resources provided by the HEIs are major factors influencing outcome variables. There are a plethora of unmentioned variables that could affect these outcomes (e.g., intelligence, determination, work ethic, and socio-economic status, etc.).

Ethical Considerations

As discussed earlier in this chapter, I submitted a request to the William & Mary EDIRC prior to data collection. A copy of this approval was included in the email sent to gatekeepers, ensuring they understand that ethical policies have been followed. In addition to providing participants with informed consent, the participants were kept anonymous and were informed they can discontinue the survey at any point. Data collected and analyzed was destroyed after the successful defense of this dissertation. By using an anonymous survey instrument, risks to participants will be minimized.

CHAPTER 4: FINDINGS

This study sought to ascertain engagement indicators, academic resources, and non-academic resources used by student veterans (SVs) through a cross-sectional survey research of SVs at elite public and private Ivy League higher education institutions (HEIs). First, this chapter provides a description of the Ivy League Veteran's Council (ILVC) sample in terms of demographics. This sample was smaller than anticipated, as only five of the 11 HEIs which have ILVC chapters participated in the study. Secondly, this chapter presents descriptive statistics to examine similarities and differences in engagement factors between the ILVC sample and the National Survey of Student Engagement (NSSE) sample. Finally, this chapter will provide the statistical results of the data analysis executed on collected data to provide answers to the specific research questions (RQs) presented in Chapter 3.

RQ1 asked how SVs were engaging in collaborative learning and student-faculty interactions. This question was crafted (a) to help understand SVs' engagement with other students, both inside and outside of the classroom, and (b) to better understand the faculty-student relationship. RQ2 examined the statistical relationship between academic resources provided by HEIs and SV's GPA. RQ3 sought to understand which resources provided by HEIs have a greater effect on SVs' perspectives of inclusion on campus. Finally, RQ4 asked the respondents which resources they desired their respective HEIs to provide to increase their academic and non-academic success.

Overview of Data Collected

As noted, not all gatekeepers at the ILVC institutions shared the survey link with their SVs; thus, the anticipated response rate of the survey suffered. Despite the loss of these potential respondents, 183 valid responses were received from five HEIs out of the potential 11 involved in ILVC. Therefore, the data analysis occurred using n = 183 as the total sample. Despite these issues, it was still possible to answer the research questions.

Demographics of the Sample

Multiple items in the survey instrument directly addressed the demographics of the respondents. This section discusses (a) physical demographics of the respondents; (b) military service demographic information; (c) respondents' demographics in terms of which HEI they attend, their class year at their university, and their respective payment plan for tuition; and (d) their past educational experiences.

Demographics. The ages of the respondents aligned with general statistics of SVs enrolled in HEIs overall. Table 4 illustrates the respondents' ages and the percentage they comprised of the total sample, then comparing the percentage to the overall national SV percentage.

Table 4

Age of Respondents

Age	Respondents		
	Total	ILVC	National SV
	n	%	%
18-22	16	9	15
23-35	137	75	65
36-55	21	11	12
56+	9	5	8
Total	**183**	**100**	**100**

Note. ILVC = Ivy League Veterans Council. National SV = all student veterans nationally. The national percentages were collected from https://www.benefits.va.gov/gibill/post911_gibill.asp. Copyright 2019 by US Department of Veterans Affairs.

The survey respondents in the 18–22-year-old age range were less than the national SV averages. The survey respondents made up a larger percentage of the 23–35-year-old age range compared to the national average. Given the residential requirements at the universities the survey respondents attended, it is likely that recently transitioning active-duty veterans opt to attend college sooner to provide enhanced career opportunities. Those in the 36–55-year-old age range were similar, and likewise the difference in representation of those 56 and older were only slightly lower than the national percentages.

The next demographic survey question asked for respondents' biological sex. Of the 183 respondents, 122 were male (66.7%) and 61 responding were female (33.3%). The ILVC sample is similar to the national SV data: males (73%) and females (27%). Finally, the survey instrument asked participants to identify their race/ethnicity. Options for race and ethnicity were based on options within the 2020 U.S. Census. Table 5 details the race and ethnicity indicated by SV survey respondents and the national SV data for these demographics.

Table 5

Race and Ethnicity of Respondents

Race/Ethnicity	Respondents		
	Total	**ILVC**	**National Undergraduate Population**
	n	**%**	**%**
Asian/Pacific Islander	27	14.8	5.7
Black/African American	19	10.4	15.2
Hispanic/Latino	27	14.8	19.8
Native American/Alaskan Native	10	5.5	0.8
White/Caucasian	90	49.2	52.0
Other	10	5.5	6.5
Total	**183**	**100**	**100**

Note. ILVC = Ivy League Veterans Council. National College Data was adapted from https://www.equityinhighered.org/indicators/enrollment-in-undergraduate-education/race-and-ethnicity-of-u-s-undergraduates/. Copyright 2020 by American Council on Education.

Half of the survey respondents identified as White or Caucasian (*n* = 90), with Asian/Pacific Islander (*n* = 27) and Hispanic/Latino (*n* = 27) comprising nearly 15% of the total sample. A smaller portion of survey respondents, 10.4% *(n* = 19), identified as Black or African American. With almost half (50.8%) of the respondents representing students-of-color, the SVs participating in this study are more diverse than national percentages of undergraduates (48%). The largest difference between the ILVC sample and the national data (ACE, 2020) is the percentage of Asian or Pacific Islanders. The ILVC student veterans were nearly triple the national representation in traditional undergraduate students. There were fewer Black/African American and Hispanic/Latino SVs in the ILVC respondents (approximately 5% less for each group) compared to the national averages. Overall, the ILVC sample was more diverse than the ACE data, with the bulk of this difference due to more enrollment of Asian/Pacific Islanders.

Future research should be conducted to determine if this increased diversity is exclusive to the ILVC HEIs, or if SVs are overall more racially diverse than their undergraduate peers nationally.

Military Service Demographics. The second portion of the collected demographics helped ensure that respondents were in the target demographic group discussed in Chapter 3: only former active-duty veterans were sought. Despite detailed instructions given to ILVC chapter presidents, a SV from the Reserves (n = 1) and two SVs from the National Guard (n = 2) responded who were not prior enlisted active duty service members; these responses were deleted from the survey data. As these three responses were n < 5%, listwise deletion was conducted on the sample. After removal of data outside of the study's criterion, the final sample size used for analysis was 183.

After component of service, respondents were asked, "Which branch of the military did you primarily serve in?" Responses to this question help provide context for survey responses and were not included in any specific statistical tests. Table 6 displays the branches and how they are represented in the respondents, then comparing to the national breakdown of enlisted personnel by military branch.

Table 6

Branches of Respondents

Branch	Frequency	ILVC Sample	Enlisted Personnel
	n	%	%
United States Army	62	33.9	36
Marine Corps	56	30.6	15.5
Navy	53	29.0	23.5
Air Force	10	5.5	22.2
Coast Guard	2	1.1	2.8
Total	**183**	**100.0**	**100.0**

Note. ILVC = Ivy League Veterans Council. National data was adapted from https://download.militaryonesource.mil/12038/MOS/Reports/2019-demographics-report.pdf. Copyright 2019 by Department of Defense.

The majority of the ILVC respondents were from three branches of the military: U.S. Army, Marine Corps, and Navy. Less represented were the Air Force and Coast Guard. In terms of branch representation, there are significant differences between the ILVC sample, and the percentage of enlisted personnel reported by the DOD. The first notable difference is Marine representation. A total of 30.6% of the ILVC sample are Marines (n = 56), whereas enlisted marines are only 15.5% of the enlisted ranks. Secondly, the Air Force was severely underrepresented in the ILVC sample with only 5.5% (n = 10), and 22.2% in the entire armed forces. It is beyond the scope of this dissertation to ascertain exact reasons for these major discrepancies; further research is warranted.

College Career Demographics. The college career demographic question of the survey instrument asked about the respondent's degree program, where they were attending college, current progress in their degree program, and how the respondents are paying for their education. As mentioned in Chapter 3, participants included in this study were required to be both prior enlisted and in a full-time undergraduate program. Table 7 displays responses of the SVs based on their institutional representation.

Table 7

Higher Education Institutions of Respondents

HEI	**Survey Respondents**		**Estimated ILVC SVs**	**Response Rate**
	n	**%**	***n***	**%**
Columbia	98	53.6	450	21.7
Cornell	40	21.9	100	40.0
Princeton	1	0.5	12	8.3
Stanford	17	9.3	30	56.6
William & Mary	27	14.8	65	41.5
Total	**183**	**100**	**657**	**100.0**

Note. Estimated Ivy League Veteran Council Student Veterans represents the estimated potential respondents from each chapter.

In terms of response rate per institution, Stanford (56.6%), William & Mary (41.5%), and Cornell (40%) had the highest response rate compared to the size of their respective SV populations. Columbia, the ILVC institution enrolling the most SVs, had a response rate of 21.7%, whereas the lowest response came from Princeton, with only one of the 12 SVs responding (8.3%). As each of the HEIs do not provide official SV counts to outside researchers, the estimated ILVC SVs column of Table 7 was populated either from personal correspondence with ILVC chapter presidents, or from the ILVC's website. The higher response rates from Stanford, Cornell, and William & Mary are most likely due to the high amount of collaboration between the primary researcher and chapter presidents at these institutions. The overall response rate for the survey was 28%. According to Dillman et. al. (2009), response rates for online surveys vary on multiple factors, such as whether the respondents are individuals, businesses, or employees, and the number of times potential respondents were contacted. According to Dillman et. al.'s (2009) research, this survey should have received an approximate 32% response rate. Per Table 7, William & Mary, Stanford, and Cornell surpassed the anticipated average response rate. Despite Columbia's 21.7% response rate, they accounted for more than half of ILVC respondents due to the HEI's large SV population. The survey's overall response rate of 28% fell slightly below the desired goal outlined by Dillman et. al. (2009) of 32%.

Table 8

Student Classification of Respondents

Year in College	**Survey Sample**	
	n	**%**
Freshman	27	14.8
Sophomore	5	2.7
Junior	55	30.1
Senior	83	45.4
Graduated	13	7.1
Total	**183**	**100**

The survey instrument also asked about the current progress of the student veterans in terms of their class year (see Table 8 above). When examining Table 8, it should be noted that freshman, sophomore, and graduated statuses are underrepresented in comparison to the other groups. While ultimately unknown, freshman and sophomore representation could be lower due to two estimated reasons: (a) many SVs are bringing in college credits from their military careers (DiRamio et al., 2008), making them juniors or seniors upon starting at an HEI; and (b) the COVID-19 pandemic, which has been ravaging the nation over the last 18 months, affected college enrollments. While speculating about the small graduated cohort from the present study, it is possible that the ILVC has limited reach to their former SVs within their chapters. In checking with three of the participating chapter presidents in the ILVC, they confirmed their lack of ability to reach out to SV alumni. Future research should be conducted to determine if students' progress towards graduation has any effect on responses to all four research questions.

When looking at the respondents and whether respondents were planning to attend their institution next year, an overwhelming majority (75.4%) stated that they were going to continue with their education (n = 138). Of the remaining, 11.4% (n = 21) stated they were unsure, and 13.1% (n = 24) said they would not be continuing with their education. This study did not question why the SVs were not planning to return; this topic could be an area for future research.

Finally, the college career demographics section of the survey asked respondents about how they were paying for college. Respondents were provided with the options of (a) a form of the GI-Bill, (b) scholarship, (c) other, or (d) any combination of the three to pay for their education. A total of 71.6% of respondents stated that they were using some form of the GI-Bill to pay for their current college program, and 29.5% of respondents indicated they using a form of a scholarship to pay for their college. The "Other" block allowed respondents to write in other forms of payment. These responses included Yellow Ribbon Programs (12, 6.5%), Federally provided college loans (35, 19.1%), and personal funds (5, 2.7%). Student veterans were using a range of funding sources to pay for college, with the vast majority relying on GI-Bill benefits.

Past Educational Experiences. This final background information sought on the survey instrument concentrated on the educational experiences of SVs' families. First, the instrument asked the SV about their parents' highest level of education. Table 9 shows these results.

Table 9

Highest Level of Parents' Education

Level of Education	Mother		Father	
	n	%	*n*	%
High School / GED	73	39.9	67	36.6
Associate Degree	12	6.6	6	3.3
Bachelor's Degree	49	26.8	44	24.0
Master's Degree	23	12.6	28	15.3
Ph.D.	9	4.9	4	2.2
Did not complete High School	17	9.3	34	18.6
Total	**183**	**100.0**	**183**	**100.0**

The educational levels of the SVs' parents were similar, with mothers having received slightly more education relative to the fathers of the students. This difference is evident with high school completion: 18.6% of fathers (n = 34) and 9.3% of mothers (n = 17) did not complete high school. Furthermore, over 50% of respondents reported that their mothers and fathers have a high school education or less. This fact is important in that Tinto (1975) placed heavy importance on family background of individuals entering the college environment. As this high percentage of respondents would be the first to enter higher education, they may be less likely to be culturally acclimated to higher education.

The penultimate background question asked the SVs to self-report their high school GPA. Five respondents did not report their high school GPA. This question was asked to compare the SV's past educational accomplishment to their current self-reported GPA in college. Table 10 presents the self-reported GPAs for both high school and college.

Table 10

High School GPA v. College GPA

GPA	High School	College
4.0+	3.3	25.13
3.0-3.99	37.7	56.28
2.0-2.99	43.2	18.03
1.0-1.99	13.1	0.54
0-0.99	0	0
Total	**97.3**[a]	**100**

Note. Data reported are in percentages. GPA = Grade Point Average.
[a]Five respondents did not include their GPAs obtained in high school.

When examining Table 10, several points must be recognized. First, five respondents did not answer the question. This question did not force a response in Qualtrics, as there was a fear that respondents may not complete the rest of the survey if they were coerced into answering this question. Lack of response to this question did not disqualify those respondents from statistical analysis for the RQs, as high school GPA was not used as an independent variable. Furthermore, some respondents may not have remembered their high school GPA. Considering that most respondents were in the 23-35 age demographic, the time between completion of the survey and high school would range between 5-17 years, supporting the explanation of a lack of recollection. It should also be noted that while it is not perfectly distributed, there is a normal curve distribution to the frequency distribution between the groups of high school GPA. The self-reported college GPAs, however, skew toward higher categories, with 81% of the respondents reporting college GPAs of 3.0 or higher.

The final demographic question on academic background pertained to the number of credits SVs transferred into the institution. Nearly all the respondents (99.4%) indicated they had transferred college credits into their HEI (n = 182); this number ranged from 0 to 78 credit hours (M = 44.54, SD = 20.94). SVs brought in nearly a complete year of college credits, corresponding to the student classifications highlighted in Table 8.

Research Question 1: SV Engagement

This study incorporated items from the NSSE to address RQ1 ("How are student veterans engaging in collaborative learning and student-faculty interaction?"). Eight survey items were utilized from the NSSE (n.d.-b) "Engagement Indicators & High-Impact Practices" survey instrument. Specifically, these eight items were taken verbatim from the "Collaborative Learning" and "Student-Faculty Interaction" sections of the survey instrument. Data analysis compared responses between this dissertation's sample and the 2020 NSSE Data. When parsing out percentages provided by NSSE, it is important to note the NSSE classifies school data using the Carnegie 2015 Basic Classification. Of the ILVC HEIs that participated, William & Mary holds a classification of "Doctoral Universities: Higher Research Activity," whereas the remaining ILVC HEIs hold the classification of "Doctoral Universities: Highest Research Activity." For the comparison, the primary researcher utilized the Highest Research Activity to compare to the ILVC sample. This figure was used as the difference in percentage between Highest and Higher Research Activity only held variations of >2% difference between the two classifications.

Collaborative Learning

There are four different items on NSSE (n.d-b). that target collaborative learning. These items include the following prompts:

During the current school year, how often have you:

1. Asked another student to help you understand course material?
2. Explained course material to one or more students?
3. Prepared for exams by discussing or working through course material with other students?
4. Worked with other students on course projects or assignments? (NSSE, n.d. -b, p. 2)

Table 11 shows the four items, the Likert type scale responses, the national and overall NSSE response for Doctoral Universities: Highest Research Activity, the survey responses, and Chi-Square results.

Table 11

Frequencies and Chi-Square Results for Collaborative Learning Comparisons

Item	ILVC Observed *n*	NSSE Expected *n*	Residual
Asked another student to help you understand course material			
Very Often	29	31.1	-2.1
Often	50	56.7	-6.7
Sometimes	89	73.2	15.8
Never	15	22	-7
Total	183	183	
χ^2	6.56		
Explained course material to one or more students			
Very Often	25	42	-17
Often	47	71.4	-24.4
Sometimes	106	60.4	45.6
Never	5	9.2	-4.2
Total	183	183	
χ^2	51.59*		
Prepared for exams by discussing or working through course material with other students			
Very Often	18	38.4	-20.4
Often	33	54.9	-21.9
Sometimes	111	62.2	48.8
Never	21	27.5	-6.5
Total	183	183	
χ^2	59.36*		
Worked with other students on course projects or assignments			
Very Often	37	54.9	-17.9
Often	72	67.7	4.3
Sometimes	54	49.4	4.6
Never	20	11	9
Total	183	183	
χ^2	13.944*		

Note. ILVC = Ivy League Veterans Council. NSSE = National Survey of Student Engagement.
$^*p<.05$

Upon examination of Table 11, there are multiple data points on collaborative learning that could be considered significantly different between the two groups of respondents. The number of survey respondents responding they ask other students for help "very often" were nearly identical to the NSSE. There are three χ^2 results that are statistically significant. First, there was a statistically significant difference between the ILVC group and the NSSE expected count for item #2. As the residuals show, there were significant differences in *very often* (ILVC v. NSSE = -17), *often* (ILVC v. NSSE = -24.4), and *sometimes* (ILVC v. NSSE = 45.6). Per Table 1,1 most of the ILVC group (57.9%) self-reported to only *sometimes* explain the material to others (n = 106).

The second statistically significant difference occurred in the Item 3. Most ILVC participants (60.6%; n = 111) were again more likely to state that they would *sometimes* conduct this activity (ILVC v. NSSE = 48.8). The NSSE group scored higher on *often* and *very often* than the ILVC group that only s*ometimes* worked with other students to prepare for exams. Further research should be done to expand the surveyed group of SVs to a larger percentage of HEIs that hold rankings of Doctoral Highest. By expanding the response rate of SVs at these institutions, future research will be able to ascertain whether these differences remain the same, or if results are due to random chance.

The third statistically significant difference was found in the final item. In this case, the residuals display that the only large difference between the ILVC observed n and NSSE expected N came in the *very often* frequency of use: n = 37 of the ILVC sample responded this way, while the χ^2 expected 54.9 students. Remaining residuals not described above were all less than 10, therefore not statistically significant. The survey respondents noted differences in how they collaborate with other students to support their learning compared to the national population of students in the NSSE. SVs in this study were less likely to explain course materials to others and were less likely to prepare for exams or work on class materials with others compared to the NSSE respondents; they were more likely to ask another student for help to increase their understanding of course content. In general, SVs worked with other students on course projects or assignments, though some differences emerged in the extremes. For example, survey respondents (11.5%) were more likely to *never* work with other students compared to the respondents to the NSSE survey (6%) and were less likely to *very often* work with other students (20%) compared to their peers responding to the NSSE survey (30%). In three of the four areas of collaborating with others from the NSSE survey, participants in this study differ significantly in how they engaged with their peers. SVs in this study engaged with other students less frequently compared to their national peers.

Student-Faculty Interaction

There were four prompts drawn from the NSSE (n.d.-b) that measure Student-Faculty Interactions. Following are the items included:

How often did you interact with a faculty member to discuss:

1. Talked about career plans with a faculty member?
2. Worked with a faculty member on activities other than coursework (committees, student groups, etc.)?
3. Discussed course topics, ideas, or concepts with a faculty member outside of class?
4. Discussed your academic performance with a faculty member? (p. 2)

Table 12

Frequencies and Chi-Square Results for Student-Faculty Interactions

Item	ILVC Observed *n*	NSSE Expected *n*	Residual
Talked about career plans with a faculty member?			
Very Often	40	31.1	8.9
Often	20	44.4	-24.4
Sometimes	75	73.9	1.1
Never	48	33.6	14.4
Total	183	183	
χ^2	22.25*		
Worked with a faculty member on activities other than coursework (committees, student groups, etc.)?			
Very Often	23	18.3	4.7
Often	13	38.4	-25.4
Sometimes	73	78.7	-5.7
Never	74	47.6	26.4
Total	183	183	
χ^2	33.11*		
Discussed course topics, ideas, or concepts with a faculty member outside of class?			
Very Often	15	18.3	-3.3
Often	37	38.4	-1.4
Sometimes	93	78.7	14.3
Never	38	47.6	-9.6
Total	183	183	
χ^2	5.179		
Discussed your academic performance with a faculty member??			
Very Often	21	16.5	4.5
Often	26	38.4	-12.4
Sometimes	88	82.4	5.6
Never	48	45.7	2.3
Total	183	183	
χ^2	5.77		

Note. ILVC = Ivy League Veterans Council. NSSE = National Survey of Student Engagement.
$*p<.05$

Table 12 shows that the first two items of discussing career plans and working with faculty outside of coursework had statistically significant χ^2 values. Specifically, when talking to faculty about career plans, the ILVC sample reported they were likely to "never" conduct this activity (48%) compared to the NSSE Group (19%); however, the ILVC group (26%) was more likely to discuss career plans with faculty compared to their national peers (18.4%).

The second statistically significant difference occurred when responding to Item 2. As with the previously discussed question, the *often* and *never* responses showed similar results: ILVC respondents selected *often* at lower rates (7%) compared to the NSSE participants (21%); ILVC participants were more likely to not work with faculty outside of coursework (40%) compared to NSSE respondents (26%).

SVs in the present study differed in how often they discussed career plans with faculty and how often they worked on non-coursework with faculty compared to their national peers. The SV respondents engaged with faculty at the same level as their national peers when engaging with faculty members on course topics and performance.

Research Hypothesis 1

Research hypothesis (RH) 1 stated that SVs would engage with classmates and faculty at higher rates than traditional students. In terms of collaborative learning, there was statistically significant differences between the ILVC sample and the NSSE sample in explaining material to other students, preparing for exams with other students, and working with other students on course projects and assignments. Given these significant differences, the null hypothesis is rejected as the ILVC sample conducted these activities at different rates that the NSSE. The SVs in this study were less likely to engage with other students.

When examining the results in the Student-Faculty section, there were two statistically significant χ^2 results, showcasing the two groups engaging with faculty differently. Discussing career plans and working with faculty on items other than coursework were statistically significant; therefore, for these two items we must reject the null hypothesis. As with student engagement, the frequency of conducting these activities differed in from their traditional student counterparts. SVs bifurcate as their responses sometimes conducted the activities more and sometimes conducted the activities less.

Research Question 2: Effective Resources for Academic Success

This study sought to answer what SVs identified as the most effective resources offered by their university. To answer this question, the survey instrument included questions about eight specific resources that are commonly provided by their respective HEIs. In response, the SVs provided the frequency of their use of each activity within an academic year. Table 13 displays the relevant descriptive statistics for the academic resources used by the ILVC sample.

Table 13

Descriptive Statistics of Use of Academic Supports

Academic Resources Offered	Minimum	Maximum	*M*	*SD*
One-on-One Interaction with Faculty	0	55	17.72	15.90
Remedial Academic Skills Programs/Seminars	0	70	9.02	14.94
One-on-One Interaction with Advisor	0	35	3.99	5.12
One-on-One Interaction with Teaching Assistants	0	15	3.12	3.18
Library Services (e.g., research assistance)	0	20	2.51	4.29
Writing Resource Center	0	20	2.39	4.28
Tutors provided by your College/University	0	10	0.93	1.90
Study Abroad Services	0	4	0.42	1.00

When examining Table 13, one-on-one interaction with faculty (*M* = 17.72, *SD* = 15.90) and remedial academic skills programs/seminars (*M* = 9.02, *SD* = 14.94) were the highest used among the resources listed. This one-on-one interaction aligns with RQ1's statistically significant χ^2 results of discussing career plans and working with faculty on activities outside of coursework. While both top-identified resources used had self-reported uses, the standard deviations were high for each resource as well. Thus, some students in the sample were using this resource quite often, while others did not.

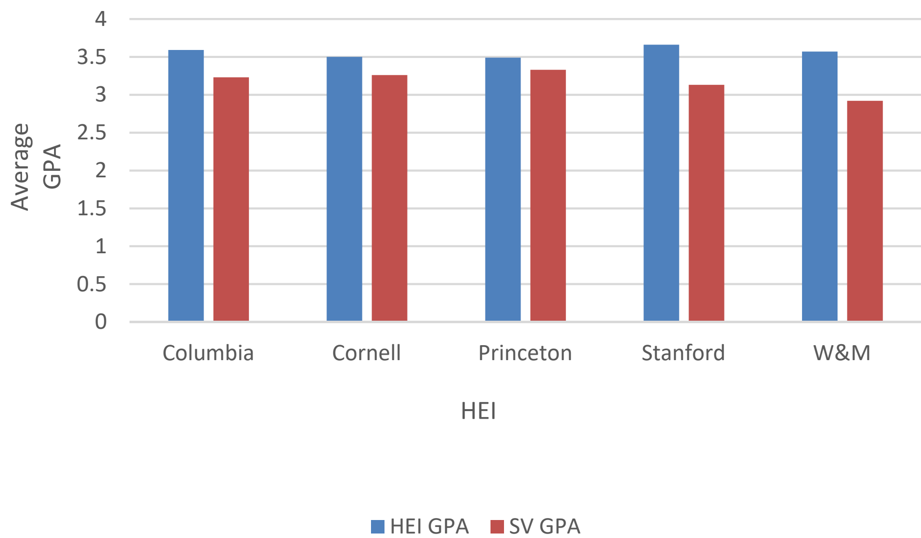
The next largest cluster of usage was between one-on-one interaction with advisors (*M* = 3.99, *SD* = 5.12) and teaching assistants (*M* = 3.12, *SD* = 3.18), library services (*M* = 2.51, *SD* = 4.29), and writing resource centers (*M* = 2.39, *SD* = 4.28). Their respective SDs also indicate that ILVC respondents utilized these resources a similar number of times during the academic year. The final cluster of resources used included tutors provided by HEIs and study abroad services, with average uses per academic year < 1 times per year.

GPA Analysis

The respondents self-reported their GPA on the survey. Of the 183 valid responses, the SVs had a mean GPA of 3.4 (*SD* = 0.633); the minimum GPA reported was 1.85 and the maximum was a 4.0. Altman (2017) describe GPA being often used as the most common measure of academic success in undergraduate higher education; thus, most SVs in this study are experiencing success at their highly competitive institutions. Figure 4 shows the frequency for the categories of GPA reported.

Figure 4

Institution GPA Versus SVs' Self-Reported College GPA



Note. GPA = Grade Point Average; HEI = Higher Education Institution; SV = Student Veteran.

This figure displays several attributes of the ILVC sample. Greater than 80% of respondents reported their GPA as 3.0 or higher; this attests to (a) the educational ability of the ILVC sample, and (b) the competitive nature of the HEIs they currently attend. Only one respondent currently is maintaining a GPA of 1.99 or lower. There is variance between the GPAs at the HEIs represented within the sample, and the average GPA of these HEIs is 3.54.

Regression Analysis

As a prerequisite of any multiple regression model, a Pearson *R* correlation test was conducted between each of the academic resources provided and student GPA. This necessary step to Pearson's R occurred to determine if there were positive or negative correlations between each of the IVs and the DV. Table 15 shows a correlation matrix between each of the academic resources and GPA.

Table 14

Correlations Between Academic Supports and GPA

Academic Supports	*R*	*p*
Writing Resource Center	0.022	0.764
One-on-One Interaction with Faculty	0.326	0.000*
One-on-One Interaction with Advisor	-0.102	0.171
One-on-One Interaction with Teaching Assistants	-0.028	0.706
Tutors provided by your College/University	-0.092	0.216
Library Services (e.g., research assistance)	-0.037	0.622
Study Abroad Services	-0.041	0.584
Remedial Academic Skills Programs/Seminars	0.296	0.000*

*p<.01

As highlighted in Table 14, there were only two moderate correlations present between the data. Both one-on-one interaction with faculty (R = 0.326, p < .01) and remedial academic skills programs (R = 0.296, p < .01) had statistically significant positive correlations with GPA, also signifying the resources accessed most frequently by the SVs in the sample. These two resources were used with the most frequency by the SVs (see Table 13). The other resources asked in the survey instrument produced non-statistically significant results. Beyond their lack of significance, the correlations did not reach the 0.2 standard for a weak correlation (Urdan, 2005); thus, there was no correlation of note between these resources and GPA of the ILVC group.

A multiple linear regression was analyzed with the self-reported GPA as the outcome variable and academic resources as the predictor variables. Table 15 shows the SPSS results of the multiple linear regression model.

Table 15

Regression Results for Academic Resources & GPA

	R	R^2	Adjusted R^2	S_e	DW
Model 1	0.388	0.150	0.111	0.5972566	2.201

Note. GPA = Grade Point Average; DW = Durban-Watson.

Per Table 15, the combination of resources provided by the institutions accounts for 11.1% of the variance in GPA. This finding indicates that other factors, which were not items in the survey instrument, are impacting the ILVC's GPA. Durban-Watson (*DW*) equaled 2.201, indicating that the errors are independent. Furthermore, the F value of the regression model (F = 3.849) indicates that the regression model was statistically significant. The maximum Cook's Distance was 0.125, indicating no outlier issues with the data. Maximum Leverage statistic was 0.255, indicating no data points are causing undue leverage on the model. Table 16 below shows those coefficients for each of the independent variables in the model.

Table 16

Regression Coefficients for Model 1

Academic Supports	Unstandardized Coefficient	Standardized Coefficients				Collinearity Statistics	
	B	S_e	β	t	p	Tolerance	VIF
Writing Resource Center	0.008	0.011	0.055	0.745	0.457	0.883	1.133
One-on-One Interaction with Faculty	0.011	0.004	0.270	2.583	0.011*	0.448	2.231
One-on-One Interaction with Advisor	-0.016	0.010	-0.133	-1.719	0.087	0.813	1.231
One-on-One Interaction with Teaching Assistants	-0.003	0.015	-0.014	-0.193	0.847	0.924	1.083
Tutors provided by College/University	-0.039	0.024	-0.118	-1.662	0.098	0.963	1.039
Library Services (e.g., research assistance)	-0.003	0.012	-0.020	-0.258	0.797	0.793	1.262
Study Abroad Services	-0.023	0.045	-0.036	-0.508	0.612	0.975	1.026
Remedial Academic Skills Programs/Seminars	0.005	0.004	0.116	1.131	0.260	0.467	2.143

*$p<.05$ level

Multiple linear regression analysis was used to predict GPA from all academic support IVs. The regression coefficients for this analysis are shown in Table 16. The *t* tests conducted show that one-on-one interaction with faculty had statistically significant results with a weight of *p*=.011. Table 16 indicates that all Variance Inflation Factor (VIF) scores are greater than 5. This finding indicates no (a) multicollinearity and (b) competing predictors in terms of GPA. As there are no competing predictors, a second multiple regression model removing offending variables was not required. As stated above, the only statistically significant IV had a regression weight of .011, signifying little predictability between use of this resource and the ILVC respondents' GPA; in other words, one-on-one interactions with faculty was used most often by SVs and the totality of this resource accounts for 11% of the variance with GPA.

Research Hypothesis 2

RH2 stated that SVs would place high importance on one-on-one interaction with faculty and writing service centers. One-on-one interaction with faculty proved to be important to the ILVC sample; the mean usage for this academic resource was 17.72 during the academic year. Furthermore, this resource held a statistically significant Pearson Correlation of 0.326. Even more evidence of its importance, the multiple regression model showed a statistically significant beta value of .011. In terms of this resource, the hypothesis must be accepted.

Research Question 3: Effective Resources for Inclusion

As mentioned in Chapter 3, many of the same processes for answering the second RQ were used to determine the analysis of what SVs found effective in terms of their non-academic success asked in RQ3. Rather than using a multiple linear regression model to answer predictability, logistic regression was used as the dependent variable, feelings of inclusion, was binary. By using binary logistic regression, the analysis was then able to ascertain both the odds and log-odds of each predictor variables' effect on the outcome variable of inclusion. The responses to this prompt found that 78.7% (*n* = 144) of the SVs felt included on campus, and 21.3% (*n* = 39) did not feel included, as seen in Table 17. The item in the survey instrument asked, "As a student veteran, do you feel included in the educational community on campus?" The only responses available to the ILVC sample were "yes" and "no." Therefore, binary logistic regression was the best suited statistical analysis.

Table 17

Frequency of Feelings of Inclusion

Response	*f*	%
Yes	144	78.7
No	39	21.3
Total	**183**	**100.0**

Descriptive Analysis

Table 18 illustrates the descriptive statistics of the non-academic resources used by the sample. Participants were asked to report the number of occasions they used each resource during a typical (fall and spring semesters) academic year. Of the resources in Table 18, there are several descriptive statistics which seem to be important to the SV population. The two most used resources include SVs student groups (M = 8.32, SD = 9.11) and non-veteran related clubs and organizations (M = 5.49, SD = 7.67). When divided into months, the ILVC sample used SVs' groups approximately once per month during the traditional academic year comprising of a fall and spring semester. Furthermore, the average usage of non-veteran related clubs were used approximately every six weeks. This study therefore finds that SVs are more likely (a) to use the

SVs groups than the non-veteran related groups, and (b) to engage more often with students in group settings over other non-academic support offices.

Table 18

Descriptive Statistics of Utilization of Non-Academic Resources

Non-Academic Resource	**Minimum**	**Maximum**	***M***	***SD***
Student Veterans Student Group	0	40	8.32	9.11
Non-Veteran Related Clubs & Organizations	0	35	5.49	7.67
Student Veterans Resource Office	0	15	3.63	3.87
Health Services	0	25	2.95	5.18
Educational benefits Resource Officer	0	10	2.22	2.41
Student Accessibility / Disability Office	0	10	1.78	2.42
Professional Development / Career Center	0	6	1.45	1.52
Diversity, Inclusion, Equity Office	0	10	0.61	1.84

The next grouping containing resources of average use includes all other non-academic resources provided by the SVs' HEIs. These other resources were used less than three times during the academic year. Average use of the SVRO, for example, was used on average 3.63 times (*SD* = 3.87) in an academic year. This level of use was lower than anticipated given the office focuses specifically on supporting SVs. Post-data collection, further conversations with ILVC gatekeepers revealed this was most likely due to HEIs with ILVC chapters not having well-funded SVROs; thus, the extent of services actually offered is minimum. The higher use of SV student groups may fulfill the needs of the participants relative to the SVRO. The final RQ in this dissertation concerns the SVs' responses for their desire for such an office. The second resource in this cluster is the Health Services resource. The average use was 2.95 (*SD* = 5.18) times per academic year. This reported low use may have several reasons; one is that most SVs in the ILVC group may have health providers in the community, as they are adult learners versus traditionally aged students on campus who are likely not from the community.

The third cluster represents non-academic supports used least frequently by SVs in this study. These supports were used by SVs once or twice in the academic year and included the student accessibility/disability office; the educational benefits resource officer; the professional development/career center; and the diversity, inclusion, equity office. Given the supports offered by SVs groups and the SVRO, the services offered in these other offices may have been met in other ways. Additionally, it may be only seniors accessing the career center as they prepare for graduation and seek employment. The least frequently accessed was the diversity, inclusion, equity office. It remains unknown the rationale for the responses of the respondents, yet it is clear these offices were not accessed with great frequency by the respondents.

Regression Analysis

Following the descriptive analysis, correlations were conducted between non-academic resources provided and the ILVC participants' feelings of inclusion on campus to ascertain if a use of the resource correlated with feelings of inclusion. Table 19 contains these values.

Table 19

Correlations Between Non-Academic Resources and Feelings of Inclusion

Non-Academic Resource	*R*	*p*
Educational Benefits Resource Officer	.153*	0.039
Diversity, Inclusion, Equity Office	0.039	0.602
Student Veterans Student Group	0.034	0.644
Health Services	0.002	0.975
Non-Veteran Related Clubs & Organizations	-0.006	0.941
Student Accessibility / Disability Office	-0.024	0.752
Professional Development / Career Center	-0.041	0.579
Student Veterans Resource Office	-0.067	0.365

*p<.05

When examining Table 20, there is only one statistically significant correlation. According to Urdan's (2005) interpretation of Pearson *R* correlations, all correlations containing between one and three correlations have small correlations between variables. Therefore, the use of an educational benefits resource officer does appear to have a very small correlation with ILVC respondents' positive feelings of inclusion on campus. Next, a binary logistic regression model was run for all independent variables (non-academic resources) against the dependent variable of inclusion. Table 20 shows the classification tables for Step 0 and Step 1.

Table 20

Combined Classification Tables

Steps	**Observed**		**Predicted**		
			Do you feel included?		**% Correct**
			Yes	**No**	
Step 0	**Do you feel included?**	**Yes**	143	0	100.00
		No	39	0	0.00
		Overall			**78.57**
Step 1	**Do you feel included?**	**Yes**	143	0	100.00
		No	38	1	2.56
		Overall			**79.12**

In Table 21, Step 0 indicates that prior to the logistic regression model, it was possible to accurately predict whether an SV from the ILVC group would feel included based on their self-reported feelings of inclusion. Step 1 indicates the results of the logistic regression. After the logistic regression model was run, the chances of correctly predicting only increased by 0.55%; therefore, the logistic regression model is not more helpful in predicting feelings of inclusivity depending on the frequency of use of the non-academic resources. Table 21 indicates the weights and statistical significance of each of the independent variables.

Table 21

Logistic Regression Model for Non-Academic Resources

Non-Academic Resource	*b*	*SE*	Wald χ^2	*df*	*p*	Exp(B)
Health Services	0.028	0.045	0.376	1	0.540	1.028
Student Veterans Student Group	0.008	0.019	0.156	1	0.693	1.008
Student Veterans Resource Office	-0.063	0.057	1.202	1	0.273	0.939
Professional Development / Career Center)	-0.076	0.128	0.351	1	0.554	0.927
Non-Veteran Related Clubs & Organizations	-0.003	0.025	0.013	1	0.909	0.997
Educational Benefits Resource Officer	0.144	0.071	4.158	1	**0.041***	1.155
Diversity, Inclusion, Equity Office	0.040	0.096	0.170	1	0.680	1.041
Student Accessibility / Disability Office)	-0.041	0.097	0.182	1	0.670	0.960

* p<.05 level.

The only statistically significant independent variable in the model was the usage of an educational benefits resource officer. As Table 21 shows, every use of the educational benefits resource officer increases the logit of inclusion by .144 units. In terms of the odds ratio, SVs who use this resource are approximately 15.5% more likely to feel included on campus. For the remaining explanatory variables, the significance levels are higher than any conventional significance level that could be used to infer the relationship between these variables and inclusion. Furthermore, the estimates of coefficients in the logits (column *B*) are very close to 0, and the odds ratios are very close to 1, meaning the remaining variables are poor predictors of feelings of inclusion.

Research Hypothesis 3

RH3 stated non-academic resources required by SVs will primarily focus on GI-Bill processing, faculty advising, and creation of a club to support social interaction, and that by offering these resources, a higher predictive property on non-academic success and inclusion would occur. Both the correlations and logistic regression model showed that the only significant non-academic resource that increased feelings of inclusion was the Educational Benefits Resource Officer. This fact would tend to accept RH3 as accurate; however there was little empirical evidence to support that creation of clubs would significantly improve inclusion. Therefore, the null hypothesis is rejected.

Research Question 4: Desired Resources

The last research question asked SVs what resources they wanted their institution to provide. Table 22 displays the results from the ILVC sample.

Table 22

Frequency Counts of Requested Resources

Resource	Sample	
	n	**%**
No Response	94	51.37
Nothing or N/A	51	27.87
Student Veterans Resource Office	8	4.37
Student Veterans Student Group	6	3.28
Remedial Academic Skills Programs/Seminars	5	2.73
Veteran Only Dormitory Options	5	2.73
Translating Military Service to Civilian Education	4	2.19
Veteran Only Career Fairs	4	2.19
Professional Network Opportunities	2	1.09
Tutors provided by your College/University	2	1.09
One-on-One Interaction with Faculty	2	1.09

Qualitative coding methods (van Manen, 2021) were utilized to group the responses by resource categories. Responses were read, then assigned specific phrases to best capture their meaning. Next, responses were collated into categories. Most respondents (79.24%) indicated no response or noted “nothing” to this prompt (*n* = 145).

The results from the responses can be broken into two groups (a) responses that reflected independent variables (IVs) in RQ2 and RQ3, and (b) resources not listed in RQ2 or RQ3. First, multiple responses were coded to reflect the IVs in RQ2 and RQ3. For instance, “I want somewhere on campus for only veterans can hang out,” and “I wish there was a one-stop shop for veteran specific needs,” (both coded as Student Veterans Resource Office). The second group of coded responses were resources not listed in RQ2 and RQ3. For instance, “I want to live exclusively with veterans,” was coded to Veteran-Only Dormitory Options. Following coding, frequency counts were conducted on the coded responses and percentages of responses were calculated (shown in Table 23).

As show in in Table 23, only 20.7% of SVs (*n*=38) answered with a substantive response. Of this 20.7%, most of responses echoed academic and non-academic resources that were listed as options in RQ2 and RQ3. Specifically, 12.57% of the total responses referenced specific IVs used in this study with SVRO (4.37%), SVs student groups (3.28%), and remedial academic skills programs/seminars (2.73%). Notable resources not explored in RQ2 and RQ3 included veteran only dormitory options (2.73%, *n* = 5) and translating military service to civilian education (2.19%, *n* = 4).

Research Hypothesis 4

RH4 hypothesized that SVs will request more one-on-one meeting time with faculty and administration to further their academic and non-academic success. This hypothesis must be rejected as this specific resource was only requested by two SVs. Instead, there was little demand for construction of student veterans resource offices and student veterans student groups. More notable, however, was the lack of responses or responses noting “nothing” to this RQ. This survey item did not force participant responses; the ILVC sample was able to not answer this final question in the survey instrument. The large number of SVs did not identify any additional desired supports (79.23%), potentially signifying that SVs are currently succeeding (as evident by the high self-reported GPAs). Therefore, they may not need more resources to compete with their traditional student colleagues. Furthermore, this could mean that the ILVC sample is self-motivated to succeed academically. Further study will be required to understand why SVs were not taking advantage of some academic resources provided by their HEI. If “not applicable” is not assumed to mean a lack of participant response, there was still over a quarter of the sample responding there was nothing else that the HEI could provide to increase academic or non-academic success.

Chapter Summary

A total of 183 ILVC-connected SVs met the requirements for inclusion in the research sample due to prior active-duty status. While the sample was not as large or diverse as originally predicted, data analysis was able to be conducted and the RQs from Chapter 1 were addressed.

Regarding RQ1, SV engagement varied slightly from the NSSE sample. SVs were more likely to often explain course content to others, and they were more often to prepare for exams with colleagues compared to their national peers. In terms of faculty interactions, they were less likely to ask faculty members for career advice. The research hypothesis was therefore rejected.

RQ2 concerned academic resources provided and their correlation and predictive ability of GPA. SVs were highly likely to use one-on-one interaction with faculty members and to utilize remedial skills programs provided by HEIs. Furthermore, use of these resources were moderately correlated with GPA. The only statistically significant regression coefficient belonged to one-on-one interaction with faculty. Therefore, this study rejects the null hypothesis.

Regarding RQ3, use of an education benefits resource officer was moderately correlated with feelings of inclusion on campus. In general, the ILVC group seldom used the eight non-academic resources offered by their HEI. Results of the binary logistic regression revealed that use of an education benefits resource officer provided a 15.5% higher chance of feeling included on campus. Due to these findings, the null hypothesis must be rejected.

Finally, RQ4 showed that most SVs did not require additional resources to be provided by their respective HEI. Of the resources requested, the most asked for resources were a Student Veterans Resource Office, creation of SVs groups, and more in-depth remedial academic skills programs. The null hypothesis for RQ4 must therefore be rejected.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

This study collected more information about student veterans' (SVs) experiences on campus using a multi-prong approach. As reviewed in Chapter 2, research gaps exist regarding this segment of the student market in higher education. While this sector of higher education has a basic understanding of the demographics of SVs, less is known about the academic and non-academic supports they access and desire. Therefore, this study attempted to better understand SV behaviors in terms of collaborative learning, student-faculty interaction, academic resources utilized, non-academic resources utilized, and their effects on GPA and inclusion.

First, this chapter discusses a summary of findings. Secondly, findings are compared to research discussed in the literature review. Third, implications for SVs, faculty, and administrators are discussed. This chapter also contains a review of this study to identify its strengths and weaknesses. Finally, recommendations for further research are provided.

Summary of Findings

The first research question in this study asked, "How are SVs engaging in collaborative learning and student-faculty interaction?" As presented in the previous chapter, NSSE data were utilized to compare their survey's approximate 95,000 data points to the responses of SVs collected for this study (183 valid student veteran responses). Specifically, NSSE data for "Doctoral Universities: Higher Research Activity" and "Doctoral Universities: Highest Research Activity" was averaged prior to comparison with the ILVC data set. This average was calculated by data scientists for the NSSE and reported on their website. These averages were then compared to frequency count percentages of the ILVC group. The largest point of difference was the 24.9% higher response by the ILVC to "sometimes" explain course material to one or more students. Collaboration overall was shown to be different between the ILVC and NSSE data sets, as the SVs were more likely to “sometimes” prepare for exams by discussing and working through course material with other students.

Beyond these descriptive statistics, a $\chi 2$ test was conducted to ascertain statistically significant differences between the ILVC Observed n and the NSSE Expected n. Three of the four items relating to collaborative learning yielded statistically significant results: the “Explained course material to one or more students” item yielded $\chi 2$ (3, n = 183) = 51.59, $p <$ .05. The item “Prepared for exams by discussing or working through course material with other students” yielded $\chi 2$ (3, n = 183) = 59.36, p = .00. Finally, the item “Worked with other students on course projects or assignments” yielded $\chi 2$ (3, n = 183) = 13.94, p = .003. SVs were less likely to collaborate with other students (*never*) compared to the general population of students (*often*).

Regarding student-faculty engagement, the two datasets deviated once from each other by >10% when analyzing descriptive statistics and frequency counts. SVs report they were 13% less likely to ask faculty members about their career plans, with most describing their likelihood as “often.” The remaining percentage differences were lower than 10% between the two groups. Despite the lack of variation, Table 11 illustrates that in terms of student-faculty interaction, the ILVC and traditional students appear to have similar experiences.

A similar χ^2 test was conducted to determine the statistical significance of these differences. Included in Table 12 there were two items which demonstrated a statistical significance below a .05 level. First, “talked about career plans with a faculty member” yielded χ^2 (3, n = 183) = 22.25, p < .05. The second item of “Worked with a faculty member on activities other than coursework” yielded χ^2 (3, n = 183) = 33.11, p = .00. Survey respondents engaged with faculty at lower levels (“sometimes” or “never”) than the NSSE sample (“often”).

The second research question asked, “Which resources provided by HEIs were most effective for SVs in terms of academic success?”. In terms of frequency used, SVs reported the highest used resources as one-on-one interaction with faculty ($M = 17.72$) and remedial academic skills and programs ($M = 9.02$). Both resources were statistically significant using a Pearson’s R correlation test (Urdan, 2005). Despite the sample’s lower overall levels of interactions with faculty, veterans most often interacted with faculty members for academic support. First, one-on-one interaction with faculty and GPA were correlated at $R(183)=.326$, $p< .05$. The second significant correlation occurred between remedial academic skills programs/seminars and GPA, with a correlation of $R(183)=.296$, $p<.05$. Beyond correlations, a multiple linear regression model was run to assess predictability of all of the resources provided. Unfortunately, no independent variables had statistically significant effects on the outcome of GPA. Further discussion on this finding occurs in the following section.

After academic resources data were analyzed, a similar analysis was conducted on non-academic resources. RQ3 asked, “Which resources provided by HEIs were most effective for student veterans in terms of non-academic success?”. Descriptive statistics in Table 13 displayed a high usage of SV groups (M=8.32), non-veteran related clubs and organizations (M=5.49), as well as a SVRO (M=5.49). Next, Pearson R correlations were conducted to determine the relationship between these resources and feelings of inclusion on campus. The only statistically significant correlation was between educational benefits resource office with a $R(183)= .153$, $p<.05$. Even though this resource was the only statistically significant correlation, the correlation between variables was weak. A binary logistic regression model was conducted to examine the predictability of resources’ impact on the dependent variable of inclusion. Once created, the model displayed a 0.55% increased chance of predicting inclusion based on the resources provided. Furthermore, the educational benefits resource officer was the only statistically significant predictor variable with a beta weight of .144. These results demonstrate that the ILVC sample did not report a high use of non-academic resources, and there was little predictability between the non-academic resources and feelings of inclusion.

The final research question asked, “What resources do SVs want HEIs to provide?”. The data collected in the survey instrument asked each respondent to, in their own words, express resources they wished their respective HEIs would provide. Qualitative coding methods were utilized to consolidate raw responses into categories to allow for frequency counts and percentages to be calculated; the results are located in Table 23 A substantial percentage of the respondents did not respond to the prompt (51.37%) or indicated no additional resources were desired (27.87%). Moreover, for those indicating a desired resource, many respondents stated desiring resources described in the second and third research questions. This could be that the resource indicated was not currently provided at their institution, and seeing it described in a prior question created desire for respondents, wanting the resource offered at their HEI. To summarize, the SVs wished for military exclusiveness in terms of dormitory options, career fairs, professional network opportunities, and translating military service to civilian education.

Discussion of the Findings

This study filled a gap in the literature and to learn more about the SV experience on campuses affiliated with the ILVC. This discussion reviews the findings of this research compared to the literature review presented in Chapter 2. The discussion includes SV demographic characteristics, veteran transition, and SV integration.

Student Veteran Characteristics

Because the SVs in this study were attending more selective institutions, it is necessary to determine if the ILVC sample is representative of the overall SV population. According to the Department of Veteran Affairs (VA, 2019), men comprise 73% of SVs. The ILVC sample was comprised of 66.7% biological males, slightly lower than the overall figures. The age of the ILVC sample and SV population were also similar, with most students aged 23-35, 74.9% and 84% respectively (NCES, 2017). According to the VA Campus Toolkit (2020), 68% of SVs are first-generation college students. The ILVC group differed, however, with only 39.9% reporting that their mother's highest level of education being high school and 9.3% had mothers who did not graduate from high school; the participants reported 36.6% of their father's highest level of education was high school and 18.6% had fathers who had not graduated from high school. Thus, the ILVC group had a lower number of first-generation college students (approximately 50-55%). In general, the ILVC sample showed more women (>5%), and fewer first-generation students (18%) compared to the national averages (NCES, 2017).

SVs often bring college credits to four-year institutions, and are therefore identified as transfer students (O'Herrin, 2011). The ILVC SVs brought in an average of 44.5 credit hours, thus aligning with prior research on SVs. Indeed, a Department of Defense (DOD, 2019) study illustrated that nearly 70% of SVs enter with nearly 60 credits, almost completing an associate's degree upon entry. Only one of the SVs in the present study had zero credits to transfer into their four-year program.

Veteran Transition

Chapter 2 noted Schlossberg's (1995) Transition Theory, positing that it examines the transition of SVs to their respective HEI. Schlossberg's (1995) theory examines the four Ss of situation, self, strategies, and support; this dissertation focused on the strategies and support of the theory. Strategies were explored through inclusion of the NSSE items. Mentioned, there were high uses of collaborative learning activities and student-faculty interactions. In terms of support, this dissertation found HEIs are providing resources to help SVs cope with transition. Bailey-Taylor (2009) stated that supports can include financial, friends, institutions, communities, and peers. Financial support was evident due to statistically significant use of the educational benefits resource officer. Communities and peers were evidenced by reported high use of SVs groups, and responses answering RQ4 urge HEIs to create more sources of support through offerings of SVROs and SVs student groups.

The literature review outlined seminal works of research investigating the complicated issue of veteran transition (Rumann & Hamrick, 2010), with a specific focus on veterans' abilities to successfully transition into HEIs (Ackerman et al., 2009). One of the central issues the literature revealed was SV's ability to socially interact and relate to other traditionally aged students, and how they deal with the loss of identity given to them by the military (DiRamio & Spires, 2009; Rumann & Hamrick, 2010). Research also stated that a lack of assistance at time of separation could hinder SV's ability to succeed (Alvarez, 2008b).

The results of this study clarify several previous findings. With respect to challenges in interacting with other students (DiRamio & Spires, 2009; Rumann & Hamrick, 2010), the present study discovered SVs were engaged in collaborative learning with others. Despite engaging in these activities less than traditionally aged students, the respondents indicated that they "sometimes" collaborated or engaged with others at higher frequencies. For example, the ILVC sample reports successfully collaborating with peers, sometimes through explanation of course material (96.8%), and they were often preparing for exams through discussing or working thorough course material with other students (88%). Beyond the large percentage of ILVC members reporting active execution of these activities, the frequency demonstrated significant differences: the expected n for the NSSE group report “sometimes” explaining course material to other students (*n*=60.4); a greater portion of the ILVC group (*n*=106) report engaging with this activity, representing a 57.9% response rate to this activity and frequency. Regarding the “never” response, fewer ILVC respondents responded than predicted by the χ^2 model, with a residual of 4.2 students.

Increased social interaction was also evident (see Table 19): the two most engaged non-academic resources utilized were SVs student groups and non-veteran related clubs and organizations. Furthermore, the highest non-academic resource requested to answer RQ4 by the ILVC group was the creation of a SVs student group (6, see Table 23). Moreover, the SVs in the present study engaged with faculty to a significant level (*M*=17.72 per academic year; see Table 13).

As mentioned, Alverez’s (2008b) research stated that a potential lack of support from the DOD and the VA may set up veterans to fail when transitioning into the civilian environment and attending college. However, using self-reported GPA as an indicator of success, the veterans in the ILVC sample of the present study are performing well academically, with 81.41% obtaining a GPA greater than 3.0.

The literature also highlights the substantive change between working in a military space and transitioning to the culture of academic space. Ackerman et al. (2009) suggested that the transition from the military to the educational environment could be exacerbated as the cultures of each are significantly different than each other. Furthermore, Olsen et al. (2014) stated that SVs often report traditional college students lacking understanding or respect for their military service. The present study contradicts this transition challenge, as 78.7% of the ILVC sample reported feeling included in the educational community.

Another finding in prior literature is that a lack of social cohesion may decrease SV matriculation rates in HEIs. In the present study, 75.4% of the sample indicated a plan to return to college within the next academic year, and an additional 11.4% were undecided. The perspectives of the participants in the study challenge prior literature on difficult transitions. Further qualitative research might investigate SVs' experiences to better understand this difference.

The SVs attending the five institutions represented in the sample (see Table 7) note accessing SVROs and SV groups. These connections may support veterans during their transition to college students. One of the key transition factors identified in the results shown to provide support was the use of the educational benefits resource officer, and its statistical significance to inclusion (see Table 20). This relationship was statistically significant with a Pearson's R correlation of 0.153. Despite the correlation's weak significance, this resource is important to all SVs. As stated earlier, the Pearson's R was low, as SVs may not utilize this resource often; however, they do use it consistently, hence the statistical significance. Prior research on educational benefits shows that approximately 43% of SVs use undergraduate education benefits (Holian & Adam, 2020). Most of the present sample (71.58%) report use of GI-Bill financial benefits (n=131), and nearly 30% use scholarships for additional support (n=54).

Table 23

Funding Supporting the ILVC Sample

Funding	ILVC Sample	
	n	**%**
GI-Bill	131	71.58
Scholarship	54	29.51
Other*	39	21.30

Note. ILVC = Ivy League Veteran Council.
*Indicates students receiving unlisted funding, either alone or in conjunction with the funding options listed.

Higher usage of GI-Bill benefits might be due to significant use of the educational benefits resource officer, making SVs feel more included on campus.

Tinto's Integration Model and Veteran Integration

Figure 3 in Chapter 2 represents the adapted Integration Model (Tinto, 1975), the Student Veteran Model of Integration. This framework suggests (a) a method of analyzing collected data, and (b) a conceptualization of SV integration based on the sample in this study.

The three inputs on the adapted model are (a) Family and Military Service Background, (b) Military Morals and Values, and (c) Military Training. Former enlisted active-duty service members were the desired sample for this study, creating a shared similarity amongst respondents and ensuring representation of all military branches. This survey instrument did not collect years of service from participants. Regarding family background data, the highest educational attainment of respondents' mothers and fathers were collected. Approximately 39.9% of the SVs were first-generation college students, which is lower than the general SV population (VA Campus Toolkit, 2020); this indicates that participants' parents received less education than the SV population. Unfortunately, data were not available to ascertain how many first-generation college students attended the HEIs in this study; therefore, comparative statistical tests could not be utilized to examine the delta between the SV's and traditional student's metrics of first-generation college students. Future research needs to be conducted to ascertain if the SV's first-generation status is overrepresented in the HEIs samples.

The Military Morals and Values were not measured directly in this survey instrument; rather, the values statements of each of the military branches highlighted the espoused culture in which the SVs experienced military service. Table 24 displays the values of the military branches and Table 25 highlights the values promoted in the included HEIs.

Table 24

Core Values of Military Branches

Branch	Values
Air Force	Integrity First, Service Before Self, Excellence In All We Do
Army	Loyalty, Duty, Respect, Personal Courage, Honor, Integrity, Selfless Service
Coast Guard	Honor, Respect, Devotion to Duty
Marine Corps	Honor, Courage, Commitment
Navy	Honor, Courage, Commitment

Table 25

Core Values of HEIs

HEI	Values
Colombia	Kindness and Respect, Embrace Diversity, Promote Research, Flexibility
Cornell	Purposeful Discovery, Free and Open Inquiry and Expression, Community of Belonging, Exploration Across Boundaries, Changing Lives Through Engagement, Respect for the Natural Environment
Princeton	Courage, Collaboration, Creativity, Community, Globalism, Imagination, Inclusivity, Resilience
Stanford	Integrity, Diversity, Respect, Freedom of Inquiry and Expression, Tenacity, Optimism
William & Mary	Belonging, Curiosity, Excellence, Flourishing, Integrity, Respect, Service

Note. HEI = Higher Education Institution.

Central in the military are honor, respect, and commitment; the values of the five ILVC institutions promote integrity and respect. As mentioned in Tinto's (1975) model, commitment manifests differently in the academic setting, with a focus on community, curiosity, and inclusivity. Both military and academic values center on individual commitment beyond the person. Future research could incorporate a survey question asking SVs if they still live by military morals and values during their college career, or if they have adapted a different worldview post-separation.

Military training was built and shaped around the requirements of participation (i.e., active-duty personnel). All respondents would have completed Initial Entry Training (IET), colloquially known as Basic Training. Due to the ages of ILVC respondents (see Table 4), it is likely they received advanced leadership training during their years of service. Finally, the high number of transferred credits accrued by the sample suggests additional military training having been obtained before entry into their HEI. Thus, these three inputs (Family and Military Service

Background, Military Morals and Values, and Military Training) highlight SVs in this study often had college-educated parents compared to the general population of college students; had experience working in military branches with respective branch values statement (Table 25); and had prior military training (e.g., IET, leadership training, etc.). All but one SV in this sample brought college credits into their programs, highlighting additional outside education prior to college entry.

In the adapted model, academic success included grade performance and intellectual development. GPA was used judge academic success. Durdella and Kim (2012) examined the relationship between GPA of SVs and of traditional students, finding that SV status is often negatively associated with GPA at HEIs. The findings in this survey found that the mean SV GPA was 3.4 whereas the HEIs mean GPA was 3.54.

The present study determined moderate correlations between one-on-one interaction with faculty and GPA, and between remedial academic skills programs/seminars and GPA. The typical student to faculty ratio at the five ILVC-affiliated HEIs range between 5:1 and 12:1 (Duffin, 2021). The focus of the liberal arts at the participating HEIs means faculty work to foster better student-faculty relationships; this is confirmed in the present data for SVs. The use of support offices for remedial skills has a positive relationship with GPA. These two results suggest academic success of SVs in this study was increased by interaction with faculty members and support from remedial academic skills programs. Faculty and institutions should promote these activities for SVs.

Non-academic success was evaluated by feelings of inclusion. Tinto and Pusser (2006) stated that non-academic success is highly influenced by peer-group interaction. The frequency of use in Table 19 suggests that SVs in the sample are heavily invested in both veteran and non-veteran groups and clubs. Furthermore, the education benefits officer also contributes to SV inclusion on campus (see Table 20).

Often in research, inclusion is also referred to as a sense of belonging:

> Students' perceived social support on campus, a feeling or sensation of connectedness, and the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the campus community or others on campus such as faculty, staff, and peers. (Strayhorn, 2012, p. 4)

HEIs working to nurture these feelings will likely contribute to SVs feeling more included and increase SV retention and GPA.

Service members report significantly lower feelings of belonging compared to their traditional student colleagues (Barry et al., 2019). Yet, the current findings highlight SVs at the five ILVC-affiliated HEIs engaging with other students and faculty, thus reporting inclusion on campus. What remains unknown is the impact of the culture of highly selective liberal arts institutions, and the motivations of SVs to attend these universities; these factors may limit applicability of conclusions to the general population of SVs attending 4-year institutions. More research is needed to understand the influence of institutional rigor and culture on these factors for SVs.

Implications for the Higher Education Community

Despite regression models revealing a lack of statistically significant results for most predictor variables, this study yields significant practical knowledge for various groups within higher learning. First, SVs can use findings from this study, particularly the correlations, to understand the relationships between use of resources, GPA, and inclusion, thus aiding them in advocating for desired programming. Secondly, faculty members can use this information to understand how to better support SVs in the classroom, emphasizing collaborative learning, student-faculty interaction, encouraging use of remedial academic skills. Administrators, particularly those supporting SVs, can use this study to inform strategic planning decisions for the academic and non-academic success of their SV communities.

SV Implications

This study focuses on SVs currently enrolled in full-time undergraduate programs at highly selective, rigorous public and private Ivy League Liberal Arts Institutions. Before gaining entry, admission to these schools is highly selective. Upon examination of the sample's high school GPAs, these students may normally face rejection, needing higher GPAs for acceptance. For example, 82% of William & Mary's class of 2025 were in the top 10% of their high school class (William and Mary, n.d.-a). Although specific data are not reported for other included ILVC schools, admitted students to Ivy League Schools generally have a weighted high school GPA of > 3.9 (Moody, 2018). The range of self-reported GPAs for the SVs, therefore, showcases some admitted veterans entering with lower GPAs than typical of the Ivy League admitted students.

This difference would place SVs at a disadvantage, as they may have started with less educational prowess compared to their traditional classmates. Yet, due to their status as adult learners, SVs may better understand the importance of success in college and the dedication needed for academic success. This understanding could be a motivating factor contributing to their higher GPAs reported in college. Furthermore, as shown in Table 4, most of the ILVC sample was 5 to 17 years removed from a formal educational environment, potentially contributing to additional maturity.

Due to the characteristics of the sample, SVs can use these findings, particularly the correlations between utilizing certain institutional resources and higher GPA and engage in these activities more. There is a moderate correlation, for example, between one-on-one interaction with faculty and a higher GPA. SVs could interpret this to reach out to faculty members more often, potentially improving their GPA. Given the age of the sample participants, they are further developed as students, and likely to be at the "self-authoring stage" (Baxter-Magolda, 2009). Many SVs may be closer in age to faculty members than traditional students, potentially providing increased opportunities for engagement through shared facets of identity. Research highlights the importance of faculty-student interaction and its relation to satisfaction and college GPA. For example, Talbert (2013) found statistically significant effects of student-faculty interaction on GPA in first-generation college students; 50% of SVs in this study are first-generation, suggesting they may benefit more from interactions with faculty members.

This sample also showed a moderate correlation between utilizing remedial academic skills programs and GPA. As mentioned, SVs often have greater time between formal schooling and when they enter college post-separation. During these gaps, academic skills (e.g., writing, mathematics) may diminish over time without use, and remedial education has demonstrated positive impacts on student academic achievement. From note taking, study practices, and reading comprehension, SVs may need assistance in relearning these skills. In addition to academic skills being underutilized in the military, academic knowledge may also diminish without use (Yanosko, 1981). Mathematics, for example, is a skill not used in most Military Occupational Specialties (Department of Defense, 2020). Therefore, attending remedial academic skills programs and seminars could prove useful to the SV population.

SVs can also benefit from this study in terms of inclusion on campus. While utilization of an educational benefits resource officer was positively correlated to feelings of inclusion, there was a high frequency of use of SV groups. The positive correlation between SV groups and inclusion suggests SVs interacting with one another improves their sense of belonging. Further research should clarify direct causation of these groups on inclusion. Furthermore, responses to RQ4 state a desire for more SVs groups and a SVRO. Although participants requesting these resources was low (see Table 23), it should be noted that many participating HEIs already offered this resource. This finding may be a result of surveyed HEIs lacking significant resources to bolster these two facets into the SV educational environment. If HEIs are unable to create these resources, SVs can use these findings to support a student-created and driven group to increase their feelings of inclusion on campus.

Faculty Implications

Faculty members at HEIs need to understand and utilize the findings of this dissertation. This research found that in comparison to the NSSE sample, SVs' student-faculty interactions slightly differed. Respondents in this study were more likely to only *sometimes* engage in an activities relative to their national peers who were more likely to *often* engage in the same activity. For example, 40% of SVs discussed career plans with faculty (*sometimes*), yet they may not do so at the same frequency of the traditional student body. Furthermore, SVs are just as often as their peers to work with a faculty member on activities outside of course work: SVs will discuss course topics and ideas with faculty members outside of class. Finally, faculty members should both encourage and expect SVs to discuss their academic performance with them outside of class.

Beyond student-faculty interaction, faculty members should consider adjusting certain assignments if their class comprises many SVs; the findings of this study support the encouragement of collaborative learning. The ILVC group was more likely to prepare for exams with other students compared to national averages (see Table 11). Also, SVs describe an openness to work with other students on course projects or assignments. Changes to assignments might include group projects, collaborative learning activities, and collaborative groups.

Because one-on-one interaction with faculty was moderately correlated with GPA, faculty may wish to emphasize office hours and tutoring options with SVs in their classrooms and under advisement. Furthermore, faculty should be aware of the potential need to revisit and teach remedial academic skills. Overall, faculty should look to this dissertation to better understand the SVs in their classrooms. Understanding these differences, as well as creating remedial education modules, may increase feelings of belonging and, ultimately, student academic success.

Institutional Implications

There are several reasons university leaders should understand this study's findings of SVs. As noted, the number of SVs on campuses are increasing (Caspers & Ackerman, 2012). This influx is expected to increase as the War on Terror ends and the population of American armed forces decreases. Institutions need to take necessary steps to accommodate the expected surge of SVs entering college.

Remedial academic training and GPA are moderately related; this study explained the importance of faculty expanding these activities. Recently, higher education has placed significant emphasis on Diversity, Equity, and Inclusion (DEI) policies (Clayton, 2021). While HEIs have primarily looked at DEI through a racial or sexual identity lens, this study urges universities to expand their DEI efforts to include SVs in efforts. Providing some form of remedial training should be looked at as an equity issue, ensuring disadvantaged students receive the extra attention they need to succeed. Given that more than half of the SVs in the sample are first-generation students, helping support a population of students with no family background in post-secondary education is critical to improve overall college outcomes. Currently, SVs in the sample group were unlikely to utilize the DEI Office (*M*=0.61 times used in an academic year; see Table 19). For reasons beyond the scope of this dissertation, SVs do not see the DEI office as a resource to use. Offering programming in DEI offices specifically focusing on SVs may result in these students accessing the office more frequently. Incorporating remedial programs or increasing availability to these programs in DEI offices is crucial, needing additional research.

Table 23 showed that SVs are requesting SVRO (*n*=8) and SVs Groups (*n*=6). While correlations between these resources and feelings of inclusion lack statistical significance, responses to RQ4 and the frequency of use during an academic year tell the tale of usage. SVs Groups, for instance, had a mean usage of 8.32 times a year (see Table 19), approximately one meeting or event every month during the academic year. When looking at SVROs, institutions surveyed with these offices were identified and report high usage by SVs (approximately 3.63 times per year). Respondents from HEIs without these offices, requested them (see Table 23). Of the sample's HEIs, four of them offered a SVRO. It is beyond the scope of this dissertation to ascertain why SVs request these offices, and is a recommendation for future educational researchers.

This study supports the need for educational benefits resource officers. The average use of this resource in the ILVC group was 2.22 uses per academic year (Table 19), corresponding to student need at the beginning of every semester; SVs will contact this administrator once per semester (twice per academic year) to ensure their GI-Bill paperwork is correct and submitted. Having this administrator on campus also had a statistically significant small correlation, with feelings of inclusion. It can be assumed this position at HEIs would never face elimination, as it ensures their HEI is receiving tuition; its importance to the SV population on campus was a statistically significant result answering RQ3.

Finally, as stated in the previous section, future research needs to be conducted to ascertain if SVs are considered first-generation students at higher rates than traditional students. If the SVs are indeed represented at higher rates, how should institutions react to assist these students in both academic and non-academic ways? HEIs should strive to further understand if there are any other ways that the SV community are similar to either adult learners or first-generation students. Accurately understanding SVs positionality on campus could allow HEIs to utilize the same methodology in assisting SVs as well as adult learners or first-generation students.

After-Action Review

In the United States Army, an After-Action Review is "a professional discussion of an event, focused on performance standards, that enables soldiers to discover for themselves what happened, why it happened and how to sustain strengths and improve on weaknesses" (United States Army, 2017, p. 17). It is common to conduct an After-Action Review after any operation, activity, or task performance which will be conducted again in the future. In the spirit of continuing this tradition, the next sections conduct an After-Action Review on this dissertation to explore points of sustainment and improvement for the planning, preparation, and execution for future research.

Planning

The planning of this dissertation was quickly conducted. Despite the tight planning window, the strategic planning of this dissertation was in accordance with recommendations from quantitative researchers (e.g., Creswell & Creswell, 2018). The topic was identified prior to the literature review, and the review provided little research discussing the topics of student engagement, academic resources, non-academic resources, and their effects on SV GPA and inclusion. While this study attempts to fill this gap, further research is imperative.

Future researchers should be aware of potential obstacles when conducting this work. Specifically, despite best practices for survey research recommending data collection be completed within two weeks of survey administration using aggressive survey distribution, this timeline was slowed due to ILVC gatekeepers' policies guarding student emails. Many ILVC chapter presidents preferred to send survey reminders once per month in accordance with their monthly emails to the SVs at their respective HEIs. Five of the 11 gatekeepers complied with the requested distribution schedule.

Preparation

The dissertation chairwoman conducted three phases of edits for each chapter prior to the proposal meeting. Approximately 100 content edits were made to each of the chapters in the dissertation proposal before submitting to other committee members. As with all research, however, feedback-based improvements can always be made to improve preparation. While few dissertations exist in terms of SVs, deeper review of dissertations concerning academic success, non-academic success, and inclusion could have improved this study. Furthermore, inclusion of a survey instrument measuring student engagement should have been included prior to the proposal meeting.

Post-dissertation proposal, there were preparation mistakes that could have been avoided. The pilot survey, for example, should have been administered to more than the ILVC chapter presidents. Many presidents did not belong to the desired sample of SVs. Due to this, most feedback from chapter presidents was not helpful in adjusting the survey instrument for the ILVC sample. Multiple items needed to be changed on the first day of data collection to adjust for mistakes made in the pilot that were not corrected for the final survey instrument. For example, when asking about the branch of military the respondent served in, Coast Guard was not listed in the original survey instrument. Several items did not have the "Force Response" feature on Qualtrics engaged, permitting the pilot sample to not answer some questions. Finally, skip logic needed corrections, ending the survey for respondents outside of the survey's criteria. These errors were resolved immediately and did reduce overall sample size of the ILVC group.

Sample size itself is a concern to be considered prior to execution. During proposal, the panel inquired about the anticipated response rate, which was 35%. This belief was based on the potential n provided from the ILVC, perceived buy-in of veterans supporting a veteran, and the perceived involvement of the ILVC on their respective campuses. This hypothesized response rate revealed to be partially accurate. Of the ILVC chapters that distributed the survey on their campuses, the response rate surpassed 35%; however, not all ILVC chapters participated. As mentioned, some chapters failed to respond to the researcher's emails post-proposal, and others initially agreed to participate, later changing their minds. Overall, the ILVC was an asset and this research could not have been completed without their assistance. The overall final response rate of 12% was lower than anticipated. Future research could this rate by through traveling to the HEI offices engaged with SVs versus directly with the student leaders of the ILVC.

Conducting the Study

While conducting the study, implementation of several improvements could strengthen the study. The survey instrument, despite its initial few mistakes, was ultimately strong. No participants described the instrument as too long, confusing, or incomplete. Use of Qualtrics for data collection and SPSS for data analysis proved to be an effective method of analyzing survey data.

One major improvement should be considered prior to conducting future quantitative research with SVs. Results of regression models, both linear and logistic, lacked statistically significant results. Upon data analysis, it was clear that many resources included in RQ2 and RQ3 were not used at all by the sample. This is most evident in RQ3, where most veterans responded never using the listed in an academic year, creating a concern with the dependent variables in the regression models. Furthermore, the GPA and inclusion dependent variables were slightly problematic. The mean GPA of SVs in the ILVC group was high, with little variability among the participants. This high reporting of GPA may be due to self-report, which is susceptible to bias and exaggeration; additionally, this may be due to the highly competitive nature of the participating ILVC HEIs. Therefore, the relationship between variables were less pronounced, as the dependent variables were scored very high. The survey should be administered at either less selective HEIs or HEIs with a lower Carnegie classification, revisiting this dissertation's findings.

Contributions of Results to Literature

Regardless the strengths or weakness of this dissertation, there were statistically significant results which contribute to the current body of literature. As discussed in Chapter 4, there was a 15.5% increased chance of inclusion for SVs who used the Educational Resource

Benefits Officer. In the social sciences, this level of effect is considered stronger than it would be in other academic disciplines. This is primarily due to the multivariate nature of subjects within social science research (Cohen, 1988). For example, a 15.5% boost in vaccine efficacy would be viewed as a small jump in effect size as a subject in a vaccine trial must be as close to 100% as possible. In social science however, Cohen (1988) argued that effect size is best looked at as a departure from 0% efficacy. Therefore, this dissertation did provide context to current research while displaying more avenues for research into SVs.

Recommendations for Future Research

Several recommendations for future research emerged throughout the course of study. Primarily, future research should be conducted at more institutions. In terms of public and private Ivy League HEIs, future research should include additional elite institutions to determine if SVs respond in similar ways. This broader sample would provide Ivy League HEIs with best practices for improving GPA and inclusion of the SV populations.

Beyond the Ivy League institutions, this study should be replicated in both public comprehensive colleges and in the community college system. Presumably, SVs in these institutions may respond differently. Regression modeling in Chapter 4 may discover statistical significance when (a) the response rate is higher and (b) the dependent variables have more variation. This research should also be expanded to other institutions enrolling higher percentages of SVs. Specifically, the community college system should be considered, as they enroll a large portion of the SV market. As this research is ultimately intended to benefit SVs, the more informed academic leaders are, the better the decisions made will be to support their existing and future SV populations.

Another avenue of future research should look at retention of SVs. As noted in Chapter 4, 21 respondents (11.5%) stated they were unsure they would continue their education, and 24 (13.1%) indicated they would be discontinuing their higher education careers. It was beyond the scope of the present study to assess for reasoning. Despite 75% of the sample intending to continue their education, this number is lower than national averages (95%) of retention at private non-profit institutions with less than 25% of applicants accepted (NCES, 2017). The retention rates of SVs are higher relative to other institutional types, yet lower than the overall populations of highly selective private institutions. Future research would benefit SVs by assessing reasons for discontinuation of their education, comparing their reasons to other traditional undergraduate students. It is important to note that data collection occurred during the COVID-19 pandemic, which may have affected veterans in the study to opt out of college.

Future research should also be conducted to determine SVs' dispositions towards their HEI and their degree post-graduation. Specifically, longitudinal research could ascertain if SVs feel they have been successful in their educational pursuits. This research would also be useful for the advancement sector of higher education, determining the level of connection to the SVs' alma maters.

This study inquired about the number of credit hours the sample transferred into their current HEI. SVs in the ILVC group transferred in a significant number of credit hours (M=44.5), yet the relationship between credits brought in, retention, and graduation rates remains unknown. Future research concerning (a) SV academic performance compared to traditional college freshman and (b) the impact of transfer student status on inclusion would provide higher education with knowledge to better support the SV population.

A small number of respondents (*n*=5) requested veteran only dormitory options and veteran only career fairs (*n*=4); further research envisioning these programs could benefit the industry. Qualitative research methods could be utilized to understand the experience of a SV living residentially with traditional students varying in age, life experience, and priorities. Furthermore, qualitative and quantitative research examining the impact of living off campus on feelings of belonging and inclusion could help explore this resource empirically.

Finally, the respondents noted a desire for SVROs at their HEIs. It remains unknown what SVs hope to obtain via these offices; future research should survey SVs to understand why they desire SVROs, what the offices should provide, and how they could best cater to SVs. Multiple reasons could exist for this desire; however, without strong qualitative or quantitative research justifying their existence, HEIs may not be inclined to invest the financial capital to start offering them.

Conclusion

This dissertation presents a profile of SVs from five public and private Ivy League institutions. A total of 183 SVs at these HEIs responded to a cross-sectional survey instrument collecting information regarding demographics, engagement practices, resources requested from their HEIs, and use of academic and non-academic supports, to determine the relationship between these supports and GPA and inclusion. This dissertation effectively answered each of the research questions listed in Chapter 1 and a summary of these findings can be found below.

SVs in the present sample at these highly selective institutions high self-reported high (>3.00) college GPAs (Table 14). This dissertation asserts a correlation between higher GPAs and use of both remedial academic skills programs and one-on-one interactions with faculty.

The ILVC group also differed from findings on retention and inclusion for SVs. Most respondents reported an inclination to return to their respective HEIs at higher rates than prior findings in the field reported (Postsecondary National Policy Institute, 2015). Furthermore, feelings of inclusion on campus were high, indicating that ILVC SVs are successfully being included on campus.

To measure engagement, both faculty interaction and collaborative learning were assessed. The ILVC sample and NSSE sample had similar responses of engaging in collaborative learning activities. The frequency of use differed, with the ILVC sample engaging in these activities "sometimes" whereas the NSSE group was more likely to collaborate "often." SVs were similar to the NSSE group in terms of faculty interaction, with the exception of talking about career plans with faculty and working with faculty on activities outside of course work.

Academic and non-academic supports most used by the SVs were SVROs, SVs groups, student groups and clubs, and educational benefits resource officer. The ILVC respondents at HEIs without these resources requested these resources be provided by their institutions.

Future research in this area of higher education should be conducted to better inform HEIs on assisting the SV portion of the market. HEIs should use this survey instrument to better understand SVs' needs and wishes. Executing this course of action will better the faculty, administrators, leadership, and SVs.

This dissertation includes a few overarching findings of note. First, SVs seem to have similar interactions in higher education as do adult learners. The ILVC sample entered HEIs at rates similar to adult learners with 137 respondents entering between 23 and 35 years old. Furthermore, over 50% of the sample reported their parents had a HS diploma or less. Further research is needed to understand how the SVs relate to adult learners and if priorities of these two groups are similar. This study also demonstrated the role of military experience when the SVs enter into HEIs. Analysis was conducted to ascertain the value systems of the HEIs and branches of the Department of Defense. Future research is required to understand how their DOD value systems merge or conflict with the educational environment. The sample also entered with a large number of credit hours (M = 44.5). This brings the ILVC sample in line with transfer students entering into these HEIs. In what other ways do SVs and transfer students align? Can HEIs utilize the same methodology in supporting transfer students and SVs? Answering these questions should be at the forefront of SV literature.

To conclude, SVs represent a very diverse group, with differences in age, race, gender composition, and educational background, relative to traditionally aged students. Despite the inter-group differences, SVs share a strong commonality: they have all devoted a significant portion of their lives to the service of their nation. This research found that despite these differences, participants in this study had higher GPAs and plans to stay in college, and that their interactions with faculty and remedial services were related to higher GPAs. As some SVs are first-generation students, it is important to provide necessary supports for them on campus. HEIs have a fiduciary responsibility to assist all students in the attainment of their goals. SVs should remain both a critical focus of DEI programming, and of HEIs working to better fulfill their responsibilities to their SVs.

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APPENDIX A

ACADEMIC AND NON-ACADEMIC RESOURCES FOUND AT HEIS WITHIN THE IVLC

Non-Academic Supports
Health Services
SVs' Group
Non-Veteran Related Clubs & Organizations
Professional Development/Career Center
SVs Resource Center
Educational Benefits Resource Officer
Diversity, Inclusion, Equity Office
Student Accessibility Office / Disability

Academic Supports
Writing Resource Center
One-on-One Interaction with Faculty
One-on-One Interaction with Advisor
Institutional Tutors
One-on One interaction with TA
Library Research Services
Study Abroad Services
Remedial Academic Skills Programs

APPENDIX B

PILOT SURVEY

Start of Block: Intro

Start of Block: Intro

Dear Participant:

I am a doctoral student at William & Mary, examining student veteran's usage of academic and non-academic resources at their higher education institutions. This survey will provide valuable information to institutions on the usage and effectiveness of these provided resources. Since you have been identified as a student veteran, I am inviting you to participate in this research. Your response to this survey will greatly enhance our understanding, and it will only take you about 5 to 10 minutes to complete.

Your participation in this research is voluntary. There is no compensation for responding nor is there any known risk. Completion of the survey indicates your consent to participate in this study. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address.

Thank you for assisting me in my educational endeavors. I genuinely appreciate your time. If you require additional information or have questions, please contact me at the email listed below.

Sincerely,

Rob Thompson, MBASSG, USA (ret.) PhD Student, William & Mary

rcthompson03@email.wm.edu

ELECTRONIC CONSENT: Clicking on the "I agree" button below indicates that:

You have read the above statement You voluntarily agree to participate

○ I Agree (1)

○ I Do Not Agree (2)

Skip To: End of Survey If Dear Participant: I am a doctoral student at William & Mary, examining student veteran's usage... = I Do Not Agree

End of Block: Intro

Start of Block: Demographics

Q2 What is your age?

- ◯ 18-22 (1)
- ◯ 23-35 (2)
- ◯ 36-55 (3)
- ◯ 56+ (4)

Q3 What is your biological sex?

- ◯ Male (1)
- ◯ Female (2)

Q4 Which of the following best describes you?

- ◯ Asian or Pacific Islander (1)
- ◯ Black or African American (2)
- ◯ Hispanic or Latino (3)
- ◯ Native American or Alaskan Native (4)
- ◯ White or Caucasian (5)
- ◯ Other (6)

Q6 Which Component were you primarily a part of during your time of service?

- ◯ Active Duty (1)
- ◯ Reserves (2)
- ◯ National Guard (3)
- ◯ Air National Guard (4)

Skip To: End of Survey If Which Component were you primarily a part of during your time of service? != Active Duty

Q8 Which branch of the military did you primarily serve in?

- United States Army (1)
- Marine Corps (2)
- Navy (3)
- Air Force (4)
- Space Force (5)

Q7 When you separated, were you Enlisted?

- Yes (1)
- No (2)

Skip To: End of Survey If When you separated, were you Enlisted? = No

Q11 Which type of educational program are you enrolled in?

- ○ Part-Time Undergraduate Program (1)
- ○ Full-Time Undergraduate Program (2)
- ○ Master's Degree Program (3)
- ○ Doctoral Program (4)

Skip To: End of Survey If Which type of educational program are you enrolled in? != Full-Time Undergraduate Program

Q17 Which Institution are/were you enrolled in?

- ○ Brown (1)
- ○ Columbia (2)
- ○ Cornell (3)
- ○ Dartmouth (4)
- ○ Harvard (5)
- ○ MIT (6)
- ○ Princeton (7)
- ○ UPenn (8)
- ○ Yale (9)
- ○ Stanford (10)
- ○ William & Mary (11)
- ○ Other (12) ____

Q27 What year best represents your current progress in College?

- ○ Freshman (1)
- ○ Sophmore (2)
- ○ Junior (3)
- ○ Senior (4)
- ○ Graduated (5)

Skip To: Q28 If What year best represents your current progress in College? != Senior

Skip To: Q28 If What year best represents your current progress in College? != Graduated

Skip To: Q32 If What year best represents your current progress in College? = Graduated

Q32 How long (in semesters) were you enrolled in the institution you have graduated from?

____

Q28 Do you plan on registering for college next year?

- Yes (1)
- No (2)
- Unsure (4)

Q23 Why did you choose this institution?

____

Q24 Which of the following resources are you using to pay for college?

- GI-Bill (1)
- Scholarship (2)
- Other (3) ____

End of Block: Demographics

Start of Block: Family Demographics

Q18 What is the highest level of education your mother completed?

- High School / GED (1)
- Associate's Degree (2)
- Bachelor's Degree (3)
- Master's Degree (4)
- Ph.D (5)

Q19 What is the highest level of education your father completed?

- High School / GED (1)
- Associate's Degree (2)
- Bachelor's Degree (3)
- Master's Degree (4)
- Ph.D (5)

Q20 Do you have immediate family (father, mother, brother, sister) who are or have served in the military?

○ Yes (1)

○ No (2)

○ Unknown (3)

End of Block: Family Demographics

Start of Block: Demographics Pre-College Experience

Q21 What was your High School GPA

○ 4.0 or Higher (1)

○ 3.0-3.99 (2)

○ 2.0-2.99 (3)

○ 1.0-1.99 (4)

○ 0-.99 (5)

Q22 Approximately how many credit hours did you transfer into your current institution?

____

End of Block: Demographics Pre-College Experience

Start of Block: RQ1

Q29 During the school year, how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (5)
Asked another student to help you understand course material (4)	○	○	○	○
Explained course material to one or more students (5)	○	○	○	○
Prepared for exams by discussing or working through course material with other students (7)	○	○	○	○

Worked with other students on course projects or assignments (6)	○	○	○	○
Talked about career plans with a faculty member (8)	○	○	○	○
Worked with Faculty member on activities other than coursework (committees, student groups, etc.) (1)	○	○	○	○

Discussed course topics, ideas, or concepts with a faculty member outside of class (2)	○	○	○	○
Discussed your academic performance with a faculty member (3)	○	○	○	○

End of Block: RQ1

Start of Block: RQ 2

Q10 Of the following Non-Academic supports, please choose the amount you used them at your institution.

	Approximate Times Used (Whole Numbers) (6)
Health Services (1)	
SVs Student Group (2)	
SVs Resource Office (3)	
Professional Development / Career Center (4)	
Non-Veteran Related Clubs & Organizations (5)	
Educational benefits Resource Officer (6)	

Diversity, Inclusion, Equity Office (7)	
Student Accessibility / Disability Office (8)	

End of Block: RQ 2

Start of Block: RQ 3

Q12 Of the following Academic supports, please choose the amount you used them at your institution.

	Approximate Times Used (Whole Numbers) (6)
Writing Resource Center (1)	
One-on-One Interaction with Faculty (2)	
One-on-One Interaction with Advisor (3)	
One-on-One Interaction with Teaching Assistants (4)	
Tutors provided by your College/University (5)	
Library Services (eg. research assistance) (6)	

Study Abroad Services (7)	
Remedial Academic Skills Programs/Seminars (8)	

End of Block: RQ 3

Start of Block: Block 4

Q14 What is your current grade point average (GPA) in terms of a 0 to 4 scale?

____

End of Block: Block 4

Start of Block: Block 5

Q15 As a student veteran, do you feel included in the educational community?

◯ Yes (1)

◯ No (2)

End of Block: Block 5

Start of Block: Block 6

Q16 Summarize what resources you would like your College/University to provide you as a student veteran.

____

____

____

____

____

End of Block: Block 6

Start of Block: Block 7

Q17 How could this survey be more approachable?

____

____

Q16 How could this survey be more clear?

Q18 Did any of the questions make you feel uncomfortable

Q31 I have enabled the survey to force responses before moving on. Would you like me to remove this feature or leave it on?

- ◯ Keep Force Response on (1)
- ◯ Remove Force Response feature (2)
- ◯ No preference (3)

End of Block: Block 7

APPENDIX C

FINAL SURVEY

Start of Block: Intro

Dear Participant:

I am a doctoral student at William & Mary, examining student veteran's usage of academic and non-academic resources at their higher education institutions. This survey will provide valuable information to institutions on the usage and effectiveness of these provided resources. Since you have been identified as a student veteran, , I am inviting you to participate in this research. Your response to this survey will greatly enhance our understanding, and it will only take you about 5 to 10 minutes to complete.

Your participation in this research is voluntary. There is no compensation for responding nor is there any known risk. Completion of the survey indicates your consent to participate in this study. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address.

Thank you for assisting me in my educational endeavors. I genuinely appreciate your time. If you require additional information or have questions, please contact me at the email listed below.

Sincerely,

Rob Thompson, MBASSG, USA (ret.)PhD Student, William &

Maryrcthompson03@email.wm.edu

ELECTRONIC CONSENT: Clicking on the "I agree" button below indicates that:

You have read the above statement You voluntarily agree to participate

○ I Agree (1)

○ I Do Not Agree (2)

Skip To: End of Survey If Dear Participant: I am a doctoral student at William & Mary, examining student veteran's usage... = I Do Not Agree

End of Block: Intro

Start of Block: Demographics

Q2 What is your age?

○ 18-22 (1)

○ 23-35 (2)

○ 36-55 (3)

○ 56+ (4)

Q3 What is your biological sex?

- ○ Male (1)
- ○ Female (2)

Q4 Which of the following best describes you?

- ○ Asian or Pacific Islander (1)
- ○ Black or African American (2)
- ○ Hispanic or Latino (3)
- ○ Native American or Alaskan Native (4)
- ○ White or Caucasian (5)
- ○ Other (6)

Q6 Which Component were you primarily a part of during your time of service?

- ○ Active Duty (1)
- ○ Reserves (2)
- ○ National Guard (3)
- ○ Air National Guard (4)

Skip To: End of Survey If Which Component were you primarily a part of during your time of service? != Active Duty

Q8 Which branch of the military did you primarily serve in?

- ○ United States Army (1)
- ○ Marine Corps (2)
- ○ Navy (3)
- ○ Air Force (4)
- ○ Space Force (5)

Q7 When you separated, were you Enlisted?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If When you separated, were you Enlisted? = No

Q11 Which type of educational program are you enrolled in?

- ○ Part-Time Undergraduate Program (1)
- ○ Full-Time Undergraduate Program (2)
- ○ Master's Degree Program (3)
- ○ Doctoral Program (4)

Skip To: End of Survey If Which type of educational program are you enrolled in? != Full-Time Undergraduate Program

Q17 Which Institution are/were you enrolled in?

- ○ Brown (1)
- ○ Columbia (2)
- ○ Cornell (3)
- ○ Dartmouth (4)
- ○ Harvard (5)
- ○ MIT (6)
- ○ Princeton (7)
- ○ UPenn (8)
- ○ Yale (9)
- ○ Stanford (10)
- ○ William & Mary (11)
- ○ Other (12) ____

Q27 What year best represents your current progress in College?

○ Freshman (1)

○ Sophmore (2)

○ Junior (3)

○ Senior (4)

○ Graduated (5)

Skip To: Q28 If What year best represents your current progress in College? != Senior

Skip To: Q28 If What year best represents your current progress in College? != Graduated

Skip To: Q32 If What year best represents your current progress in College? = Graduated

Q32 How long (in semesters) were you enrolled in the institution you have graduated from?

____

Q28 Do you plan on registering for college next year?

- Yes (1)
- No (2)
- Unsure (4)

Q23 Why did you choose this institution?

____

Q24 Which of the following resources are you using to pay for college?

- GI-Bill (1)
- Scholarship (2)
- Other (3) ____

End of Block: Demographics

Start of Block: Family Demographics

Q18 What is the highest level of education your mother completed?

- High School / GED (1)
- Associate's Degree (2)
- Bachelor's Degree (3)
- Master's Degree (4)
- Ph.D (5)

Q19 What is the highest level of education your father completed?

- High School / GED (1)
- Associate's Degree (2)
- Bachelor's Degree (3)
- Master's Degree (4)
- Ph.D (5)

Q20 Do you have immediate family (father, mother, brother, sister) who are or have served in the military?

◯ Yes (1)

◯ No (2)

◯ Unknown (3)

End of Block: Family Demographics

Start of Block: Demographics Pre-College Experience

Q21 What was your High School GPA

◯ 4.0 or Higher (1)

◯ 3.0-3.99 (2)

◯ 2.0-2.99 (3)

◯ 1.0-1.99 (4)

◯ 0-.99 (5)

Q22 Approximately how many credit hours did you transfer into your current institution?

____

End of Block: Demographics Pre-College Experience

Start of Block: RQ1

Q29 During the school year, how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (5)
Asked another student to help you understand course material (4)	○	○	○	○
Explained course material to one or more students (5)	○	○	○	○
Prepared for exams by discussing or working through course material with other students (7)	○	○	○	○

Worked with other students on course projects or assignments (6)	○	○	○	○
Talked about career plans with a faculty member (8)	○	○	○	○
Worked with Faculty member on activities other than coursework (committees, student groups, etc.) (1)	○	○	○	○

Discussed course topics, ideas, or concepts with a faculty member outside of class (2)	○	○	○	○
Discussed your academic performance with a faculty member (3)	○	○	○	○

End of Block: RQ1

Start of Block: RQ 2

Q10 Of the following Non-Academic supports, please choose the amount you used them at your institution.

	Approximate Times Used (Whole Numbers) (6)
Health Services (1)	
SVs Student Group (2)	
SVs Resource Office (3)	
Professional Development / Career Center (4)	
Non-Veteran Related Clubs & Organizations (5)	
Educational benefits Resource Officer (6)	

Diversity, Inclusion, Equity Office (7)	
Student Accessibility / Disability Office (8)	

End of Block: RQ 2

Start of Block: RQ 3

Q12 Of the following Academic supports, please choose the amount you used them at your institution.

	Approximate Times Used (Whole Numbers) (6)
Writing Resource Center (1)	
One-on-One Interaction with Faculty (2)	
One-on-One Interaction with Advisor (3)	
One-on-One Interaction with Teaching Assistants (4)	
Tutors provided by your College/University (5)	
Library Services (eg. research assistance) (6)	

Study Abroad Services (7)	
Remedial Academic Skills Programs/Seminars (8)	

End of Block: RQ 3

Start of Block: Block 4

Q14 What is your current grade point average (GPA) in terms of a 0 to 4 scale?

____

End of Block: Block 4

Start of Block: Block 5

Q15 As a student veteran, do you feel included in the educational community?

- Yes (1)
- No (2)

End of Block: Block 5

Start of Block: Block 6

Q16 Summarize what resources you would like your College/University to provide you as a student veteran.

____

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____

____

APPENDIX D

EMAIL FOR SURVEY

Dear Student Veteran:

My name is Rob Thompson, and **I am a veteran** of both Afghanistan and **Iraq. As a fellow veteran I am reaching out for your assistance.** I am currently a doctoral candidate at the College of William and Mary. I have developed a survey to ascertain which resources your College or University can provide to specifically help the student veteran population.

Below, you will find a link for my short survey. The survey will take approximately 7 minutes to complete. Veterans who participate in this study will be entered into a $50 gift card raffle.

All responses to this survey are confidential. If you have any questions, feel free to contact me at rcthompson03@email.wm.edu and 703.225.9515. Furthermore, if you would like your response to be deleted from the study, you may make that request at any time.

Thank you in advance for your participation!

Sincerely,

Rob

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE W&M PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966).

Robert Clay Thompson Jr, MBA

SSG, USA (ret.)

Email: rcthomson03@email.wm.edu

Cell: 703.225.9515

VITA

SSG Robert Clay Thompson Jr (ret.)

Rcthompson03@email.wm.edu

Birthdate: May 10, 1983

Birthplace: Olongapo Bay, Philippines

Education:

2020-2022 The College of William & Mary
Williamsburg, Virginia
Doctor of Philosophy

2012-2013 Palm Beach Atlantic University
West Palm Beach, Florida
Master of Science - Business Administration

2011-2012 Palm Beach Atlantic University
West Palm Beach, Florida
Bachelor of Science – Organizational Management

2010-2011 Central Texas College
Killeen, Texas
Associate of Arts – General Studies

Experience:

2020 - Present: Quantitative Researcher, Troops to Teachers
2018-2019: Vice President, A & A Associates
2015-2017: Project Manager Analyst, Healthcare REIT
2002-2011: Staff Sergeant, United States Army