ACADEMIC PERFORMANCE OF VETERANS IN HIGHER EDUCATION

By

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Abstract:

On October 6, 2001, President George W. Bush noted in his memoir that the military was prepared and ready to start military action in Afghanistan, and two years later the order was given to start Operation Iraqi Freedom. The decision to go to war would alter the lives of thousands of military men and women serving around the nation. These students would then return to fulfill a dream of a college degree. This study investigates the academic performance levels, by measurement of GPA, of military students who utilized Chapter 33 Post 9/11 VA benefits at OSU during the fall 2012 semester. Of the 418 individuals surveyed, 50 veteran students responded and demonstrated that they were capable of performing at academic levels of equal standing to their peers. The statistical results indicated no significance between the military and non-military students, no significance regarding months spent in military service, and no negative correlation between aggregate months served in combat and academic performance. Thus concluding, that military individuals are able to perform at an equal standard of their fellow classmates and meet the expectations set by the programs at OSU.

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CHAPTER 1

INTRODUCTION

On October 6, 2001, President George W. Bush noted in his memoir that the military was prepared and ready to start military action in Afghanistan, and two years later the order was given to start Operation Iraqi Freedom (OIF) (2010). The decision to go to war would alter the lives of thousands of military men and women serving around the nation. After 10 years of war, America is still engaged in Overseas Contingency Operations in support of Operation Enduring Freedom (OEF) and OIF (Vincent, Roebuck-Spencer, & Lopez, 2012).

As the U.S. service members deployed to Afghanistan and Iraq start returning to American soil, a new life in the civilian culture becomes reality (DiRamio & Jarvis, 2011). Transition from one culture to another can be difficult for those who suffered through extensive lengths of service, traumatic experiences and frequent combat (Vincent, Roebuck-Spencer, & Lopez, 2012; Burnett, 2009; DiRamio, Ackerman, & Mitchell, 2008; MacLean, 2005). Stemming from the physical, emotion and psychological sacrifice that 793,000 military service members have made, the inspiration and passage of a new educational benefit called the Chapter 33 Post 9/11 GI Bill (Ch. 33) gives military veterans the opportunity for a new future (Brown & Gross, 2011).

That new future includes educational benefits, which were introduced to veterans of World War II (Greenberg, 2004). The Ch. 33 benefits are now offered to military veterans who

have served after September 11, 2001, and the benefits include payment for military student housing, books, tuition and fees (Department of Veteran Affairs, 2012). With the new generous Ch. 33 benefits, paid through the Department of Veterans Affairs (VA), more service members are expected to attend college (Manos, 2010; Brown & Gross, 2011). Due to the effects of lengthy combat deployments and the demands of military service, degree progression, retention and graduation rates of military veterans may pose a challenge to civilian collegiate institutions (Ady, 2009; Vincent, Roebuck-Spencer, & Lopez, 2012; Cohen, Segal, & Temme, 1986). However, more research is needed to address the academic performance of veterans in higher education (Weber, 2012).

Problem

Military students entering a civilian higher education system may have a life experience different from the traditional college student with no military service (Weber, 2012). Some veterans of OEF and OIF return from deployment with related disabilities such as amputation, traumatic brain injuries or psychological issues (Vincent, Roebuck-Spencer, & Lopez, 2012). If colleges do not recognize the unique challenges facing military students, low grades and dissatisfaction may lead to an exodus of students (Aitken, 1982). The resulting loss of income and inability to achieve university missions create negative public perception resulting in a disservice to veterans and higher attrition rates (DeShields, Kara, & Kaynak, 2005).

Purpose of the Study

The purpose of the study is to determine if military service affects the academic performance of military students attending college. Ultimately, the resolve of this study's findings help determine if institutional change is necessary for military students at Oklahoma State University (OSU). Further investigation determines if possible affects of deployment length and continued time in military service contributes to academic performance.

Definition of Terms

The following terms are used with specific intent and meaning in this research. Where possible, specific terminology is based upon cited authorities.

- Military student, military service student, veteran student – a student who is/was either a member of active duty, reserve, National Guard, or retired military population (Brown & Gross, 2011).
- Non-military student – a student without any military service.
- Academic achievement – the related intellectual ability, motivation and skills of a student to perform on coursework in college (Aitken, 1982).
- Deployment – when a military service member is or was called to combat action in support for Operation Iraqi Freedom in Iraq or Operation Enduring Freedom in Afghanistan (Weber, 2012).
- Length of Military Service- the time spent from enlistment to end of time service (ETS) departure.
- Grade Point Average (GPA) - the institutional cumulative average of grade points and credits earned.

Assumptions

Due to the literature of gender differences on academic performance, it is assumed that gender differences are not related to academic performance and will not be controlled (Astin & Kent, 1983). Additionally, due to systematic limitations of access and control students who maintain residence on campus (in a dormitory setting) will not be researched (Aitken, 1982). Post Traumatic Stress Disorder (PTSD) is a frequently discussed topic in which military service members are subjected to intense trauma, adversely affecting the psychological state of a person

(Vincent, Roebuck-Spencer, & Lopez, 2012). Due to the sensitivity and clinical nature of the PTSD diagnosis, this study will assume that all military members identified as serving in OEF or OIF operations, will suffer from minimal to mild levels of PTSD. Furthermore, socioeconomic status is assumed to be leveled due to student's access to GI Bill benefits for military service. This research is designed to compare military students to non-military students in a comparative study to identify any possible academic performance variations.

Significance of the Study

This research provides empirical data to an under studied population of military students. The results of the study help raise awareness to colleges and other organizations about the unique issues facing military students and inspire academic services and programs focused on the successful matriculation of military veterans.

This study of effects of military service on the academic performance of military students is a quantitative study. Questions that are answered include:

- Is there a difference in academic performance between military students and non-military students?
- Does total length of military service affect academic performance of military service-members attending college?
- Is there a negative correlation between the length of deployments and GPA?

The first hypothesis states that military service negatively affects the grade point average (GPA) of military students. The second hypothesis under study examines whether military students with increased time serving in the armed forces will have lower GPAs. The final hypothesis is that GPA in military students with more deployment time will be lower than non-military students.

The independent variable is military service. Military service was measured by nominal category through survey data collection. Length of military service is defined as the amount of time from enlistment to separation or present date. This information was collected through open-ended questions. Deployment time is defined as the amount of time supporting Operation Iraqi Freedom (OIF, Iraq) and Operation Enduring Freedom (OEF, Afghanistan) and this data was self reported with an open ended question (Vincent, Roebuck-Spencer, & Lopez, 2012).

The dependent variable used to determine the difference in achievement is the GPA. Participants' GPAs was reviewed concluding the fall 2012 semester at OSU utilizing Institutional Research and the Student Information System (SIS) upon Institutional Review Board approval.

Organizations that may benefit from this research include but are not limited to: institutions of higher learning, Department of Veteran Affairs, Department of Defense, counseling organizations, non-profit organizations and vocational/technical training schools. These institutions can utilize information collected from this study to develop counseling programs and identify systemic issues that may hinder military dependent academic performance. Furthermore, investigating the topic of academic performance in military college students does assist, on a micro organizational scale, in the evolution of the Veteran Benefit Services Office (VBSO) at OSU to better serve the entirety of military veterans. This area of study contributes to empirical research that may raise awareness to the lack of programs offered to military students, their spouses and their children.

Special services and programs need to be adapted or developed to serve the unique subpopulation of veterans (Brown & Gross, 2011). This study centered its investigation around possible academic deficiencies in military students by comparing veteran academic performance

to students with no military service. Investigating academic deficiencies will in turn address possible programmatic deficiencies and help OSU fulfill its mission of enrichment and development (Oklahoma State University, 2005).

Theoretical Perspective

Academic performance can be explained by the theoretical model proposed and developed by Alexander Astin (1970) where he describes academic achievement variables in the construct of students' Inputs, College Environment and Outputs (IEO). This study focuses on the relationship of the college environment and student output. Specifically the IEO theory helps explain the need of college programs and services (college environment) to adjust to the unique issues of military students returning from war, as to not pose a negative effect on the student output.

The assumptions of the IEO model describe student inputs as the talents, skills, aspirations, and other potentials for growth and learning (Astin A. W., 1970). "College environment" refers to the aspects of the higher educational institution affecting students such as administrative policies and practices, curriculum, physical plan and facilities, teaching practices, peer associations, and other characteristics of college environment (Astin, 1970). Student outputs refer to students' achievements, knowledge, skills, values, attitudes, aspirations, interests and daily activities (Astin, 1970).

The propositions of Astin's model indicate that a relationship exists between student input and the college environment (Astin, 1970). Also, the college environment affects the overall student output and the student inputs give result to the output or success of the student (Astin, 1970).

The principles of Astin's IEO model allow for the study of different variables that explain the possible relationships between an institution's organizational process and the overall success of a college student. The IEO model provides that institutions of higher learning can impact the academic success of students (Astin, 1970). Appropriately, this theory could explain a link between organizational influence and poor academic performance of military students.

In conclusion, military veterans may see a decrease in academic performance due to the organizational structure of a college university. Utilizing the IEO model will help explain if a link exists between the students' academic performance measured by GPA and an institutional environment. The IEO theory also explains if the university system is adequately providing programs that assist in the transitional support of military students and identify possible deficiencies in OSU training.

CHAPTER 2

REVIEW OF LITERATURE

Military Service

As the wars in Iraq and Afghanistan begin to wind down, troops who have adapted to military service have started returning home to face a new reality in a civilian higher education system (Ady, 2009; DiRamio & Jarvis, 2011). Although military service members have proven to be adaptable, a smooth transition into a new culture is necessary to ensure academic success (DiRamio & Jarvis, 2011). Institutions of higher education will need to recognize the needs of its students and adapt its programs and policies to meet the needs of a new sub environment of college learners (DeShields, Kara, & Kaynak, 2005; Brown & Gross, 2011). Recent research of this subgroup of military students is in its infancy and requires further investigation of the modern day military student. However, investigation into the history of military members entering higher education is necessary to adequately gauge future evolutionary needs.

In a 1986 study, negative consequences due to military service were prevalent, as military service members were found to be less likely to complete their college degrees in the 1960's (Cohen, Segal, & Temme). Veterans in the late 1970's were also found to be less likely to attend college, according to findings by Maclean (2005). Entering a civilian education system further exacerbates the negative effects of military service as service members often struggle to meet the admissions criterion to enter college (Alvarez, 2008). Maclean's (2005) study attributes that

veterans typically came from families of lower economic ranking and equates this to access to quality education but concluded that this did not make a difference in the decision to attend college.

Socioeconomic differences, such as rank, are known to show differences in college degree attainment and retention in higher education (Cohen, Segal, & Temme, 1986). This is a challenge that the VA and U.S. Congress have realized, and they have implemented new policy and legislation that sets a level playing field for all service members to earn college degrees. The introduction of the Post 9/11 Chapter 33 G.I. Bill (Ch. 33) has ruled out socioeconomic differences between enlisted and officers as all service members can afford a college degree paid for by the VA through Ch. 33 (Alvarez, 2008; DiRamio, Ackerman, & Mitchell, 2008).

Achievement

Gauging academic performance includes the measurement of many variables. Combined measures of GPA, entrance exams and high school aptitude reduce the possibility of academic achievement being gauged by merely chance (Grove, Wasserman, & Grodner, 2006). Allen (2005) suggests that measurement by GPA alone does not account for the inconsistency of teachers perceived grading standards. However, a 2006 study claims that utilizing GPA and one additional standard (i.e., high school grades, rank or college entrance exams) are good indicators to academic ability (Grove, Wasserman, & Grodner).

Students who attend college for the first time come from a variety of backgrounds that may adversely affect academic achievement due to lack of support from home (Ady, 2009). Inadequate support from home or under preparation for college in English, reading or mathematics affects the chances of success in college (Long & Amey, 1993). Regardless, factors such as these may be the reason many join the military in the first place (Alvarez, 2008).

Often the military serves as a gateway to a stable career lending additional perks of education, life and career experience (Alvarez, 2008). Many individuals utilize the military as a passage to higher education in the hopes of attaining a degree (Morreale, 2011). Often college education comes after life in the military and characteristics of this student demographic are those of adult learners in which academic performance exceeds that of traditional students (Richardson J. E., 1995; Brown & Gross, 2011)

Transitions

Adult students are more likely to correlate internal meaning and academic work; therefore their study habits are better than younger students (Richardson J. E., 1995). Military students, however, pose new challenges of disability that may affect the cognitive ability, such as the onset of post traumatic stress disorder (PTSD) (Vincent, Roebuck-Spencer, & Lopez, 2012). The traumatic experiences of combat may alter the outcome of collegiate experiences and negatively affect GPA. Colleges may not be prepared to handle the unique disabilities of military students when transitioning from military service to college (Burnett, 2009).

Organizational Implications

Brown and Goss (2011) discuss the concept of an institution of higher education being "Military Friendly" and the challenges that universities will face when military students return from war and head back to the college campus. They highlight that universities must recognize the uniqueness of this subgroup and develop unique ways to support veteran students through service consolidation (Brown & Gross, 2011). In this study, Western Carolina University exemplified its efforts to streamline services to military students by consolidating the outreach and veterans benefit services (Brown & Gross, 2011). Another study finds that the student's positive or negative satisfaction to the partial college experience determined by institutional factors of faculty, advising staff and classes affects academic achievement and negative

satisfaction contributes to a lower retention rate (DeShields, Kara, & Kaynak, 2005). In an additional research evaluation, Weber evaluated the military student population of Arizona State University (ASU). The findings indicated that 71% of military students desired recognition of their military service to facilitate greater student achievement, 40% recommended a lounge and special counseling services, and 30% recommended changes to admission, orientation and the creation of a dedicated veteran department (Weber, 2012). The ability for an institution to reform and provide services to military veterans is important to students' academic success. When measuring academic success, other variables related to ethnicity, gender and socioeconomic status may also play a part.

Demographic Factors

A study conducted by MacLean (2005) identifies a link between military service and the completion of a college degree. This study poses that between 1950 and 1960, veterans did not have the financial means to attend college, and their service adversely affected the outcome for achieving a college degree (MacLean, 2005). During 1955-1965, the GI Bill was not available to level the socioeconomic status so military service members from lower income levels could not attend college (MacLean, 2005). Effective August 9, 2009, the Ch. 33 Post 9/11 GI Bill affords the opportunity for military service members with all levels of income, to pay for a college degree through the VA (Department of Veteran Affairs, 2012).

Another variable that affects the outcome of a student's GPA is gender (Richardson & Woodley, 2003). Variables of gender play a role in organization placement, differential treatment, and processing (Astin, 1993). Richardson and Woodley (2003) found that a relationship existed between male and female and the attainment of good degrees. Characteristics in women and men are different, affecting self-identity and college impact (Astin & Kent, 1983).

This study takes into account possible gender effects on GPA as it measures the difference in academic performance of military students.

Ethnicity plays a role in the intrinsic motivation for student achievement as a negative correlation was found in one study (Morreale, 2011). A 2009 study found a significant difference between students who identified themselves as “other than white, black, Hispanic or Asian”, as this category was negatively correlated to academic performance (Ady, 2009). This study further accounted for the effects of ethnicity and gender in the final analysis however, was not warranted due to the statistical results.

More research needs to be conducted on the possible links between military service and academic performance. As many service members return home and enter a new civilian culture, the traumatic experiences of war may negatively affect their academic goals. This study will contribute to that perspective on grade achievement; however investigating attrition rates of military students is of equal value.

CHAPTER 3

METHODOLOGY

Sampling Design

Military students at Oklahoma State University serve as the population under study. This consists of both students from the OSU-Stillwater and OSU-Tulsa campuses. The sample analyzed is military students attending OSU in the fall 2012 semester. These students were certified through the Veteran Benefit Services Office (VBSO), guaranteeing the students' military status through the certification process, which requires verification of supporting military documentation by a university official. This study was conducted through the VBSO office and viewed as an empirical contribution to the university insight of the student cohort. Military students have completed at least basic training and served in one of the four branches of military service that fall under the Department of Defense (e.g., Army, Navy, Air Force or Marines). In close coordination with OSU Institutional Research, the Registrar and VBSO, a census from a list of individuals certified during the fall 2012 semester was analyzed.

To determine statistical significance between military students and non-military students, a random sample was requested from Institutional Research for the non-military students. The information requested for the non-military group was for GPA, age, gender, ethnicity, SAT/ACT, and grade classification. No personal identifying information was requested. The non-military student information remained confidential and randomly generated by Institutional

Research. A report with specifically requested information was generated by Institutional Research and provided to VBSO for the investigation of this study. The results of the random sample served as the control group in the analysis of the military student.

The VBSO had certified 418 military students and dependents for the fall 2012 semester who utilized the Chapter 33 Post 9/11 GI Bill (Ch.33). A census of the entire certified Ch. 33 veteran population was conducted to gain assent and gather pertinent information the university does not currently track in the Student Information System (SIS). This information consists namely of the veterans military experience i.e., months of military service, deployment history, number of separate deployments, and aggregated time spent deployed in a combat zone. In order to establish a verified credible link between deployments, length of military service and academic performance, identifiable information such as first name, last name, and CWID was requested.

Currently, OSU does not track any information regarding military experience. Establishing a bona fide connection between GPA and military service is imperative to the credibility of this study and the usefulness of its findings to the university. The identifying information remained confidential and was utilized simply as a means to link GPA and student responses to the census instrument. All identifying information was deleted prior to analysis. Participants self declared and completed the convenience census willingly. A target response rate of 10% was achieved.

Willingness of subjects to complete the census was paramount. Students with military service could be reluctant to participate as they are currently a highly sought research group in higher education. They may also be reluctant to participate due to the sensitive nature of military service. To account for unwilling participation, all military students identified by VBSO were invited to participate. Approximately 40 participants were desired for the study; however there

was no predetermined amount if more students participate. No research inducements were offered for participation in this study and no subject under the age of 18 was investigated.

Utilizing the VBSO posed a challenge in that the VBSO only certifies military students who utilize VA benefits through that department. Therefore, students who serve in the military but who are not certified were excluded from the sampled population. On the counter, all veterans identified by VBSO were guaranteed to have military service with one exception and that is if the individual is a dependent utilizing VA benefits.

The issue is that the VBSO assimilate the veterans and their dependents into the same composed report as most dependents in this category utilize transferred Ch. 33 benefits from their military parents or spouse. The challenge will be to delineate between the two groups. Therefore, the census instrument will also include one question asking if the subject is a spouse or child of a veteran who serves or has served in the armed forces. The response will be collected and analyzed therefore verifiable information will be requested to complete the census and separate the dependents into a categorical group.

Collection

A census was administered during the fall 2012 semester, and an email invitation sent out to students utilizing Ch. 33 benefits and certified through the OSU VBSO. Participants were invited to participate through emails linked to Qualtrics, electronic research software, to complete a convenient, willing respondent online survey. The census was available for two weeks from January 10-23, 2013. The initial email was sent on January 10, 2013 followed by a reminder email sent on January 16, 2013 and the census closed on January 23, 2013.

All complete responses gathered were utilized for analysis. GPA analysis was conducted using a T-test to determine statistical significance between the non-military and military student

GPA. A correlation calculation conducted between the results of GPA and number of separate deployments. An Analysis of Variance (ANOVA) was utilized to determine significance between military service time and military students GPA. Due to possible extraneous variables that could affect the measure of GPA, matching analysis and categorical compares were utilized to control for identified variables. For this study, the confidence level was set at 0.05 alpha.

Analysis

Following the completion of the census administration, data was stored in Qualtrics and then transferred to SPSS 20.0 for analysis. Any personal information such as name and CWID's were deleted prior to any calculations. Frequencies, percentages, and descriptive statistics were used for analysis and controlled compares. Various tables, found in Chapter IV- Findings, were created to show the samples demographics and significance findings.

Instrumentation

The online census is designed to collect demographic information and is adapted from the survey instrument designed by Martina Ady (2009) to collect information on academic performance and degree progression. The census has been modified to include only questions pertaining to variables necessary to analyze possible constructs between academic performance and military service that was not retained by OSU. Identifying information, such as name and CWID, will be asked in order to verify their information through the OSU SIS system from the fall 2012 semester. Qualifying questions used to determine the eligibility to participate in the study is collected by a forced response in question one, two and three in which identifies if the participant was enrolled in the fall 2012 semester at OSU and eighteen years of age, is not an international student and is a U.S. citizen. Further screening questions, five and six; determine if the potential participant is a veteran or dependent of a military veteran and if they are a veteran

who has served more than one year in a branch of military service under the Department of Defense. Little empirical evidence is available to the effects of variables such as years of military service, combat deployment in OEF or OIF, ROTC and aggregated time spent on combat deployment. These variables will be analyzed by the responses collected in questions nine through fourteen.

The research questions to be answered in this study include:

- Is there a difference in academic performance between military students and non-military students?
- Does total length of military service affect academic performance of military service-members attending college?
- Is there a negative correlation between the length of deployments and GPA?

Based upon these research questions, the null hypotheses to be tested at an alpha of 0.05 are:

1. There is no difference in academic performance based on GPA between military students and non-military students.
2. There is no difference between academic performance of military service-members (based on GPA) attending college based on total length of military service in months.
3. There is no significant negative correlation between the length of deployments in months for military service-members and GPA as a measurement of academic performance.

The research design, sampling procedures, data analysis, and all other aspects of this research were approved by the Oklahoma State University Institutional Review Board for protection of human subjects. That approval is shown in Appendix A.

CHAPTER 4

FINDINGS

Introduction

The purpose of this chapter is to communicate the discovery of the study based upon the analysis of the collected data.

Purpose and Objectives

The purpose of this study was to identify veteran students at Oklahoma State University and determine if there was an academic performance deficiency amongst the population using GPA measurements. The objectives utilized are as followed:

1. Determine if statistically, an academic performance difference exists between military students and non-military students utilizing GPA.
2. Determine if total length of military service and number of combat deployments affects GPA.
3. Determine if there is a significant correlation between deployment lengths and GPA.

Respondents

Utilizing Qualtrics, participants were emailed starting January 10, 2013 and a reminder email sent January 16, 2013. The census was later closed on January 23, 2013. A total of 418

emails were sent to the students identified from the VBSO office. The response rate was 33 % (n=141) however only fifty total respondents identified themselves as veterans.

A total of fifty veteran students responded to the survey and were analyzed by variables and categorical responses. Based upon categories of race, gender, age, grade classification, enrollment status, months in the military, deployment zone, months spent in combat, military status, service branch, and service component these categories were then analyzed against the variables of GPA, ACT, and SAT. The scores from ACT and SAT were controlling variables used to gauge intellectual capacity compared to their academic achievement through GPA.

The first category is gender of the participants which was reported at 94% (n=47) respondents being male and 6% (n=3) female (see Table 1). The next category was broken down by race whereas 86% (n=43) of the subjects were of white origin. Additionally, 4% (n=2) identified themselves as Hispanic/Latino and Black/African American, furthermore 2% (n=1) where identified as Alaskan Native/American Indian, multi-racial, or those who declined to identify (see Table 2).

The age ranged from 20 years of age to 54 (n=50, *M*=31.44) the breakdown is as follows: 12% (n=6) reported at age 27 and 29, 10% (n=5) ages 26 and 33, 6% (n=3) at age 43, 4% (n=2) at ages 22, 24, 36, and 38, and 2% (n=1) at ages 25, 30, 31, 34, 35, 37, 39, 40, 41, 46, and 54. Grade classification was 38% (n=19) undergraduate seniors, 20% (n=10) undergraduate juniors, 16% (n=8) graduate masters, 12% (n=6) undergraduate sophomores, 8% (n=4) undergraduate freshmen, 4% (n=2) as graduate doctorial student, and 2% (n=1) as 1st year veterinary medical students (see Table 3). The enrollment status indicated 86% (n=43) full-time and 14% (n=7) part-time students (see Table 4).

Table 1- *Gender Demographics*

	Freq.	%
Female	3	6.0
Male	47	94.0

Table 2- *Ethnicities*

	Freq.	%
White	43	86.0
Alaskan Native/American Indian	1	2.0
Multi-Racial	1	2.0
Hispanic/Latino	2	4.0
Black/African American	2	4.0
Decline to Answer	1	2.0

Table 3- *Grade Classification*

	Freq.	%
Masters-Graduate	8	16.0
Senior-Undergraduate	19	38.0
Junior-Undergraduate	10	20.0
Sophomore- Undergraduate	6	12.0
Freshman- Undergraduate	4	8.0
1st year Vet Med.	1	2.0
Doctoral-Graduate	2	4.0

Table 4- *Enrollment Status*

	Freq.	%
Full Time	43	86.0
Part Time	7	14.0

The respondents were asked to identify their 'months serving in the military' which was divided into groups of less than 12, 13-36, 37-60, 61-84, 85-108, and 109+ months in services. The group 37-60 accounted for 36% of the respondents, 30% at 109+, 20% at 61-84, and 14% at 85-108 months (see Table 5). The other groups had no respondents. The question regarding deployment area of operation, OEF or OIF was broken into several options. The options are as follows: Iraq, Afghanistan, both, never deployed, deployed for a different campaign. The results from the census finds that 32% of the participants participated in the Iraq deployment, 24% participated in both areas of operation, 16% in Afghanistan, 14% never deployed, and 14% deployed for a different campaign (see Table 6).

Table 5- *Months Spent in the Military*

	Freq.	%
37-60	18	36.0
61-84	10	20.0
85-108	7	14.0
109+	15	30.0

*Other categories had no responses (I.e., less than 12 months and 13-36)

Table 6- *Deployment Zone*

	Freq.	%
Iraq	16	32.0
Afghanistan	8	16.0
Both	12	24.0
Never Deployed	7	14.0
Different Campaign*	7	14.0

*Respondents identified Germany, Kosovo, Kuwait, and Central America as other deployment zones.

The 'how many separate times deployed' category was broken down from 0-5 times. The findings show that 60% of the participants had been deployed 1-2 times, 14% had not seen any combat, 14% indicated being deployed 3 times, 10% deployed 5 times and 2% indicated deployment 4 separate times (see Table 7).

Table 7- *Number of Deployments*

No.	Freq.	%
1	15	30.0
2	15	30.0
3	7	14.0
4	1	2.0
5+	5	10.0
0	7	14.0

The 'total months in combat' category was broken down by groups of none, 3 months or less, 9 months or less, 10-18, 19-30, 31-54, 55-78, and 79+. Seventeen students indicated that they spent 10-18 months in combat account for 34%, 22% indicated no deployment time, 20%

spent 19-30 months in combat, 18% spent less than 9 months, 4% indicated less then 3 months, and 2% spent 31-54 months in combat. The other categories had no respondents (see Table 8).

Table 8- *Months in Combat*

No.	Freq.	%
3 months or less	2	4.0
9 months or less	9	18.0
10-18	17	34.0
19-30	10	20.0
31-54	1	2.0
none	11	22.0

*Selection 55-78 and 79+ had no responses.

The military status of the participants indicated that 67.5% (n=27) where separated, 25% (n=10) are currently serving, and 7.5% (n=3) are retired (see Figure 1). The component in which the member served(s) was 21.1% active-duty (n=4), 68.4% National Guard (n=13), and 10.5% federal reserve's (n=2) (see Table 9). The branch of service in which the student served(s) was Air Force 36.7% (n=11), Army 30% (n=9), Navy 20% (n=6), and Marines 13.3% (n=4) (see Figure 2).

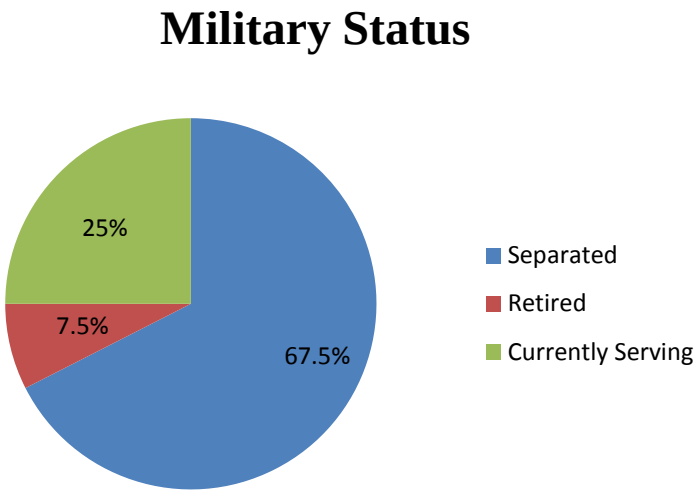


Figure 1. Respondents' Military Status

Table 9- *Military Component*

	Freq.	%
Active Duty	4	21.1
National Guard	13	68.4
Federal Reserve	2	10.5

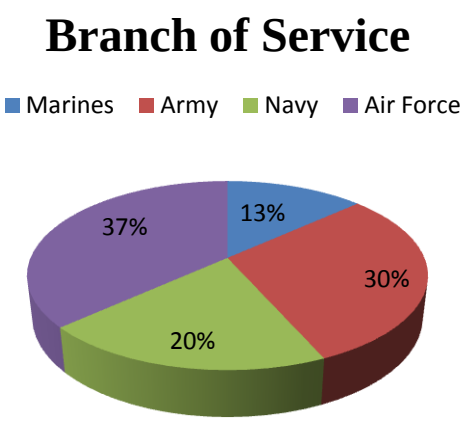


Figure 2. Reported Branch of Service

Random Sample

A random sample was requested from OSU Institutional Research on February 12, 2013 and received on February 20, 2013. This sample was pulled from the main body of students who attended the fall 2012 semester at OSU. In addition to this request, a list providing the names of all students certified through the VBSO office was included to exclude them from the random sample of main body students.

The demographics of this sample included age, race, gender, enrollment status and grade classification. Information such as GPA was requested to conduct the initial analysis. Additionally, ACT/SAT scores were requested to use as further controlling variables to gauge intellectual capacity against their GPA.

The percentages discussed in the following categories are based upon the total number of subjects from the random sample. The first category from the random sample of non-military students is gender whereas 42% (n=21) were female and 58% (n=29) are male (see Table 10).

The ethnicity/race from the random sample is as follows: 70% (n=35) white, 12% (n=6) Non Resident Alien, 6% (n=3) Alaskan Native/ American Indian, 6% (n=3) Multi-Racial, 4% (n=2) Black/African American and 2% (n=1) Asian (see Table 11).

The enrollment status of the sample was 80% (n=40) full-time students and 20% (n=10) part-time students (see Table 12). The grade classification was 24% (n=12) undergraduate seniors, 22% (n=11) undergraduate sophomores, 20% (n=10) undergraduate freshman, 16% (n=8) graduate masters, 12% (n=6) undergraduate juniors, 4% (n=2) graduate doctoral students, and 2% (n=1) 1st year veterinary medical students (see Table 13).

The age of the random sample ranged from 19-41 years of age (n=50, *M*=24.16) the breakdown is as follows: 20% (n=10) at age 22, 16% (n=8) at age 21, 12% (n=6) at age 20, 10% (n=5) at age 25, 6% (n=3) at ages 19, 27, and 28, 4% (n=2) at ages 23, 24, and 26, and finally 2% (n=1) at ages 29, 31, 33, 36, 37, and 41.

Table 10- *Gender Demographics Non-Military*

	Freq.	%
Female	21	42.0
Male	29	58.0

Table 11- *Ethnicities of Non-Military*

	Freq.	%
White	35	70.0
Alaskan Native/American Indian	3	6.0
Multi-Racial	3	6.0
Asian	1	2.0
Black/African American	2	4.0
Non Resident Alien	6	12.0

Table 12- *Enrollment Status of Non-Military*

	Freq.	%
Full Time	40	80.0
Part Time	10	20.0

Table 13- *Grade Classification of Non-Military*

	Freq.	%
Masters-Graduate	8	16.0
Senior-Undergraduate	12	24.0
Junior-Undergraduate	6	12.0
Sophomore- Undergraduate	11	22.0
Freshman- Undergraduate	10	20.0
1st year Vet Med.	1	2.0
Doctoral-Graduate	2	4.0

Descriptive Findings

Statistical T-Test, ANOVA, and Correlation were utilized on the respondents' answers to the census to determine the results of the null hypothesis. Such analyses were run on the variable of GPA and the appropriate corresponding question under study. The first question stating, "Is there a difference in academic performance between military and non-military students" was analyzed with a T-Test. This resulted in the comparison of means of GPA between the military and non-military students. The results for group one of military students (n=50) indicated a non-significance (*M*=3.15, *SD*=0.59) in the predicted direction over group two (n=50) of non-military students (*M*=3.08, *SD*=0.56); $t(98) = 0.65$, $p = 0.518$ (see Table 14).

Table 14- *Military vs. Non-Military GPA*

	No. (n)	Mean (*M*)	Standard Deviation (*SD*)
Group 1 (Military)	50	3.1589	0.59174
Group 2 (Non-Military)	50	3.0837	0.56687

Note: Group 1 refers to Military Students and Group 2 Non-Military with common variable GPA; $t(98)= 0.65$, $p=0.518$.

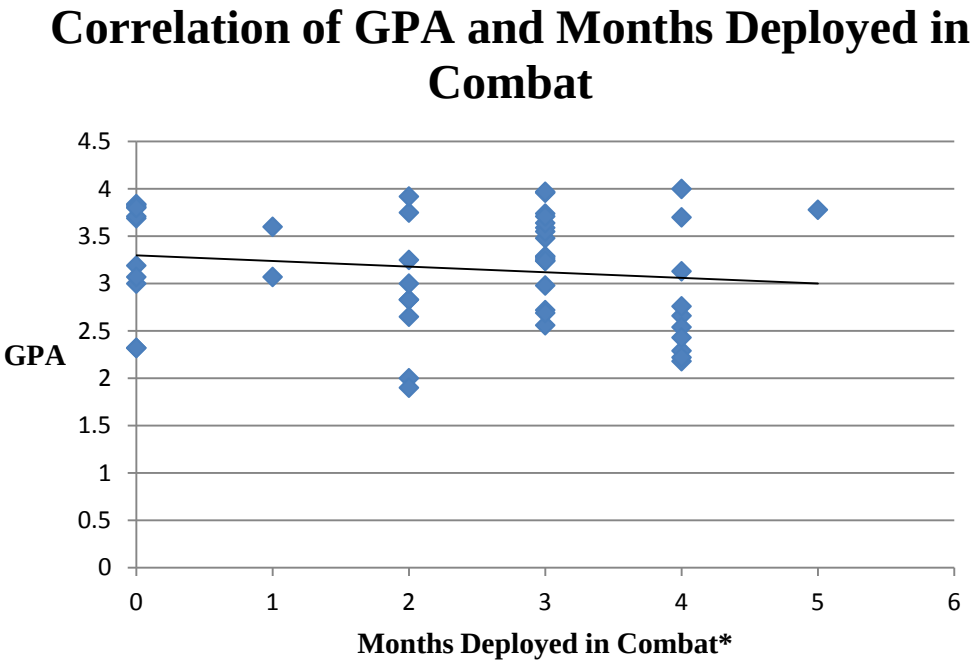
The next question under investigation is whether total length of military service affects academic performance of military students attending college. An ANOVA was conducted to determine the effects of military service on GPA. The null hypothesis states that there is no difference between academic performance of military service-members (based on GPA) attending college based on total length of military service in months. The analysis indicates that there is no significant effect of military service on GPA at the $p<.05$ level for the three conditions [$F(3,46) = 1.21$, $p = 0.316$]. Respondents identifying as 37-60 months indicated (n=18, *M*=3.2991, *SD*=0.57), 61-84 months indicated (n=10, *M*=3.05, *SD*=0.58), 85-108 months indicated (n=7, *M*=2.83, *SD*=0.51), 109+ months indicated (n=15, *M*=3.21, *SD*=0.63) and no respondents existed for 'less than 12 months' and '13-36 months' (see Table 15).

Table 15- *Months in Military Service and GPA*

	No. (n)	Mean (*M*)	Standard Deviation (*SD*)
37-60	18	3.30	0.57
61-84	10	3.06	0.59
85-108	7	2.83	0.51
109+	15	3.21	0.63

Note: 'Less than 12 months' and '13-36 months' had no respondents. [F (3,46) = 1.21, p = 0.316].

On the final area in question, a Pearson product-moment correlation coefficient was conducted to determine if a significant correlation existed between total length of deployment time and GPA as a measurement of academic performance. The Pearson r indicated a negligible negative correlation; however, not of significant measurement [r = -0.148, n = 50, p = 0.30] (see Figure 3).



*Reported in the following categories: 0= 0 months, 1= <3 months, 2= <9 months, 3= 10-18 months, 4= 19-30 months, 5= 31-54 months, 6= 55-78 months, 7= not reported.

Figure 3. Correlation of GPA and Months Deployed in Combat

The veteran's descriptive information indicated from total months spent deployed in a combat zone as follows: None (n=11, *M*= 3.32, *SD*=0.58), 3 months or less (n=2, *M*=3.33, *SD*=0.37), 9 months or less (n=9, *M*=2.90, *SD*=0.68), 10-18 months (n=17, *M*=3.34, *SD*=0.42), 19-30 months (n=10, *M*=2.78, *SD*=0.62), 31-54 months (n=1, *M*=3.77, *SD*=N/A), and 55-78 and 79+ months had no responses (see Table 16).

Table 16- *Total Months Spent in Combat Zone*

	No. (n)	Mean (*M*)	Standard Deviation (*SD*)
None	11	3.32	0.58
3 months or less	2	3.33	0.37
9 months or less	9	2.90	0.68
10-18 months	17	3.34	0.42
19-30 months	10	2.78	0.62
31-54 months	1	3.77	N/A

Note: Categories 55-78 and 79+ months had no responses.

Summary of Findings

The overall findings indicated that there was no significance and not enough evidence to reject the null hypotheses based on an alpha of 0.05. The results from the t-test in question 1, indicated $t(98) = 0.65$, $p = 0.518$ which concludes no significance between the two groups. A one-way ANOVA was conducted on question 2 and the results indicated a p value of 0.31, indicating no significance between groups. The findings from question 3 indicated a negligible negative correlation of -0.148; however this coefficient was not large enough to indicate a firm correlation between GPA and deployment length.

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

Introduction

Chapter 1 provided background information on the current status of U.S. veterans with information about the realities of war. In this section was outlined the purpose of the study and the perceived benefits from its production. Furthermore, definitions of terms, assumptions, questions to investigate, statement of hypothesis and the theoretical perspective for the study was explained. The emphasis on this chapter was the need to identify academic performance deficiencies in the veteran population by means of GPA.

Chapter 2 gauged the level of empirical research conducted on veterans returning from the Iraq and Afghanistan wars. This information suggested that the performance of military veterans maybe inferior to that of the traditional student due to combat stress and trauma. It provided evidence that GPA was a qualified measurement of academic performance. Additionally, it identified the need for an organization to support its veteran students returning to college through the transition period and developing an institution that is perceived to be "military friendly".

Chapter 3 established the methodological design to conduct a census of 418 students utilizing VA benefits through the VBSO attending OSU during the fall 2012 semester. It identified Qualtrics as the collection instrument and the null hypothesis to be tested at an alpha of

0.05. In addition, the research process and analysis were approved by the OSU Institutional Review Board.

Chapter 4 presented the frequencies and demographics of the willing participants responding to the census. It covered the descriptive statistics and correlation of the results. In addition, the analysis indicated through t-test, Pearson r correlation coefficient and ANOVA that no statistical significance existed between academic performance by measure of GPA and military service. Therefore not enough evidence was supplied to reject the null hypothesis.

In the preceding Chapter 5 a summary of the findings, conclusions and author recommendations for future research and investigation will be covered.

Problem and Purpose

The problem to which this investigation was warranted was due to the influx of military veterans returning from OEF and OIF and attending OSU with possible combat related disabilities, traumatic brain injuries, or psychological issues that universities may not be prepared to handle. Identifying whether an academic deficiency existed in military students because of their military service was the premise and purpose of this study.

Objectives

The following were under investigation and to be answered from this study:

1. Is there a difference in academic performance between military students and non-military students?
2. Does total length of military service affect academic performance of military service-members attending college?
3. Is there a negative correlation between the length of deployments and GPA?

This study investigated 50 respondents from a census of military students utilizing VA benefits in the VBSO office at OSU. The population constituted 418 students identified as beneficiaries of Chapter 33 Post 9/11 and Yellow Ribbon benefits at OSU. The total responses from the direct census link (N= 141) and 50 were determined to be veterans. A random sample of 50 was then requested and pulled from the general student population at OSU. The two samples were then compared by statistical analysis.

Major Findings

The overall findings indicated that there was no significance and not enough evidence to reject the null hypotheses. The following will discuss the results in order of question.

Findings of the Question 1

The first question under investigation stated, "Is there a difference in academic performance between military students and non-military students?" The results from the t-test indicated $t(98) = 0.65$, $p = 0.518$ which concludes no significance between the two groups. The military student group indicated a mean GPA of 3.15 and the non-military student sample had a mean GPA of 3.08.

The intention of this research was to determine if veteran students were underperforming. This was related to the I-E-O theory that the environment of a college institution could affect the academic outcome of its students (Astin A. W., 1970). Although statistically insignificant, the importance of the finding was that military students are not underperforming academically at OSU. One could include that military students who have decided to return to college after/during/before service are performing at a similar academic level as their peers and parallels.

Findings of Question 2

The second question to be addressed was, "Does total length of military service affect academic performance of military service-members attending college?" A one-way ANOVA was conducted. The results indicated no significance between groups.

The veterans reporting at 37-60 months had a mean GPA of 3.29, 61-84 months had a mean GPA of 3.05, 85-108 months had a mean GPA of 2.83, 109+ months of service had a mean GPA of 3.21 and there were no veterans reporting with less than 12 months of service or 13-36 months. The ANOVA showed a p value of 0.31 which is determined to be non-significant. Therefore it is concluded that the length of time in military service does not adversely affect the student's academic performance.

Findings of Question 3

The third question to be analyzed asks, "Is there a negative correlation between the length of deployments and GPA?" A Pearson r correlation coefficient was conducted on the total months spent deployed in a combat zone. The findings indicated a negligible negative correlation of -0.148; however this coefficient was not large enough to indicate a firm correlation between GPA and deployment length.

Descriptive information showed that members with no combat deployment had a mean GPA of 3.32 those with 3 months or less had a mean GPA of 3.33, those with 9 months or less had a mean GPA of 2.90, 10-18 months had a mean GPA of 3.34, 19-30 months had a mean GPA of 2.78 and only one response was recorded for 31-54 months with a GPA of 3.77. The finding concluded that there was not a link between months spent in military combat and GPA.

Conclusions

The typical veteran student based upon the most frequented responses display a student who is a full time student 27-29 years of age, male, white, undergraduate senior, with 37-60 months in military service, has been deployed to Iraq 1-2 times, spent 10-18 months in combat, with the National Guard, part of the Air Force and now currently separated.

Conclusion from Question 1

The conclusion drawn from question 1 indicates that veteran students attending classes during the fall 2012 semester are performing academically similar to their peers. This would suggest that there is not an additional environmental change necessary for veteran students at OSU. No further changes in student services offered at OSU are necessary to affect the student's academic performance. Disability related services such as counseling and advisement need to be available given the stressors and disabilities related to combat. Furthermore, the understanding that many disabilities are diagnosed on a case by case basis and may result in adverse effects several years after the experience is paramount (Vincent, Roebuck-Spencer, & Lopez, 2012). This question was researched on the group as a whole rather than looking at individual variables (e.g., specific bases in Iraq, military occupation, traumatic experiences, etc…) that could affect academic performance.

Conclusion from Question 2

The highest response was that 18 of the 50 veterans spent 37-60 months in military service followed by 15 respondents for 109+ months. The ANOVA statistical analysis indicated non-significance in GPA between the groups. The conclusion is drawn from the analysis of question 2 as well as the outcome of question 1. Regardless of the amount of military service

time, military students can perform to an equal standard of its peers and meet the expectations set by the programs and colleges at OSU.

Conclusion from Question 3

Pearson r correlation coefficient indicated a slight -0.148 negative correlation that was not considered significant enough to draw a conclusion on the effects of prolonged deployment to a combat zone and academic performance. The highest response group of 17 veterans indicated serving between 10-18 months in combat followed by 11 students reporting military service time but no combat deployment. No definitive evidence to indicate a connection between the variables and avow or disavow the null hypothesis that no negative correlation exists.

Discussion/Implications

Prior to this study, OSU did not track or know the demographics regarding military service of its veteran students. The findings indicated that military students are performing well and are capable of contending with their fellow classmates. The future effects of ten years of war may not play out in a service member's life until several years following the deployment (Vincent, Roebuck-Spencer, & Lopez, 2012). While, this study's findings indicated no academic performance differences, this does not preclude the possibility that performance of the same respondents may drop years later.

The census gathered 141 responses; however only 50 veteran students were identified from the population of 418. The population was identified as students utilizing Ch. 33 Post 9/11 benefits to help levy the financial variable between student cohorts. The general student population sample did not account for any financial aid factors. The vast majority of responses on the census were from dependants of military veterans. Therefore, a new question about the

transferability clause in the Post 9/11 benefits, financial aid and the retention of veterans who may have started at OSU, entered military service, did not return to campus and transferred their benefits to a dependant is introduced. Several studies from chapter 2 indicated that veterans may be less likely to return to college after a period of military service due to new financial responsibilities and introduction into the work force (Ady, 2009; Cohen, Segal, & Temme, 1986).

The demographics from this study suggest an age difference in the military students from the traditional non-military students. Although this was expected due to the review of literature, the ability to control for age was difficult due to the noteworthy difference in age of the two samples (Richardson J. E., 1995; Brown & Gross, 2011).

Utilizing Astin's IEO theory to explain the output of academic performance, a question of variables due to environmental inputs from different service branches may suggest a differing level of academic performance (1970). Further research could study if a link exists between GPA and branches of service (i.e., Army, Navy, Marine, and Air Force). Given the different methods and philosophies between training and expectations between defense organizations would lend to the idea that perhaps training and leadership philosophies between branches could impact the performance levels of military service-members.

Limitations of the Study

The investigations of this study have several limitations. First, this study did not investigate further into the age differences between the military and non-military groups. Investigation into these age differences may have affected the results but was limited to the random sample pulled from the general student population at OSU. Furthermore, investigation into the age factors was not warranted due to the insignificant statistical results and relied on the

constructs of a random sample set forth in this study. Second, the students who were surveyed were willing respondents and did not account for those who elected to not participate. The individuals that did not respond may be experiencing other issues that could have affected their academic performance and consequently the outcome of this study. Finally, the clinical diagnosis of PTSD, TBI, and other combat related injuries were unavailable variables in the analysis of this study. This is due impart to the clinical nature of the diagnosis and the inability to verify these diagnosis's because of the restrictions to personal medical records.

Recommendations for Future Research

1. Future studies should investigate the future long term effects that PTSD and traumas related to war have on academic performance.
2. A closer analysis of characteristics between the military students, dependants of military veterans, and non-military student groups.
3. Further investigation should investigate retention rates of veterans and factors related to returning to college.
4. Further research should be done on the transferability in government programs as a means for veterans to pay college tuition and fees for their dependants to attend college.
5. Further research should be done on employability, the college degree, federal aid and the job market.
6. Further study should investigate the academic performance of children utilizing VA funding compared to the general student population, veterans, and the non-traditional students.
7. Further investigation into the transition needs of military veterans and their families at institutions of higher learning.

8. Investigation into the environmental inputs of military service branches and their academic effects on service members.
9. Investigation into the effects of political statements from faculty and staff on military veterans and their families. For example, does a biased political statement made by a class instructor have a detrimental impact (e.g., depression, drop in grades, withdrawal, exodus from campus, etc.) on students who have loved ones serving in war?
10. Future research should be done to determine the "military friendliness" of campuses and their services provided to military members and their families.

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Appendices

Appendix A Institutional Review Board Approval Form

Oklahoma State University Institutional Review Board

Date:	Monday, January 07, 2013
IRB Application No	ED12191
Proposal Title:	The Academic Performance of Veterans in Higher Education
Reviewed and Processed as:	Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 1/6/2014

Principal Investigator(s):

Ryan Moehle
322 Student Union
Stillwater, OK 74078

Lowell Caneday
180 Colvin Center
Stillwater, OK 74075

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☑ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI, advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Shelia K. Kennison

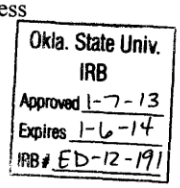
Shelia Kennison, Chair
Institutional Review Board

Appendix B Script

Participant Information
Oklahoma State University

Title: Academic Performance of Veterans in Higher Education
Investigator: Ryan A. Moehle, Veteran Services Specialist OSU
Purpose: The purpose of the study is to determine if military service affects the academic performance of military students attending college. Ultimately, the resolve of this study's findings will help determine if institutional change is necessary for military students at Oklahoma State University (OSU). Further investigation will determine if possible affects of deployment length and continued time in military service contributes to academic performance.
What to Expect: Participation in this research will involve one questionnaire that will take less than 10 minutes to complete.
Risks: There are no risks associated with this project which are expected to be greater than those ordinarily encountered in daily life.
Benefits: Your response will contribute to the University's broader understanding of the veteran student population.
Compensation: No extra credit or money is offered for participation.
Your Rights: Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time, without penalty.
Confidentiality: All information about you will be kept confidential and will not be released. Research records will be stored securely in the Registrar's Office and only researchers and individuals responsible for research oversight will have access to the records. The Registrar adheres to Oklahoma State University policy, state and federal law.
Contacts: You may contact Ryan Moehle (Primary Investigator) at 405-744-6586 or ryan.moehle@okstate.edu, 322 Student Union, Veteran Benefit Services Office or Lowell Caneday, Ph.D.(Advising Faculty), 184 Colvin Center, Dept. of Leisure Studies Oklahoma State University, Stillwater, OK 74078, 405-744-5503, should you desire to discuss your participation in the study and/or request information about the results of the study. If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

If you choose to participate: Please continue to the first question of this survey. Answer the questions to the best of your ability. At the end of the survey you will be prompted to enter your name and CWID, please accurately complete this portion to finish. Once the survey is completed, a request will be sent to Institutional Research to gather further information such as fall 2012 cumulative GPA, age, gender, ethnicity, SAT/ACT scores, and current grade classification. You will not be identified individually; we will be looking at the group as a whole. Any individual names or CWID's will be deleted once your information has been retrieved from Institutional Research. ***By completing the questionnaire provided, indicates your willingness to participate in this research study. ***



Appendix C Direct Message

Dear Student,

As the certifying official for Chapter 33 Post 9/11 GI Bill benefits, I am conducting a census of military service and academic performance through the Veteran Benefits Services Office. Currently, Oklahoma State University does not track any information regarding your military experiences and current military status. I am completing this census to provide the university with a broader picture of the veteran student population and possible changes necessary to ensure your academic success. The census will take less than 10 minutes to complete and your participation is greatly appreciated.

The census will prompt you to enter your name and CWID; this is to link your responses to the census and your current academic standing from the fall 2012 semester. Once the information is collected any identifiable information i.e., name and CWID will be deleted prior to analysis. Your information will remain confidential with the Veteran Benefits Office and no identifiable information will be published.

If you wish to complete the census please do so by selecting the link below.

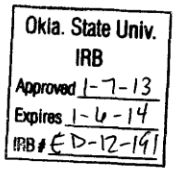
Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Thank you,

Ryan Moehle
Veteran Benefit Services
School Certification Official
405-744-6586
veteransbenefits@okstate.edu



Dear Student,

This is a follow up request for your participation in the census for military experience.

As the certifying official for Chapter 33 Post 9/11 GI Bill benefits, I am conducting a census of military service and academic performance through the Veteran Benefits Services Office. Currently, Oklahoma State University does not track any information regarding your military experiences and current military status. I am completing this census to provide the university with a broader picture of the veteran student population and possible changes necessary to ensure your academic success. The census will take less than 10 minutes to complete and your participation is greatly appreciated.

The census will prompt you to enter your name and CWID; this is to link your responses to the census and your current academic standing from the fall 2012 semester. Once the information is collected any identifiable information i.e., name and CWID will be deleted prior to analysis. Your information will remain confidential with the Veteran Benefits Office and no identifiable information will be published.

If you wish to complete the census please do so by selecting the link below.

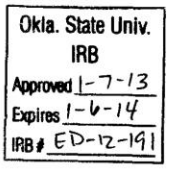
Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Thank you,

Ryan Moehle
Veteran Benefit Services
School Certification Official
405-744-6586
veteransbenefits@okstate.edu



Appendix D Census Instrument

First Question

Participant Information
Oklahoma State University

Title: Academic Performance of Veterans in Higher Education
Investigator: Ryan A. Moehle, Veteran Services Specialist OSU

Purpose: The purpose of the study is to determine if military service affects the academic performance of military students attending college. Ultimately, the resolve of this study's findings will help determine if institutional change is necessary for military students at Oklahoma State University (OSU). Further investigation will determine if possible affects of deployment length and continued time in military service contributes to academic performance.

What to Expect: Participation in this research will involve one questionnaire that will take less than 10 minutes to complete.
Risks: There are no risks associated with this project which are expected to be greater than those ordinarily encountered in daily life.

Benefits: Your response will contribute to the University's broader understanding of the veteran student population.

Compensation: No extra credit or money is offered for participation.

Your Rights: Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your

consent and participation in this project at any time, without penalty.

Confidentiality: All information about you will be kept confidential and will not be released. Research records will be stored securely in the Registrar's Office and only researchers and individuals responsible for research oversight will have access to the records. The Registrar adheres to Oklahoma State University policy, state and federal law.

Contacts: You may contact Ryan Moehle (Primary Investigator) at 405-744-6586 or ryan.moehle@okstate.edu, 322 Student Union, Veteran Benefit Services Office or Lowell Caneday, Ph.D.(Advising Faculty), 184 Colvin Center, Dept. of Leisure Studies Oklahoma State University, Stillwater, OK 74078, 405-744-5503, should you desire to discuss your participation in the study and/or request information about the results of the study. If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

If you choose to participate: Please continue to the first question of this survey. Answer the questions to the best of your ability. At the end of the survey you will be prompted to enter your name and CWID, please accurately complete this portion to finish. Once the survey is completed, a request will be sent to Institutional Research to gather further information such as fall 2012 cumulative GPA, age, gender, ethnicity, SAT/ACT scores, and current grade classification. You will not be identified individually; we will be looking at the group as a whole. Any individual names or CWID's will be deleted once your information has been retrieved from Institutional Research. ***By completing the questionnaire provided, indicates your willingness to participate in this research study. ***

Q1. Are you currently 18 years of age or older and attending or have attended college at Oklahoma State University during the Fall 2012 semester?

- ○ Yes
- ○ No

Screening

Q2. Are you an international student attending Oklahoma State University?

- ○ Yes
- ○ No

Q3. Are you a U.S. Citizen?

- ○ Yes
- ○ No

Q4. Are you a Native American?

- ○ Yes
- ○ No

Dependent vs. Military Screen

Q5. Are you a spouse or child of a veteran who serves or have served in the armed forces?

° Yes

° No

Q6. Have you completed initial training and served more than a year in one of the following branches of service: Army, Navy, Air Force, or Marines?

° Yes

° No

SIS Verification Block Dependants

Q7. Please provide your first and last name to verify enrollment at OSU:
(This information will remain confidential and no identifying information will be published)

First name

Last name

Q8. To validate your GPA for the Fall 2012 semester please provide your Campus Wide ID (CWID) below:
(This information will remain confidential and no identifying information will be published)

Military Service Survey

Q9. Are you currently a student in ROTC at OSU?

- ○ Yes
- ○ No

Q10. How many months have you served in the military?

- ○ less than 12
- ○ 13-36
- ○ 37-60
- ○ 61-84
- ○ 85-108
- ○ 109+

Q11. Have you been deployed for Operation Iraqi Freedom (OIF) or Operation Enduring Freedom Afgahnistan (OEF)?

- ○ Iraq
- ○ Afgahnistan
- ○ Both
- ○ Never deployed
- ○ Deployed for a different campaign

Q12. How many separate times have you been deployed during your military career?

- ○ Once
- ○ Twice
- ○ Three
- ○ Four
- ○ Five +
- ○ none

Q13. How many total months have you spent deployed in a combat zone?

- ○ 3 months or less
- ○ 9 months or less
- ○ 10-18
- ○ 19-30
- ○ 31-54
- ○ 55-78
- ○ 79+
- ○ none

Q14. Check all that apply to your current military status:

- ☐ Separated
- ☐ Retired
- ☐ Currently Serving
- ☐ Active Duty
- ☐ Marines
- ☐ Army
- ☐ Navy
- ☐ Air Force
- ☐ National Guard
- ☐ Federal Reservist
- ☐ Other

SIS Verification Block Veterans

Q15. Please provide your first and last name to verify enrollment at OSU:
(This information will remain confidential and no identifying information will be published)

First name

Last name

Q16. To validate your GPA for the Fall 2012 semester please provide your Campus Wide ID (CWID) below:
(This information will remain confidential and no identifying

information will be published)

Appendix E Statistical Results

T-Test of Military vs. Non-Military GPA

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
GPA	1	50	3.1589	.59174	.08368
	2	50	3.0837	.56687	.08017

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
GPA	Equal variances assumed	.461	.499	.649	98
	Equal variances not assumed			.649	97.820

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
GPA	Equal variances assumed	.518	.07516	.11589	-.15482
	Equal variances not assumed	.518	.07516	.11589	-.15482

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
GPA	Equal variances assumed	.30514
	Equal variances not assumed	.30514

ANOVA of GPA and Months Spent in the Military

```
ONEWAY GPA BY months in military
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=TUKEY SCHEFFE ALPHA(0.05).
```

Oneway

Descriptives

GPA

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
3	18	3.2991	.57305	.13507	3.0141	3.5840	1.90
4	10	3.0566	.58878	.18619	2.6354	3.4778	2.00
5	7	2.8303	.50961	.19262	2.3590	3.3016	2.18
6	15	3.2121	.63474	.16389	2.8606	3.5636	2.22
Total	50	3.1589	.59174	.08368	2.9907	3.3270	1.90

Descriptives

GPA

	Maximum
3	3.97
4	3.84
5	3.60
6	4.00
Total	4.00

ANOVA

GPA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.257	3	.419	1.212	.316
Within Groups	15.901	46	.346		
Total	17.158	49			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: GPA

	(I) months in military	(J) months in military	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	3	4	.24246	.23189	.724
		5	.46877	.26189	.291

		6	.08692	.20555	.974
		3	-.24246	.23189	.724
	4	5	.22631	.28974	.863
		6	-.15553	.24003	.916
		3	-.46877	.26189	.291
	5	4	-.22631	.28974	.863
		6	-.38185	.26912	.494
		3	-.08692	.20555	.974
	6	4	.15553	.24003	.916
		5	.38185	.26912	.494
		4	.24246	.23189	.779
	3	5	.46877	.26189	.372
		6	.08692	.20555	.981
		3	-.24246	.23189	.779
	4	5	.22631	.28974	.894
		6	-.15553	.24003	.936
Scheffe		3	-.46877	.26189	.372
	5	4	-.22631	.28974	.894
		6	-.38185	.26912	.574
		3	-.08692	.20555	.981
	6	4	.15553	.24003	.936
		5	.38185	.26912	.574

Multiple Comparisons

Dependent Variable: GPA

	(I) months in military	(J) months in military	95% Confidence Interval	
			Lower Bound	Upper Bound
Tukey HSD	3	4	-.3756	.8606
		5	-.2293	1.1668
		6	-.4610	.6348
	4	3	-.8606	.3756
		5	-.5460	.9986
		6	-.7953	.4843
	5	3	-1.1668	.2293
		4	-.9986	.5460
		6	-1.0992	.3355
	6	3	-.6348	.4610
		4	-.4843	.7953
		5	-.3355	1.0992
Scheffe	3	4	-.4304	.9154
		5	-.2912	1.2287
		6	-.5095	.6834
	4	3	-.9154	.4304
		5	-.6145	1.0671
		6	-.8520	.5410
	5	3	-1.2287	.2912

		4	-1.0671	.6145
		6	-1.1628	.3991
		3	-.6834	.5095
	6	4	-.5410	.8520
		5	-.3991	1.1628

Homogeneous Subsets

GPA

	Months in military	N	Subset for alpha = 0.05
			1
Tukey HSD[a,b]	5	7	2.8303
	4	10	3.0566
	6	15	3.2121
	3	18	3.2991
	Sig.		.257
Scheffe[a,b]	5	7	2.8303
	4	10	3.0566
	6	15	3.2121
	3	18	3.2991
	Sig.		.335

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10.957.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Correlation of GPA and Total Months Spent in Combat

```
CORRELATIONS
  /VARIABLES=GPA total months in combat
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		GPA	Total months in combat
GPA	Pearson Correlation	1	-.148
	Sig. (2-tailed)		.303
	N	100	50
Total months in combat	Pearson Correlation	-.148	1
	Sig. (2-tailed)	.303	
	N	50	50

Descriptives

GPA

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
0	11	3.3253	.58953	.17775	2.9292	3.7213	2.32
1	2	3.3360	.37335	.26400	-.0184	6.6904	3.07

2	9	2.9036	.68770	.22923	2.3749	3.4322	1.90
3	17	3.3464	.42518	.10312	3.1277	3.5650	2.56
4	10	2.7895	.62962	.19910	2.3391	3.2399	2.18
5	1	3.7780	.	.	.	.	3.78
Total	50	3.1589	.59174	.08368	2.9907	3.3270	1.90

Descriptives

GPA

	Maximum
0	3.84
1	3.60
2	3.92
3	3.97
4	4.00
5	3.78
Total	4.00

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
age * Group	100	100.0%	0	0.0%	100	100.0%

Report

age

Group	Mean	N	Std. Deviation
1	31.4400	50	6.93751
2	24.1600	50	4.79949
Total	27.8000	100	6.97180

VITA

Ryan Allen Moehle
Oklahoma State University
Office of the Registrar
Veteran Services Specialist/Coordinator
Oklahoma State University
Stillwater, OK 74078
(405) 744-6586
ryan.moehle@okstate.edu

Education:

B.S. Degree, Leisure Services Management, Oklahoma State University, December 2006
Assoc. of Sci. Degree, Aerospace Maintenance Technology, Community College of the Air Force, Montgomery, Al, April 2011
Diploma, Chisholm High School, Enid, Oklahoma, May 2001

Employment Record:

1. *Oklahoma State University,* Office of the Registrar Veteran Benefit Services, Veteran Services Specialist/Coordinator, September 2011-Present.
2. *Oklahoma State University,* Cooperative Extension Service, Assistant Extension Specialist 4-H Youth Development/Military Projects, Oklahoma Operation: Military Kids Initiative Coordinator, February 2009-September 2011.
3. *Oklahoma Air National Guard,* Airmen SSgt. Crew Chief F-16 Aircraft, July 2007-Present.

Military Service:

2001-2007 - Enlistment in Oklahoma Army National Guard, Alva, OK B Co. 179th Infantry
2002-2003 -Active Duty Tour- Kuwait, Operation: Southern Watch
2003 -Change of Mission- Iraq, Operation: Iraqi Freedom
2007-Present -Re-enlistment in Oklahoma Air National Guard Tulsa, OK 138th Fighter Wing
2007-2008- Air Force Maintainer Training- Shepard AFB, Luke AFB-AFSC 2A3X3
2008- American Expeditionary Force (AEF) - Iraq, Operation: Iraqi Freedom
2010- Temporary Duty -Hickam AFB, Mission Support
2010-Promoted to Staff Sergeant, Oklahoma Air National Guard-AFSC 2A3X5
2011-American Expeditionary Force (AEF) –Iraq, Operation: Iraqi Freedom
2012-Promoted to Technical Sergeant, Oklahoma Air National Guard-AFSC 2A3X7

Presentations:

- Moehle, R., *Supporting Military Families in Your Community*, FCS Educator Conference. 2011 Stillwater, OK.
- Sallee, J., Moehle, R., & Cline, M. *4-H Military programs making an impact*. 2010 Oklahoma Cooperative Extension Service Conference. OSU Stillwater, OK.
- Moehle, R., *Building Support Networks through OACCRA*, Oklahoma Association of Child Care Referral Agencies. 2010 Oklahoma City, OK.

Awards:

- Veteran of Operation Iraqi Freedom
- Army Expeditionary Medal
- Army Achievement Medal
- National Defense Service Medal