

4-30-2025

The Effect of School Classification and a Veteran-Friendly Rating on U.S. Veteran Graduation Rates

Melton Harvey
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Psychology Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Psychology and Community Services

This is to certify that the doctoral dissertation by

Melton R. Harvey

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Jesus Tanguma, Committee Chairperson, Psychology Faculty

Dr. Rochelle Michel, Committee Member, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2025

Abstract

The Effect of School Classification and a Veteran-Friendly Rating on U.S. Veteran

Graduation Rates

by

Melton R. Harvey

MA, Eastern Michigan University, 1988

BA, Davenport University, 1983

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

May, 2025

Abstract

U.S. colleges, universities, or trade schools enroll and graduate several veterans each year and receive extensive federal funding for doing so. Currently, there is little research on the difference between educational outcomes of veterans that attend publicly supported and private educational institutions or the potential impact of a veteran-friendly rating system. Grounded in Vincent Tinto's theory of retention, the purpose of this quantitative non-experimental study was to examine the effect of school classification and a veteran-friendly rating on veteran graduation rates among colleges and universities using descriptive statistics. The initial study design featured the gathering of archival data from the State of Michigan Veteran Affairs Agency to answer the study's three research questions; however, the sample size was inadequate. Subsequently, the study was expanded to include samples from throughout the United States, and the research methodology was changed from a 2x2 factorial analysis of variance to a Kruskal-Wallis H test. Although not statistically significant, the results of the Kruskal-Wallis H test suggest that gold-rated public and private institutions tend to yield slightly higher graduation rates than silver rated institutions. The findings concur with the existing literature regarding the critical role of institutional support in shaping the U.S. veteran. Despite limitations such as reliance on archival data and a small response sample, the research offers insight on the importance of tailored support services for veteran students. Educational leaders can foster positive societal change by improving institutional support and aiding veterans' transition to civilian life and careers.

The Effect of School Classification and a Veteran-Friendly Rating on U.S. Veteran
Graduation Rates

by

Melton R. Harvey

MA, Eastern Michigan University, 1988

BA, Davenport University, 1983

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Psychology

Walden University

May, 2025

Dedication

This is dedicated to all veterans especially, African American, and Native American descendants of sharecroppers. Their perseverance to honor the dreams of their enslaved forefathers is admirable.

Acknowledgments

Thank you, God, Geneva, Kayla, Dr. Melton, Dr. Genice, Alexis, Jamelco, Dr. Khloe, and all my sisters and brothers (11 siblings) for being on the journey with me. Notably Alma, Lee, and Josepine (oldest siblings) that sacrificed their education to assist on the farm. A special thank you to my dissertation committee, Dr. Tanguma and Dr. Michel, and the other Walden faculty who assisted me throughout this process. Thank you to the Aleda E. Lutz Medical Center Educational Staff, in particular Susanna Sheltraw and VRE John Rosenbach, to whom I am greatly indebted. Also, thank you to the Vessels of God Church family for all your prayers. I am humbled by all your assistance. A glorious "I love you" to my parents, Lee and Hattie Harvey, who will always live in my heart for instilling in me a desire for knowledge.

Table of Contents

List of Tables	iv
List of Figures	v
Chapter 1: Introduction to the Study.....	1
Introduction.....	1
Background.....	1
Problem Statement.....	2
Purpose of the Study	4
Research Questions and Hypotheses	5
Theoretical Framework of the Study	7
Nature of the Study	8
Revised Study Design.....	8
Definitions.....	10
Assumptions.....	12
Scope and Delimitations	13
Limitations	13
Significance.....	14
Summary	15
Chapter 2: Literature Review.....	16
Introduction.....	16
Literature Search Strategy.....	25

Theoretical Foundation	26
Literature Review Related to Key Variables	29
Summary and Conclusions	34
Chapter 3: Research Method.....	36
Introduction.....	36
Research Design and Rationale	37
Methodology.....	38
Population	38
Sampling and Sampling Procedures	39
Archival Data Use.....	39
Instrumentation and Operationalization of Constructs	40
Data Analysis Plan.....	43
Threats to Validity	46
Ethical Procedures	47
Summary.....	47
Revised Study Design.....	48
Chapter 4: Results.....	50
Introduction.....	50
Data Collection	51
Results.....	54
Assumptions Test.....	54

Statistical Analyses	57
Summary	58
Chapter 5: Discussion, Conclusions, and Recommendations	60
Introduction.....	60
Interpretation of the Findings.....	61
Limitations of the Study.....	63
Recommendations.....	64
Implications.....	65
Conclusion	67
References.....	68

List of Tables

Table 1. Eras of Student Retention Studies 27

List of Figures

Figure 1. Graduation Rates	55
Figure 2. Categorical Independent Variable	56
Figure 3. Box Plot for the Kruskal-Wallis H Test	57

Chapter 1: Introduction to the Study

Introduction

In the United States, more than 1,500,000 veterans participate in higher education programs (Jones, 2013; Lopez, 2019). Through the GI Bill, \$71,000,000,000 covers the cost of veterans' educational expenses (Bridendolph, 2021). The increase in attendance and spending in recent years is due to conflicts and U.S. military downsizing (Krishnamoorthi & Kaissi, 2020). Of course, additional spending and increased student enrollment do not guarantee an improvement in veteran graduation rates (Veteran Graduation Rate, 2017). Information regarding veteran students attending U.S. colleges, universities, and trade schools is limited.

Background

In the United States, veterans attending colleges, universities, and trade schools face additional hurdles in earning a degree. For some veteran students, they struggle to avoid violating school regulations that prohibit alcohol abuse and assault (Haynes, 2016; Lopez, 2019). Difficulty transitioning from military to college life, lack of funds, failing grades, inadequate services, and an educational institution's inability to assist veterans can impede one's educational success (Vanterpool, 2021).

In this inquiry, I investigated higher education institutions throughout Michigan that have veteran students. For the 2021–2022 school year, the Michigan Veterans Affairs Agency awarded Veteran-Friendly Schools status to 63 universities, colleges, and trade schools across Michigan (Michigan Veteran's Affairs Agency, 2021). In Michigan, any institution of higher learning or training facility that accepts

veteran education benefits can apply to participate in the program. For example, a film school had no veterans enrolled, whereas a large university had 522 (Michigan Veteran's Affairs Agency, 2021). Unfortunately, there is little research that assesses the effect of school classification and veteran-friendly ratings on veteran graduation rates.

Problem Statement

Sansone and Segura (2020) evaluated how persistence positively affects veterans' college graduation rates. Still how veterans' learning experiences differ from other students remains largely unexplored. Based on what is known, though, it appears that veterans require strong social support systems if they are to thrive educationally (Hallisy, 2021). Moreover, Alschuler and Yarab (2018) noted that educational institutions that wish to retain veteran students must develop and implement a multi-pronged proactive approach that requires coordination across several departments. Barmak (2020) focused on the role veteran resource centers play in smoothing transitions. Barmak found that college retention and graduation rates increase with support, especially when there is a vocational rehabilitation counselor.

Overall, though, the academic environment must undergo a systemic evaluation to assess the services it offers veterans (Borsari et al., 2017). Cofield (2019) observed that institutions can motivate veterans to complete their chosen program of study by utilizing information (how the program works for the students or what changes would the students suggest) collected from them. Furthermore, as a

student participates in school-related activities and immerses oneself in the school's community, the probability of graduating increases (Fagan & McQuillen, 2020).

Leaders of educational institutions should define student veteran success by soliciting their feedback. Veteran students have suggested that colleges need to offer more than a stand-alone veteran student center, especially for those who transfer to a 4-year institution (Sansone & Segura, 2020). In other words, if institutions want veterans to succeed, they must consider their wants and needs. Then each school should determine whether existing assets can meet these wants and needs (Cate, 2013). To improve educational outcomes for veterans, researchers should scrutinize institutional, state, and federal data collection procedures as well as student veterans' assessments (Sansone & Segura, 2020). Hallisy (2021) stated that existing veteran students' academic performance data are scarce. Eakman et al. (2016) concluded that future inquiries must embrace theory and resilience factors that impact veteran postsecondary success.

Vincent Tinto (1993), who developed the theory of retention, asserted that future research concerning student veteran success should focus on services that improve graduation rates. That means prioritizing services that focus on student autonomy, competence, and feelings of connectedness. The theory of retention suggests that school classification, type of school, and its veteran-friendly rating helps explain graduation rates (percentage). However, recent research has not evaluated the success and efficiency of these efforts. Mahoney et al. (2021) reported that even though some schools offer many types of services to veteran students, there

is not enough information to determine what makes one school more veteran-friendly than others. Veterans entering higher education are nontraditional students because their specific life experiences and challenges differ from the general student population (Anderson, 2021; Falkey, 2016). Indeed, Barmak (2020) also emphasized the lack of data associated with classifying college systems as it relates to retention and graduation.

There are limitations associated with this study. The primary limitation of this study is the use of archival data because it is based on research created by someone else for another purpose. Even though it is archival data and has inherent limitations, it reduces the potential for research bias. Chapter 1 includes the background section that focuses on the literature regarding veteran graduation rates. This chapter also includes the problem statement, purpose of the study, research questions, theoretical framework, nature of the study, assumptions, scope, and limitations, and significance of the research. The chapter closes with a summary.

Purpose of the Study

In this quantitative non-experimental, two-way (2x2) factorial analysis of variance (ANOVA) study, I examined the effect of school classification and veteran-friendly rating on veteran graduation rates among Michigan colleges, universities, and trade schools. In this study, veteran students were defined as those who previously served in some branch of the U.S. military and currently attend colleges, universities, and trade schools in Michigan (Michigan Veteran's Affairs Agency, 2021). The dependent variable was the veteran student graduation rate (percentage). The first independent variable was

the school classification (either a public or private school). The second independent variable was the veteran-friendly rating of gold or silver. Michigan Veteran's Affairs Agency (2021) stated that the program awards gold, silver and bronze-level status to institutions based on seven criteria:

- an established process for identifying student veterans;
- a veteran-specific website;
- active student-operated veterans club or association;
- veteran-specific career services, resources, advising, and outcome monitoring;
- on-campus veteran's coordinator or designated staff point of contact;
- a system to evaluate and award credit based on military training and experience; and
- a monitoring and evaluation system for student veteran academic retention, transfer, and graduation rates.

Gold-level certification requires a school to meet six or more criteria, whereas silver schools must complete four and bronze schools, three (Michigan Veteran's Affairs Agency, 2021).

Research Questions and Hypotheses

Using archival data, I examined the effect of school classification and veteran-friendly rating on the veteran graduation rate among Michigan trade schools, colleges, and universities. The three research questions (RQs) for the study, and their corresponding hypotheses, were as follows:

RQ1: Is there a significant difference in veteran student graduation rates between Michigan's veteran-friendly private and public schools that enroll more than 50 veteran students?

H₀1: There is no significant difference in veteran student graduation rates compared to Michigan's veteran-friendly private and public schools that enroll more than 50 veteran students.

H_A1: There is a significant difference in veteran student graduation rates compared to Michigan's veteran-friendly private and public schools that enroll more than 50 veteran students.

RQ2: Is there a significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enroll more than 50 veteran students?

H₀2: There is no significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enroll more than 50 veteran students?

H_A2: There is a significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enroll more than 50 veteran students?

RQ3: Is there a significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enroll more than 50 veteran students.

H₀₃: There is no significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enroll more than 50 veteran students.

H_{A3}: There is a significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enroll more than 50 veteran students.

Theoretical Framework of the Study

Vincent Tinto's (1993) theory of retention identifies three significant sources of student departure: academic difficulties, the inability of individuals to resolve their educational and occupational goals, and their failure to become or remain incorporated in the intellectual and social life of the institution. Tinto's model of institutional departure states that to persist, students need integration into formal (academic performance) and informal (faculty/staff interactions) educational systems and formal (extracurricular activities) and informal (peer-group interactions) social systems (Jacks, 2021). These concepts informed the selection of the variables for this study: (a) school classification as either a public or private school (independent), (b) the veteran-friendly rating of gold or silver (independent), and veteran student graduation percentage rate (dependent). The independent and dependent variables were used to interpret results, draw conclusions, and provide recommendations for future research.

Although researchers have investigated issues affecting veteran retention in higher education, they have not, to my knowledge, examined the college veteran-friendly rating system by the Michigan Veteran Affairs Agency. Consequently, the gap in the literature this research addressed is the effect of a college classification system and veteran-friendly rating on veteran graduation rates in Michigan. I will further explore the literature on the study topic in Chapter 2.

Nature of the Study

This study involved a quantitative, non-experimental retrospective analysis of veteran student graduation rates using descriptive statistics and a 2x2 factorial ANOVA. For this planned research design, the State of Michigan Veteran Affairs Agency provided archival data. The intent is to use the archival data to investigate the effect of school classification and veteran-friendly rating on veteran graduation percentage rates. The dependent variable is the veteran student graduation rate (percentage); the first independent variable is the school classification as either a public or private school. The second independent variable is the veteran-friendly rating of gold or silver. A 2x2 factorial ANOVA will be used to answer the identified RQs, test their associated null hypotheses, and, ideally, retain the alternate hypotheses to address the RQs in this quantitative non-experimental study. No participants were recruited.

Revised Study Design

Several major changes arose in the data collection process. Data collection extended over several semesters due to the incomplete information from the archival data source (Michigan Veteran's Affairs Agency, 2021), which provided only part of the

veteran student data listed on its website. Additional data were required for the 2x2 factorial ANOVA. Initially, three emails were sent and several phone calls were made to 63 Michigan colleges, universities, and trade schools (gold, silver, and bronze) requesting their archived veteran student data. Seventeen responded (12 rated gold and five rated silver). An alternate data collection process was developed once responses from Michigan institutions ceased.

A new application to Walden's IRB for permission to expand the study from local to nationwide was submitted. The IRB approved the expansion to include archival data from new national sources. Consequently, over 1,400 emails were sent to institutions nationwide. Despite the prompt sending of emails, data responses were slow, beginning in February through August 2024. A significant issue associated with data collection is that institutions are not required to report veteran student data; this is typically a voluntary action by the college. The archival data set used in this study included 60 institutions from across the United States. This sample size was insufficient for a 2x2 factorial ANOVA, as it neither met the sample size requirements based on a power analysis nor statistical assumptions (Laerd Statistics, 2024). The number of RQs changed from three to one, and the planned statistical analysis was altered from a 2x2 factorial ANOVA to a Kruskal-Wallis H test.

The Kruskal-Wallis H test, sometimes referred to as the "one-way ANOVA on ranks," is a rank-based nonparametric test used to determine if there are statistically significant differences between three or more groups of an independent variable on a continuous or ordinal dependent variable (Laerd Statistics, 2024). The Kruskal-Wallis H

test is nonparametric and relies on four assumptions. According to Laerd Statistics (2024), the assumptions include (a) one dependent variable measured at the continuous or ordinal level; (b) one independent variable consisting of three or more categorical, independent groups; (c) independent observations; and (d) a determination of whether the distribution of scores for each group of the independent variables has the same shape or a different one. Unlike the one-way ANOVA, the nonparametric Kruskal-Wallis H test does not assume a normal distribution of the underlying data (Taylor, 2020). Laerd Statistics (2024) suggests that the Kruskal-Wallis H test is appropriate for this study due to the nonnormal distribution of the data and the presence of outliers; it is more suitable to use ranks rather than actual values to avoid the influence of outliers or nonnormal data distribution.

Definitions

Academic success: Institutional expectations, such as meeting the university's expectations for being in good standing and making satisfactory progress toward a degree. Academic success also includes the student's expectation to identify goals to work toward based on what the veteran wants to achieve, such as academic achievement, satisfaction, acquisition of skills and competencies, persistence, attainment of learning objectives, and career success (Hafer et al., 2021; Mason & Moore, 2018).

Bronze-level certification: A determination that is granted to an institution that completes four Certification Criteria for Veteran Friendly Schools Program (Michigan Veteran's Affairs Agency, 2021).

Financial aid: Any financial assistance provided by the institution where the veteran is enrolled. The veteran receives aid for the academic year to pay university-related educational and living expenses (Rouscher, 2018).

Gold-level certification: A determination that is granted to institutions that complete six or more of the Certification Criteria for Veteran Friendly Schools Program (Michigan Veteran's Affairs Agency, 2021).

Michigan Veteran-Friendly Schools Program: A program that includes academic institutions committed to supporting the needs of veterans and military-connected students. These institutions are awarded gold, silver, and bronze-level status based on their veteran-centric services and programs (Michigan Veteran's Affairs Agency, 2021).

Private colleges, universities, and trade schools: For-profit or nonprofit educational institutions. Private colleges and universities rely more heavily on student tuition fees, alum donations, and endowments to fund their academic programs. For-profit colleges are run like businesses and are most concerned with generating a profit, while nonprofit private colleges focus on providing students with a quality education. As a result, nonprofit colleges generally boast better reputations than for-profit schools. Though often costlier, private schools may offer generous financial aid. Private universities offer distinct campus and residential experiences (Bouchrika, 2022).

Public colleges, universities, and trade schools: Higher education institutions that are mainly funded by state governments. Public universities boast a more comprehensive array of program offerings. Public universities have low-cost tuition rates, especially for

in-state students (sometimes free). Public universities offer distinct campus and residential experiences (Bouchrika, 2022).

Silver-level certification: A determination that is granted to an institution that completes four Certification Criteria for Veteran Friendly Schools Program (Michigan Veteran's Affairs Agency, 2021).

Veteran academic policy: Special rules and regulations stated in the student catalog that explicitly provide guidance and direction to veteran students that are designed to enhance veterans' academic experience (Cate et al., 2017).

Veteran students: Nontraditional students who have served in the military and attend higher education institutions (Baskas, 2021).

Veteran student support services: Resources offered to all enrolled veteran students to support their success while attending and after graduation by coordinating services to address the academic, financial, physical, and social needs of veteran students. Furthermore, Zickar (2019) explains that academic advising, health and wellness services, mental health, marriage counseling, food services, and a veteran's center may be a part of the supportive services process. .

Assumptions

Assumptions for this study include the concept that the archival data requested from The MVAA would be complete and accurate. Secondary data requires certain assumptions from the individual conducting the research and the participating educational institutions. The use of an archival data set can reframe some of the assumptions commonly seen in studies using primary data. One common assumption in archival

research is that the study sample represents the population to the degree that findings can be generalized. The sample in this study are educational institutions in Michigan that participate in the Veteran Friendly Schools Program. As such, findings can only be generalized to the beforementioned population during the 2021–2022 school year. There is also a common assumption that institutions provided honest and truthful responses on the MVAA questionnaire. In addition, it is assumed that the educational institutions will provide those stated services to assist the veteran students through graduation.

Scope and Delimitations

At the time of writing, there were 93 colleges or universities and 81 trade schools in Michigan, totaling 174 schools. Of this number, 63 schools participated in the Michigan Veterans Affairs Agency's Veteran Friendly Schools Program during the 2021–2022 school year. The data for analysis were selected to include the most recently enrolled student veterans and the percentage who could graduate from Fall 2021 to Summer 2022. Out of 63 eligible institutions identified on the MVAA website, 42 institutions who enroll 50 or more veteran students will be a part of the study. No live participants will be involved in this study. The study does not include civilian students.

Limitations

The primary limitation of this study is the use of archival data because it is based on research created by someone else for another purpose. I must trust the methodology used to collect the original data and assume it is accurate and reliable. Even though it is archival data and has inherent limitations, it reduces the potential for research bias. The most current data available will be used for this study. Another limitation of this study's

sample includes only institutions from Michigan colleges, universities, and trade schools that were enrolled in The MVAA veteran-friendly schools. A response bias is present due to the instrument being a self-report measure. The last limitation was the assessment of archival data and the accurate data recording.

Significance

In this study, I examined the effect of school classification and veteran-friendly rating on veteran graduation rates among Michigan colleges, universities, and trade schools. The study may reveal three key conclusions regarding MVAA veteran-friendly schools that enroll 50 or more veteran students: There is a significant difference in veteran student graduation rates between private and public schools. There is a significant difference in the graduation rate when comparing schools rated gold and silver. There is a significant interaction effect between school classification, public or private, and rating of gold or silver on veteran student graduation rates.

I addressed a gap in the literature by answering the RQs, which may contribute to positive social change by empowering students to complete their program of study and provide reliable information to other higher education institutions and stakeholders. Higher education leaders can better serve this population of students by adding, removing, or modifying existing support programs to improve the graduation rate percentages (Zickar, 2019). The limited research on Michigan's student veteran graduation rates (percentages) further validated the significance of this study. Furthermore, the anticipated results will support Walden University's desire to promote continued positive social change and point out the need for future studies that address

similar variables by identifying the tools to promote continued transformation and development of veteran students (Walden University, 2021).

Summary

The purpose of this chapter has been to provide an introduction to and overview of the research. This quantitative non-experimental, 2x2 factorial ANOVA study was designed to examine a gap in the literature regarding the effect of school classification and veteran-friendly rating on veteran graduation percentage rates among Michigan colleges, universities, or trade schools. The research has relevant social change implications. It has provided a summary of the literature and background related to this study. This chapter has also outlined a gap in the literature that will be addressed through the research. After outlining the gap in literature, this chapter provided a basis for the necessity of the research, the problem statement, and evidence supporting the problem statement. The RQs, hypotheses, conceptual framework, scope, and limitations, and identified social change implications were addressed. Chapter 2 reviews current literature regarding the effect of school classification and veteran-friendly rating on veteran graduation rate percentages.

Chapter 2: Literature Review

Introduction

Veterans attended educational institutions in higher numbers due to the withdrawal of troops throughout major conflicts in other countries and the downsizing of the U.S. military (Krishnamoorthi & Kaissi, 2020). Over 1,500,000 veterans participated in higher education programs throughout the United States (Jones, 2013; Lopez, 2019). There was limited information regarding the recruitment, enrollment and graduation percentage rates of veteran students in the United States. Bridendolph (2021) noted that veteran students nationwide used over \$71,000,000,000 as part of the GI Bill. Vast spending does not equal a positive picture of success for our nation's student veterans; more work is warranted (Veteran Graduation Rate, 2017).

Veterans in colleges, universities, and trade schools throughout the United States faced many hurdles in earning a degree, including being involved in severe violations of school regulations, such as alcohol abuse or assault (Haynes, 2016; Lopez, 2019). Stress associated with transfer from the military to college life, lack of funds, failing grades, decreased services or lack thereof, or an educational institution's inability to deal effectively with veterans could hamper a student's graduation success (Vanterpool, 2021). Although researchers have investigated this issue, the topic had not been explored in the manner this research investigated.

Veterans were enrolled at various higher education institutions throughout midwestern United States. The Michigan Veteran's Affairs Agency (2021) awarded Veteran-Friendly Schools status to 63 universities, colleges, and trade schools across

Michigan for the 2021–2022 school year. Any institution of higher learning or training facility in Michigan eligible for veteran education benefits could apply for the program regardless of size. The 2021–2022 school year's awardees ranged from 0 veterans enrolled at a film school to 522 at a large university (Michigan Veteran's Affairs Agency, 2021). Nevertheless, little was known about the effect of school classification and veteran-friendly ratings on veteran graduation rates in Michigan. Sansone and Segura (2020) focused on predicting persistence and graduation factors contributing to a veteran's college success/graduation. Additional studies were needed to determine the types of support to assist veteran students while they navigated college. Veteran students' learning experiences were mainly unknown and showed a strong need for social support like teamwork and transparency to bring graduation rates and retention to the forefront (Hallisy, 2021).

Alschuler and Yarab (2018) noted that educational institutions that planned to seek and retain veteran students must develop and implement a multiple-pronged, proactive, strength-based approach encompassing several departments that continued through graduation. Barmak (2020) focused on the role of veteran resource centers and stated that graduation rates and retention in college could improve with support, including a vocational rehabilitation counselor. Also, there was a need for a systemic evaluation of the academic environment, including services (Borsari et al., 2017). Cofield (2019) mentioned that institutions could motivate veterans to complete their chosen program of study by utilizing information collected from them to improve recruitment and graduation rate. The more a student participated in school-related activities, the more

campus culture increased, leading to a higher probability of graduation (Fagan & McQuillen, 2020).

Also, educational institutions should define student veteran success with an appropriate lens by initiating the use of evaluations and viewpoints that apply to them. Veteran students have suggested that colleges offer more than a stand-alone veteran student center, especially when veterans transferred to a 4-year institution (Sansone & Segura, 2020). If institutions wanted veterans to succeed, they had to pay attention to their wants, needs, and assets on campus. More attention also had to be given to institutional, state, and federal data collection procedures and student veterans' assessments, including a sense of belonging (Sansone & Segura, 2020). Hallisy (2021) stated that historically veteran students' academic performance data were moderately scarce. Eakman et al. (2016) revealed that future inquiry had to embrace resilience factors markers that impacted veteran postsecondary success.

Tinto's (1993) asserted that future researchers studying student veteran success should focus on services that has been shown to improve graduation rates, such as services that focused on student autonomy, competence, and feelings of connectedness. I analyzed two independent variables: (a) school classification, which had two levels (groups): public or private, and (b) veteran-friendly rating, which also had two levels (groups): gold or silver. Applying Tinto's theory of retention, I expected the independent variables to influence or explain the variance in the dependent variable, graduation rate (percentage), due to veterans feeling a sense of life satisfaction while attending and receiving supportive services at an educational institution.

However, current researchers had not evaluated the success and efficiency of these efforts. Mahoney et al. (2021) found that even though some schools offered many types of services to veteran students, there was little information that made a comparative analysis of what made one school more veteran-friendly than others. Veterans entering higher education were nontraditional students because they had specific life experiences and challenges that differed from the traditional student population (Anderson, 2021; Falkey, 2016). Barmak (2020) pointed toward the gap by emphasizing the lack of data associated with the importance of a classification of college systems that impacted retention and graduation.

This quantitative non-experimental, 2x2 factorial ANOVA study examined the effect of school classification and veteran-friendly rating on veteran graduation rates among Michigan colleges and universities. This study defined veteran students as those who previously served in some branch of the U.S. military and currently attended colleges, universities, or trade schools in Michigan (Michigan Veteran's Affairs Agency, 2021). The dependent variable is the veteran student graduation rate (percentage). The first independent variable is school classification as either a public or private school. The second independent variable is the veteran-friendly rating of gold or silver. Michigan Veteran's Affairs Agency (2021) stated that the program awarded gold, silver and bronze-level status to institutions based on seven criteria:

- an established process for identifying student veterans;
- a veteran-specific website;
- an active student-operated veterans club or association;

- veteran-specific career services, resources, advising, and outcome monitoring;
- an on-campus veteran's coordinator or designated staff point of contact;
- a system to evaluate and award credit based on military training and experience.
- a monitoring and evaluation system for student veteran academic retention, transfer, and graduation rates.

Gold-level certification required six or more criteria, while silver schools had to complete four and bronze schools, three (Michigan Veteran's Affairs Agency, 2021).

There has been multiple research studies regarding veterans and their transition into academia. O'Connor et al. (2017) noted that colleges that used VA services on their campus could assist in the development of services that targeted student veteran needs. In addition, numerous veteran students could profit from added support in their transition from military to academic life (Rattray et al., 2019). Several studies emerged that associated the use of various GI Bills as agents of change that aids in the veteran student's need to succeed in their educational process. Robertson and Eschenauer (2020) found that student veterans' confidence and readiness for the college-to-career transition correlated to overall life satisfaction as a result of using the GI Bill. Therefore, GI Bill student veterans were empowered to develop self-determination, which promoted an attitude of becoming an agent for change in their transition from freshman through graduation (Lechuga et al., 2021).

In addition, numerous researchers delved into the psych-social aspects of veterans' desire to improve their careers through education. For example, Wewiorski et al. (2018)

stated that there should be modifications made to the supported employment model including cognitive rehabilitation, contingency management, motivational interviewing, supported self-employment, and transitional work to effectively meet the needs of returning veterans for employment in jobs of their choice. Nevertheless, there was a lack of information available that examined the effect of school classification and veteran-friendly ratings on veteran graduation rates among Michigan colleges, universities, and trade schools.

The literature review aimed to inform educational leaders, educators, veteran students, and policymakers about school classification and veteran-friendly ratings on veteran graduation rates in Michigan. Tinto's theory of retention and the three RQs informed the review. The RQs concerned whether there was (a) a significant difference in veteran student graduation rates between Michigan's veteran-friendly private and public schools that enrolled more than 50 veteran students; (b) a significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enrolled more than 50 veteran students; and (c) a significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enrolled more than 50 veteran students.

A large body of information regarding traditional students and nontraditional students who attended college in the United States might have taken this study out of its design due to a lack of information regarding veteran students. Therefore, this inquiry focused on the literature associated with educational institution reform regarding veteran

education, school classification, and veteran-friendly rating on veteran graduation. This study impacted a veteran's choice to attend college by providing recommendations, improving; transparency, veteran services, and institutional views/perception of student veterans. Kapp Heifner and Kelli (2018) posited that a framework would present itself through literature relevant to the research study by producing a point of view that was resistant to the ideologies and conceptual theories of the past but would offer new perspectives for the student and educational institutions.

Cathcart (2019) mentioned that an executive order was issued in 2014 by President Obama establishing guidelines for colleges and universities to serve veteran students effectively. Many benefits were associated with becoming a veteran-friendly college, university, or trade school, including additional benefits for the institution and collaborations with the government, industry, and research. It was advantageous for institutions to recruit veterans actively. There was a clear gap in research associated with veteran-friendly institutions and their impact on veteran students (Cathcart, 2019). The United States Department of Veterans Affairs (n.d.) mentioned that most research associated with veterans and veteran-friendly schools was conducted in the United States. The initial GI Bill started in 1944, which gave returning service members exceptional educational opportunities (United States Department of Veterans Affairs, n.d.). Veteran students were not the only ones benefiting from educational opportunities. Educational institutions and the environments where the veterans lived and worked were additional benefactors (Cable et al., 2021).

The following data indicated studies that pointed toward the gap in literature:

Fagan and McQuillen's (2020) data results showed a relationship between college participation and assimilation. Eakman et al. (2016) mentioned that many factors represented a part of a veteran's life; they pointed toward resilient markers that enhanced their success. Jenner (2019) revealed that the veteran's role as a college student deserved a new understanding of how it related to their prior service. Student veterans valued completion, retention, and academic achievement. Also, these student veterans considered other more unique factors (e.g., helping other veterans and being informed) as important markers of student success (Jenner, 2019). Jones (2013) provided historical data related to understanding a veteran's college transition; findings indicated a limited understanding of veterans' needs, including graduation potential, despite the influx of student veterans at various educational institutions throughout the United States.

Kinney et al. (2020) compared veterans who received supported services and those not on campus. Kinney et al.'s research suggested that colleges supplement their programs by providing additional services to veterans, including counseling, a veteran's service center, family support, supported employment promoting self-usefulness, and other veteran-centric supports. Krishnamoorthi and Kaissi (2020) focused on strengthening transparency, equity, and student success. There is a continued need for research on the veteran student experience in universities, colleges, and trade schools due to the acute shortage of information on this emergent student demographic (Borsari et al., 2017; Jones, 2013).

Alschuler and Yarab (2018) posited that there was a need for my study and others due to the gap in the literature regarding school classification and veteran graduation rates. Eakman et al. (2016) revealed that future inquiry must embrace resilience factors markers that impact veteran postsecondary success. Fagan and McQuillen's (2020) data results were used to show that the more a student participated in school-related activities, the campus culture increased, leading to a higher probability of graduation. There is a need for further studies to show the benefits of veterans attending higher education institutions. Veterans with a positive outlook and who have developed relationships within their classroom with professors and students were persistent in their effort to graduate (Fernandez, 2019).

Once veterans and students developed a positive working relationship, it became a success for the student and the university, especially if the university was genuinely veteran-friendly. Future research should include factors that may influence veterans' success/graduation. This investigation pointed toward the gap in research based on services provided by the institution and expected by the veteran. Jenner (2019) argued that the educational institution could shorten the gap in research by training veterans to use their educational benefits to inform and develop the ability to help others, including other veterans, navigate the higher education system. Other researchers acknowledged the gap in literature by analyzing and understanding data related to veterans transitioning toward graduation (Clary & Byrne, 2021; Williams, 2022). Kinney et al. (2020) insisted that a lack of services to support veterans on campus did not enhance their educational experience. Krishnamoorthi and Kaissi (2020) realized how valuable the research gap

could be to college researchers and their staff by providing veteran-centric data to assist student veterans during their courses through graduation.

Literature Search Strategy

The literature for this research study was accessed utilizing peer-reviewed books and journals, and dissertations. Also, various online databases were used, such as ProQuest, EBSCO, ERIC, Google Scholar, PUBMED/Medline, CINAHL, Embase, Psych Info, Web of Science, and the United States Department of Veteran Affairs. Keywords associated with this literature review included student veterans, higher education; faculty; college students, peer-groups, quantitative, 2x2 factorial ANOVA, and educational institution. Also, a collection of databases were used that included the following: discrimination, Black veterans, White veterans, Native American veterans, colleges, female veterans, graduation rates, veteran graduation rates, Michigan colleges, veteran-friendly colleges, yellow ribbon colleges, percentage of graduation rates, counseling, psychology, stress, vocation, stereotypes of veteran students, veteran students in higher education, marginalized, social support, college support, veteran student support, veteran student family support, veteran tutoring, veteran student center, student center, risk factor, protective factor, college classification, student classification, veteran-friendly policies, college policy, student veteran policies, traditional student, nontraditional student, veteran-friendly college policies, veteran centered policies and marriage and family therapy. Childers and Maggard Gibbons (2021) asserted that database research was easily accessible, could be imported into statistical programs within minutes, and offered opportunities to answer a diverse breadth of questions.

Furthermore, clinicians often relied on database research to develop guidelines, make patient care decisions, and shape health care policy.

The search yielded 2,780 publications related to college, university, and trade schools servicing military veterans. There were 196 that dealt explicitly with veteran college students or graduation rates. The search narrowed to 44 while thoroughly analyzing all publications. The criteria for dropping articles included the need to focus on information that was relevant, while ensuring that the study would indisputably become a part of the larger body of research associated with the effect of school classification and veteran-friendly rating on veteran graduation rates.

Theoretical Foundation

This literature review focused on the existing literature written from 1958 (historical) through the earlier parts of 2022. Most data about the effect of school classification and veteran-friendly rating on veteran graduation rates among Michigan colleges and universities were written within the last 5 years. Even though veteran student attrition had been an issue for colleges, universities, and trade schools for decades, theoretical models developed from research did not appear until the 1970s (Aljohani, 2016; Berger et al., 2012; Scheunemann et al., 2021; Seidman, 2005; Tinto, 2017). During the 1970s, student retention became an international concern due to a lack of viable retention theories. Table 1 provides a concise history of the eras of development of student retention studies.

Table 1*Eras of Student Retention Studies*

Era	Period
Retention prehistory	1600s–mid-1800s
Evolution towards retention	Mid-1800s–1900
Early developments	1900–1950
Management of expansion	1950s
Prevention of dropout	1960s
Development of theories	1970s
Management of enrollment	1980s
Broadening of horizons	1990s
Early 21st century	Current and future trends

Note. The data in the table are from Bäumle et al. (2022) and Berger et al.

(2012). Several models of retention gained a reputable reputation since the 1970s.

Nicoletti (2019) stated that the models of retention are Tinto's institutional departure model, Bean's student attrition model, the student–faculty informal contact model (Pascarella, 1980), Astin's (1984) student involvement model, the nontraditional student attrition model (Bean & Metzner, 1985), and the student retention integrated model (Cabrera et al., 1993; Hafer et al., 2021). The literature review used credible data from Tinto's (1993) theory of retention to support the gap regarding the effect of school classification and veteran-friendly rating on veteran graduation rates among Michigan colleges, universities, and trade schools. Ermeling (2021) mentioned that Durkheim's suicide theory drives Tinto's theory. Van Gennep's tribal societies' rites of passage, Price's human resources, and Tinto's (2017) theory of retention all supported the use of multiple services by educational institutions to increase veterans' graduation rate and veterans' autonomy, competence, and connectedness. Choi et al. (2019) suggested that Tinto's

theory of retention applied to students' experiences of academic difficulty, and continued support may improve student retention.

Tinto's theory held that a researcher would expect (a) the first independent variable (school classification as either a public or private school) and (b) the second independent variable (veteran-friendly rating of gold or silver) to influence or explain (c) the dependent variable (graduation rates). This process might provide student veterans with feelings associated with a sense of life satisfaction while attending and receiving supportive services at an educational institution (Hlinka, 2017). Maldonado et al. (2021) stated that even though educational institutions had a significant interest in retention and graduation, the dropout rate could develop into social and economic losses for the student and the institution if both were lacking.

Cofield (2019) further explained that Durkheim's theory posits that the individual's level of integration into society could predict an individual's propensity to commit suicide. Furthermore, like Spady (1971), Tinto applied Durkheim's theory to student dropouts. From Durkheim's theory, Tinto posited that the level of students' academic or social integration into their university would predict whether the students would persist or depart (Cofield, 2019).

Numerous examples existed that impacted a veteran student's decision to continue to attend or leave an education institution, including a relationship between student characteristics, persistence, and interaction with the educational institution (Bean & Metzner, 1985; Cofield, 2019; Tinto, 1993). Sverdlik et al. (2018) mentioned that institutions can focus on factors that might inhibit student accomplishment and prospects.

Those factors could include the pre-college attributes or background of the student.

Nadeem (2021) stated that a student's goals and commitments before college influenced whether a veteran student stayed or left college. Nadeem (2021) further stated that students' aspirations could be strengthened or weakened by interacting with the college or university.

Each veteran student could have a level of commitment to their college goals (Choi et al., 2019; Tinto, 2017). Some might be lacking in their commitment process due to their experiences on campus (Aljohani, 2016). In contrast, others might persist through family, employment, disability, and low income to graduate (Alschuler & Yarab, 2018). Nicoletti (2019) persisted that Tinto's model is still a valid proponent of an educational institution's student dropout or perseverance process. Nicoletti further added that this was a valid principle for shaping, guiding, and evaluating of the issues surrounding retention, especially the addition of financial matters, health concerns, psychological impact, and adjustment difficulties to understand the veteran student, (Cofield, 2019; Nicoletti, 2019).

Literature Review Related to Key Variables

This quantitative non-experimental, 2x2 factorial ANOVA study examined the effect of school classification and veteran-friendly rating on veteran graduation rates among Michigan colleges and universities. This study defined veteran students as those who previously served in some branch of the U.S. military and currently attended colleges, universities, and trade schools in Michigan (Michigan Veteran's Affairs Agency, 2021). The dependent variable is the veteran student graduation rate (percentage). The first independent variable is school classification as either a public or

private school. The second independent variable is the veteran-friendly rating of gold or silver. Michigan Veteran's Affairs Agency (2021) stated that the program awarded gold, silver and bronze-level status to institutions based on seven criteria:

- an established process for identifying student veterans;
- a veteran-specific website;
- an active student-operated veterans club or association;
- veteran-specific career services, resources, advice, and outcome monitoring;
- an on-campus veteran's coordinator and designated staff point of contact;
- a system to evaluate and award credit based on military training and experience; and
- a monitoring and evaluation system for student veteran academic retention, transfer, and graduation rates.

In this study, I defined veteran students as those who previously served in some branch of the U.S. military and currently attended colleges, universities, and trade schools in Michigan (Michigan Veteran's Affairs Agency, 2021). Brown (2019) mentioned that research studies should be examined to develop a general understanding of the student veterans attending their educational institutions. Currently, the percentage rate of 37.1 percent is representative of the veteran undergraduate student population nationally (Brown, 2019). The United States Department of Veterans Affairs (n.d.) reported national student veteran statistics. In 2016, 60% of undergraduate students who received veterans' education benefits were White, 16% were Black, 14% were Hispanic, 3% were Asian,

and 7% were "other" or multicultural. In 2018, 62% of student veterans were first-generation college students. In 2017, 73% of student veterans were male, and 27% were female. In 2018, most student veterans were between the ages of 24 and 40. Only 15% of student veterans were traditionally aged (18 to 23). In 2018, 47% of student veterans were parents, and 47% were married. Furthermore, in 2017 52% were enrolled in an undergraduate program; 24% in a 2-year school; 9% in a graduate program; and 15% in a vocational, technical, or nondegree program. Three fourths of student veterans were attending school full-time. The current study may provide leaders of educational institutions, professors, and other stakeholders with new information regarding veterans attending college in Michigan.

Several factors impacted the dependent variable graduation rate (percentage) as the veteran student progressed toward graduation, including the type of institution, financial aid, support systems, the program of study, school classification, and others. For example, the 2018 school year revealed some surprising statistics regarding how many veteran students attended various educational institutions that the VA supported with several billion dollars to assist with veteran education through graduation (Holian & Adam, 2020). Hill et al. (2019) reported that after September 2001, there were over 5,100,000 post-9/11 veterans on active duty. Sixty-eight percent did not have a bachelor's degree or higher; however, 37% of the 5,100,000 had an associate degree, and only 13% used their GI benefits.

Nationally, student veterans have earned over 453,000 degrees since 2009 on multiple platforms. Degrees earned by student veterans are expected to increase to over

1,400,000. This inquiry may provide stakeholders with information that examines the effect of school classification and veteran-friendly rating on the veteran graduation rate among Michigan colleges, universities, and trade schools (Student Veterans of America, 2017).

Also, the first independent variable for this study is school classification as either a public or private school. Bouchrika (2022) stated that a public education institution is a college, university, or trade school funded by the state or local government. They tended to have larger class sizes and a selection of majors. A private educational institution is a private college, university, or trade school that operates as a nonprofit which did not receive state or federal funding as primary income. The private educational institution might have smaller classes and relate to a religious organization (Study in the States, 2013). Estetikha et al. (2021) posited that public educational institutions could do more with less monetarily by graduating a slightly larger percentage of students than private colleges, universities, and trade schools. Sikes et al. (2021) reported that veteran students attended (a) public universities (54%), (b) private schools (24%), and (c) for-profit institutions (22%).

There were three certification levels associated with the MVAA school classification program: (a) gold-level certification; institutions had to complete six or more of the Certification Criteria for Veteran-Friendly Schools Program; (b) silver-level certification; an institution had to complete four of the Certification Criteria for Veteran-Friendly Schools Program, (c) bronze-level certification; an institution had to complete three of the Certification Criteria for Veteran-Friendly Schools Program (Michigan

Veteran's Affairs Agency, 2021). The researcher is seeking archival data to understand the second independent variable veteran-friendly rating of gold or silver.

The following established process for identifying student veterans included a veteran-specific website; an active student-operated veterans club or association; veteran-specific career services, resources, advising, and outcome monitoring; an on-campus veteran's coordinator and designated staff point of contact; a system to evaluate and award credit based on military training and experience; and a monitoring and evaluation system for student veteran academic retention, transfer, and graduation rates.

McCaslin et al. (2021) identified veteran-specific websites that could be an asset for increasing student veteran knowledge about veteran-specific resources. Student veteran organizations and clubs can provide a feeling of belonging, as demonstrated by the comradery that a student veteran felt while in the military (Klaw et al., 2021). A veteran resource center provided a positive space for the veteran to explore resources available to student veterans while offering a safe space to rest and relax while engaged in advising and other services (Haun, 2021). Ermeling (2021) informed veteran students that a designated veteran service officer is in 75% of colleges, universities, and trade schools. The veteran service officer is the liaison between the school, student veteran, and VA. This officer can administer VA education programs and benefit certification. Many educational institutions promoted awarding credit for military training. The United States Department of Education (2019) stated that the Joint Services Transcript had the approval of the American Council on Education to provide a conversion of military-based education to matching college credit.

Michigan Veteran's Affairs Agency (2021) stated that a monitoring and evaluation system for student veteran academic retention, transfer, and graduation rates would aid in a veteran's transition from the military through graduation. Researchers further noted that if a veteran resource center had a tracking component that started at a veteran-centered orientation would increase a veteran's probability of success in a college environment (Leader, 2021). According to Salzman et al. (2018), student veterans accessing one-stop services that provided monitoring, and evaluation, paired with mentors and coaches, promoted a veteran-friendly educational institution.

Summary and Conclusions

This literature review synthesized significant concepts associated with retaining students and student departure. This study was grounded in Tinto's (1993) student retention model. The study has literature that included data related to the military veteran student population that met the study's success and those that did not. Tinto's theory supported that a student's environments affected their aim/goals of graduation; this was apparent in veteran students' desire to attend college and persist through graduation (Choi et al., 2019). One of the benefits of being in the military was the training received. Successful military training provided the student veteran with aspirations of college success.

A record number of military veterans, described chiefly as nontraditional students, were taking advantage of the Department of Veterans Affairs college programs (United States Department of Veterans Affairs. (n.d.). This study is built on the work of many researchers studying veteran students, including those who studied students' transition

experiences, student veterans, resilient factors, military veteran student success, veteran affairs, and support services. Also, this inquiry was designed to aid veteran students, school classification, and veteran-friendly rating on veteran graduation rate. Lopez (2019) furthered the understanding of practical insights into resources and funding allocation and pointed toward how my study of the effect of school classification and veteran-friendly rating on veteran graduation rate could influence veteran students' choices.

This study's extensive research on student veterans and veteran education programs reinforced the need for an educational institution to understand the complex nature of their transition through to graduation. Institutions of higher learning that are vetted to be veteran-friendly should be aware of the various services that veterans may need to succeed in their social and educational environment. Those services could include a veteran service officer, Veteran Service Center, mentoring, tutoring, and other services/benefits (Ermeling, 2021). When considering the uniqueness of the veteran experiences on campus, universities, colleges, and trade schools could change their behavior from just acting veteran-friendly to veteran-friendly in practice through specific expenditures, resources, and teamwork within different departments (Barragan et al., 2021). This study aimed to address a gap in literature by informing educational leaders, educators, policymakers, and other stakeholders about school classification and veteran-friendly ratings on veteran graduation rates in Michigan.

Chapter 3: Research Method

Introduction

The purpose of this quantitative non-experimental, 2x2 factorial ANOVA study was to examine the effect of school classification and veteran-friendly rating on veteran graduation rate calculated as percentages, the number of veteran students graduating divided by the total number of veteran students in each school included in the study. In this study, veteran students were defined as men and women who had served previously in a branch of the U.S. military and were currently attending colleges, universities, and trade schools in Michigan (Michigan Veteran's Affairs Agency, 2021). In this study, the researcher sought to demonstrate whether there was: (a) a significant difference in veteran graduation rates (percentages) between Michigan veteran-friendly private and public schools that enrolled 50 or more veteran students; (b) a significant difference in veteran-friendly schools rated gold or silver; and (c) a significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran graduation rate among veteran-friendly schools that enrolled 50 or more veterans in Michigan. Even though some schools might have offered online courses for students, the MVAA archival data set did not reflect online students as a part of their research.

Michigan Veteran's Affairs Agency (2021) asserted they were dedicated to veterans attending Michigan colleges, universities, and trade schools. Therefore, MVAA developed the Michigan Veteran-Friendly Schools Survey to assist them with identifying and certifying educational institutions throughout Michigan. To facilitate the process,

MVAA sent out survey questionnaires yearly to institutions committed to veterans. Any Michigan academic institution or training facility eligible to use veteran educational benefits could request to take the Michigan Veteran-Friendly Schools Survey.

This chapter included details on the study methodology. First, I discussed the research design and rationale. Next, in the Methodology section, I described the target population, sampling procedures, instrumentation, how the variables were operationalized, and data collection methods. The data analysis plan is explained, and the three RQs and associated hypotheses under investigation were restated. Potential threats to research validity, including ethical considerations, were also presented. This chapter ended with a summary.

Research Design and Rationale

I used a quantitative, non-experimental research design to examine the effect of school classification and service level rating on veteran student graduation rates using a 2x2 factorial ANOVA design. Student graduation rate (percentage) is the dependent variable, and the independent variables are school classification (public or private) and service level ratings (gold or silver). I used existing archival data. Institutions included in the study, including their MVAA classification levels, came from the MVAA website. A non-experimental design was appropriate for this study because participating institutions were not randomly selected or assigned to levels of the independent variables (Hare, 2020).

A quantitative design was appropriate for this study because hypothesis testing was suitable for quantitative inquiry, data collection methods were objective, and the

inquiry could be replicated by other researchers to confirm or deny the findings (Creswell & Creswell, 2017). Williams (2019) stated that qualitative methods were not designed to test statistical hypotheses based on RQs or the inquiry's purpose, but quantitative research methods could accomplish these research tasks (Creswell & Creswell, 2017).

I did not gather data directly from participants. I used existing archival data for this inquiry. Archival data were an excellent means of accessing readily available data based on research created by someone else for another purpose (Shum et al., 2021). Therefore, archival data collection was a good fit for this quantitative non-experimental study designed to investigate the differences in veteran graduation rates across institutions in Michigan that have 50 or more veteran students. Nurdin (2021) described many benefits of using archival data, such as fewer costs to the researcher and increased accuracy, amount, and extent of the available information.

Methodology

Population

The target population was all Michigan public and private colleges, universities, and trade schools who served veteran students. Veteran students were defined as students who previously served in some branch of the U.S. military and currently attending a college, university, or trade school in Michigan (Michigan Veteran's Affairs Agency, 2021). There were presently 93 colleges or universities and 81 trade schools in Michigan, totaling 174 schools. Of this number, 63 schools participated in the Michigan Veterans Affairs Agency's veteran-friendly schools' program during the 2021–2022 school year.

Sampling and Sampling Procedures

Out of 63 eligible institutions identified on the MVAA website, all 42 institutions who enrolled 50 or more veteran students were included in the sample. No live participants were involved in this study. Power analysis was not used to determine the sample size but was based on institutional listings on the MVAA public website. Lacking a sample size derived from power analysis and determining the power of the potential results, a post hoc power analysis was conducted as part of the data analysis plan.

Archival Data Use

The purpose of this quantitative non-experimental study was to investigate the differences in veteran graduation rates across institutions in Michigan that had 50 or more veteran students. I obtained access and special permission from each institution's institutional research office after obtaining Walden University Institutional Review Board (IRB) approval. The school can use its own form or Walden's data use agreement.

For this study, to begin the initial process of collecting the archival data, I developed an email list for each institution's institutional research office. I identified the institutional research staff responsible for collecting data on veteran student graduation rates. The email lists were based on data downloaded from the MVAA's website, which contained the archived Veteran Friendly Schools Register. A formal request for the archived graduation rate data were emailed to each institution's institutional research staff office. To acquire this data, I provided the 63 schools eligible to participate in the 2021–2022 school year with a brief questionnaire to complete. The questionnaire simply asked,

"What percentage of the veteran students attending your institution graduated during the 2021–2022 school year?"

After receipt of the initial email and subsequent agreement to participate, the institutional research office staff emailed the response data to me. A second archival data email request was sent if the institution did not send data within 2 months. Responses from all institutions in the sample were needed, but multiple requests might have been needed to accomplish this goal. I was expecting a minimal email response rate of 60%. Most inquirers in the field expect a 60% email response rate (Fincham, 2008; Menon & Muraleedharan, 2020). The collected archival data were uploaded to a spreadsheet and sorted by institution's name, veteran friendly certification, and graduation rate. After the data were assembled, it was transferred to SPSS version 28 (IBM Corp, 2021) for analysis to answer the RQs. This process was outlined in the data analysis and RQs sections of the study.

Instrumentation and Operationalization of Constructs

The primary instrument used in this study was an existing survey questionnaire developed by MVAA personnel, entitled the Michigan Veteran-Friendly Schools Survey. The Michigan Veteran's Affairs Agency (2021) stated they were dedicated to veterans attending Michigan colleges, universities, and trade schools. The MVAA distributed questionnaires yearly to institutions who served and educated veterans. Any Michigan academic institution or training facility eligible for veteran educational benefits was also eligible to apply for participation in the rating program. An account request form had to be requested prior to receiving and completing the self-report questionnaire. Once

received, the participating institution had to fill out and return the questionnaire in a timely manner. MVAA analyzed the questionnaire responses and rated the institution gold, silver, or bronze. A site visit was also a part of the process prior to the official rating being established and published. Archival rating data for the 2021–2022 school year were used in this study.

Seven Veteran-Friendly School Program Certification Criteria were included in the survey questionnaire and used to determine if institutions qualified for certification and at what level. The following criteria are self-reported by responding yes or no:

- an established process for identification of current student veterans;
- a veteran-specific website;
- an active student veteran organization or club;
- veteran-specific career services, resources, advising, or outcome monitoring;
- an on-campus veterans' coordinator and/or designated staff point of contact;
- a system to evaluate and award academic credit based on prior military training and experience; and
- monitoring and evaluation of student veteran academic retention, progress, and graduation rates.

Three certification or rating levels are included in the MVAA school classification program. Each participating institution was rated based on its survey responses. Michigan Veteran's Affairs Agency (2021) states that the certification levels were (a) gold (must answer yes to six or more of the Certification Criteria for Veteran-Friendly Schools

Program), (b) silver (must answer yes to four of the criteria), or (c) bronze (must answer yes to three of the criteria). In this study only institutions certified as gold or silver were included in the sample. The bronze-level rating was excluded because no bronze-level rated institutions served more than 50 veteran students, a study inclusion criterion.

The Michigan Veteran-Friendly Schools Survey had face validity because the instrument appeared to measure what it was intended to measure (Creswell & Creswell, 2017). The survey questionnaire was not a psychometric instrument designed to measure a psychological construct(s). Consequently, customary psychometric validity and reliability issues did not pertain to this proposed study. The MVAA developed the questionnaire to collect objective data used by the MVAA to determine certification levels.

The two independent variables included in the factorial design were institutional classification (public and private) and service level rating or certification (gold or silver). This nominal data was available on the MVAA public data site. The data were readily available to the public and no prior permission was required to use the data. Nevertheless, this inquirer sent a letter to MVAA stating his intentions to use the data as part of the requirements necessary for Walden IRB approval. I downloaded data (list of institutions) directly from the MVAA website because no other sources were available. The resulting response data, percentages, were continuous in nature or more specifically, were suitable interval-level data required for the dependent variable percentage rate in a factorial ANOVA.

Data Analysis Plan

The software used for analysis was the IBM SPSS Statistics for Windows, Version 28 (IBM Corp, 2021). SPSS is a software program developed and published by IBM (IBM Corp, 2021). This application allows the user to complete statistical manipulations and computations quickly and efficiently. Data were screened first for accuracy, missing data, or extreme cases. The relevant archival data available on the MVAA website were summarized using descriptive and inferential statistics, specifically a 2x2 factorial ANOVA.

The following three RQs and their associated null and alternate hypotheses underpinned this research. I used archival data to examine the effect of school classification and veteran-friendly rating on the veteran graduation rate among Michigan colleges, universities, and trade schools. The RQs and hypotheses I examined were as follows:

RQ1: Is there a significant difference in veteran student graduation rates between Michigan's veteran-friendly private and public schools that enroll more than 50 veteran students?

H₀1: There is no significant difference in veteran student graduation rates compared to Michigan's veteran-friendly private and public schools, that enroll more than 50 veteran students.

H_A1: There is a significant difference in veteran student graduation rates compared to Michigan's veteran-friendly private and public schools that enroll more than 50 veteran students.

RQ2: Is there a significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enroll more than 50 veteran students?

H₀₂: There is no significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enroll more than 50 veteran students?

H_{A2}: There is a significant difference in veteran student graduation rates when comparing Michigan's veteran-friendly schools, rated gold or silver, that enroll more than 50 veteran students?

RQ3: Is there a significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enroll more than 50 veteran students.

H₀₃: There is no significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enroll more than 50 veteran students.

H_{A3}: There is a significant interaction effect between school classification, public or private, and veteran-friendly rating, gold or silver, on veteran student graduation rate among Michigan's veteran-friendly schools that enroll more than 50 veteran students.

Sartin (2019) and Lani (2010) indicated that factorial ANOVA must meet several assumptions. Two of the assumptions associated with this inquiry were that the study

would measure the dependent variable at the interval level and the distribution of the dependent variable would be normal for each category of the independent variable. Normality is the assumption that the data are normally distributed (bell shaped) and would be assessed with the Kolmogorov Smirnov test. Third, homogeneity of variance assumes comparison groups have equal error variances. I used Levene's test to test the homogeneity assumption. The last assumption is that the observations are independent. In this study, this means the participating institutions' data were kept separated and were not mingled together. I acknowledged this assumption because I did not collect the original data; I used existing archival data.

SPSS Version 28 (IBM Corp, 2021), procedures and options were used to conduct the planned 2x2 factorial ANOVA. The presentation of results included descriptive statistics and statistical values from Levene's test and the tests of between-subjects effects, which showed the F -statistic and p -value for each independent variable and the interaction effect. The F -test for the interaction, the primary issue in a factorial design, between School Classification and Service Level Rating showed whether there was a significant interaction effect on the dependent variable, graduation percentage. If the reported p -value was less than .05, this supported concluding there was a significant interaction effect between School Classification and Service Level Rating. In other words, the p -value showed the probability of observing an interaction if the null hypothesis were true. For this study, if the p -value was equal to or less than .05, there was sufficient evidence to reject the null hypothesis and retain the alternate hypothesis. I did not determine sample size based on a-priori power analysis because the sample size was

predetermined in the archival data. Therefore, a post hoc power analysis was conducted as part of the data analysis to assist in interpreting and evaluating the research findings.

Threats to Validity

Potential threats to internal or external validity may exist. Internal validity involves research procedures to collect data and uncontrollable underlying institutional characteristics that may threaten the findings and hinder my ability to draw correct inferences from the data about the target population. In this study, the participating institutions already completed the MVAA questionnaire themselves. Self-reporting presents a potential threat to internal validity. Institutions may overstate their responses on the questionnaire to suggest that their school has more veteran-centered programs (which do not exist) to meet a higher level of certification for instance, shifting from a possibility of a bronze certification to silver or from silver to gold certification. A site visit can minimize this threat. Another threat to internal validity may correspond to the accuracy of existing records. This study intends to use archival data and doing so presents the possibility the database has flaws or errors. However, I must trust the methodology used to collect the archival (original) data and assume it is accurate and dependable.

External validity threats may arise when incorrect inferences are based on results from a sample of insufficient size and not selected using a random sampling method. This study will use archival data and information collected for another purpose. Thus, the sample size and selection method were predetermined and not controlled by me. Another threat to external validity may arise if a researcher generalizes beyond the experimental groups to other racial or social groups not under study, to settings not examined, or to

past or future situations. This study will be limited to all participating academic institutions in the state of Michigan. Therefore, any generalizations beyond this target population are unwarranted and will not be attempted. In Chapter 5, I will discuss the implications of this study.

Ethical Procedures

This study is subject to the guidance and oversight of the Walden University IRB. Approval from Walden University will be obtained prior to conducting the study. The archival data collected will be kept anonymous and confidential by this research even though it is publicly accessible data. The researcher will not have direct access to the names of the student veterans at each participating institution because the unit of analysis is an institution, not the specific students who attend the institution(s). Consequently, using the names of institutions who participated and are already identified in the publicly available data is also part of this proposed research. All data will be stored on my Google One drive with password protection and on a backup thumb drive stored in a locked desk. Data will be kept for 5 years after completing the study and then destroyed. This time frame exceeds a recommendation to not keep secondary data longer than needed to determine if data content is accurate (Ruggiano & Perry, 2019; Tripathy, 2013).

Summary

Chapter 3 provides information regarding the research design and methodology used in this study. This inquiry used a quantitative, non-experimental research design to examine the effect of school classification and service level rating on veteran student graduation rates using a 2x2 factorial ANOVA design. The methodology section includes

the target population, size, sampling, sampling procedures, participation, data collection, instrumentation, and operationalization of constructs. The data analysis plan uses SPSS Version 28 (IBM Corp, 2021), RQs, and hypotheses. Threats to internal and external validity are also a part of the discussion. Lastly, ethical considerations and institutional permissions are an intricate part of the research. In Chapter 4, I provide information regarding data collection, including treatments /interventions and results.

Revised Study Design

Several major changes arose in the data collection process compared to the plan presented in this chapter (Chapter 3). Data collection extended over several semesters due to the incomplete information from the archival data source (Michigan Veteran's Affairs Agency), which provided only part of the veteran student data listed on its website. Additional data were required for the 2x2 factorial ANOVA. Initially, three emails were sent, and several phone calls were made to 63 Michigan colleges, universities, and trade schools (gold, silver, and bronze) requesting their archived veteran student data. Seventeen responded (12 rated gold and five rated silver). An alternate data collection process was developed once responses from Michigan institutions ceased.

A new application to Walden's IRB for permission to expand the study from local to nationwide was submitted. The IRB approved the expansion to include archival data from new national sources. Consequently, over 1,400 emails were sent to institutions nationwide. Despite the prompt sending of emails, data responses were slow, beginning in February through August 2024. A significant issue associated with data collection is that institutions are not required to report veteran student data; this is typically a

voluntary action by the college. The archival data set used in this study included 60 institutions from across the United States. This sample size was insufficient for a 2x2 factorial ANOVA, as it did not meet the sample size requirements based on a power analysis or statistical assumptions (Laerd Statistics, 2024). The number of RQs changed from three to one, and the planned statistical analysis was altered from a 2x2 factorial ANOVA to a Kruskal-Wallis H test.

The Kruskal-Wallis H test, sometimes referred to as the "one-way ANOVA on ranks," is a rank-based nonparametric test used to determine if there are statistically significant differences between three or more groups of an independent variable on a continuous or ordinal dependent variable (Laerd Statistics, 2024). The Kruskal-Wallis H test relies on four assumptions, according to Laerd Statistics (2024): (a) one dependent variable measured at the continuous or ordinal level, (b) one independent variable consisting of three or more categorical, independent groups, (c) independent observations, and (d) a determination of whether the distribution of scores for each group of the independent variables has the same shape or a different one. Unlike the one-way ANOVA, the nonparametric Kruskal-Wallis H test does not assume a normal distribution of the underlying data (Taylor, 2020). Laerd Statistics (2024) suggests that the Kruskal-Wallis H test is appropriate for this study due to the nonnormal distribution of the data and the presence of outliers; it is more suitable to use ranks rather than actual values to avoid the influence of outliers or nonnormal data distribution.

Chapter 4: Results

Introduction

In this quantitative, non-experimental study, I examined the effect of school classification and veteran-friendly ratings on veteran graduation rates among colleges, universities, and trade schools throughout the United States. Veteran students were individuals who had previously served in a U.S. military branch and were currently attending various educational institutions across the country. The dependent variable in this study is the veteran student graduation rate (percentage). In contrast, the independent variable, institutional veteran classification group, had four levels: (a) public gold, (b) private gold, (c) public silver, and (d) private silver. I used archival data to examine the effect of school classification and veteran-friendly ratings on veteran graduation rates among colleges, universities, and trade schools.

The following overarching RQ and corresponding null and alternate hypotheses underpinned this research:

RQ: How do graduation rates across colleges, universities, and trade schools differ based on school classification (gold, silver) and veteran-friendly ratings?

H_0 : All four groups originate from the same distribution.

H_a : At least one group originates from a different distribution.

In Chapter 4, I described the data collection methods, the data collection period, and the actual recruitment and response rates. Next, I reported any deviations in the data collection process compared to the plan presented in Chapter 3. The results of the

analyses using the Kruskal-Wallis H test to address the RQs were then presented. This chapter concluded with a summary of the findings and a transition to Chapter 5.

Data Collection

The archival data used in this study were retrieved in collaboration with various colleges throughout the United States. The original data collection period began on August 16, 2022, while seeking permission to use the MVAA website and concluded nationally on August 8, 2024. Data sets containing information on veteran student graduation rates from 60 institutions across the United States were collected. These data were utilized instead of data from only the state of Michigan, as initially proposed, due to the unavailability of necessary data from Michigan institutions.

Walden IRB initially approved the use of institutions from Michigan at the beginning of this study (approval no. 09-06-23-0999784). Walden's IRB permitted data collection regarding veteran graduation rates from colleges listed in the MVAA for the beginning of 2022. However, only partial data from the MVAA were available. Consequently, for the following year, phone calls, emails, and visits to colleges throughout Michigan were necessary to retrieve the data.

Several discrepancies arose in the data collection process compared to the plan presented in Chapter 3. Data collection extended over several semesters due to the incomplete information from the archival data source (MVAA), which provided only part of the veteran student data listed on its website. Additional data were required for the 2x2 factorial ANOVA. Initially, three emails were sent, and several phone calls were made to 63 Michigan colleges, universities, and trade schools (gold, silver, and bronze) requesting

their archived veteran student data. Seventeen responded (12 rated gold and five rated silver). An alternate data collection process was developed once responses from Michigan institutions ceased.

A new application to Walden's IRB for permission to expand the study from local to nationwide was submitted. The IRB approved the expansion to include archival data from new national sources. Consequently, over 1,400 emails were sent to institutions nationwide. Despite the prompt sending of emails, data responses were slow, beginning in February through August 2024. A significant issue associated with data collection is that institutions are not required to report veteran student data; this is typically a voluntary action by the college. The archival data set used in this study included 60 institutions from across the United States. This sample size was insufficient for a 2x2 factorial ANOVA, as it did not meet the sample size requirements based on a power analysis or statistical assumptions (Laerd Statistics, 2024). The number of RQs changed from three to one, and the planned statistical analysis was altered from a 2x2 factorial ANOVA to a Kruskal-Wallis H test.

The Kruskal-Wallis H test, sometimes referred to as the "one-way ANOVA on ranks," is a rank-based nonparametric test used to determine if there are statistically significant differences between three or more groups of an independent variable on a continuous or ordinal dependent variable (Laerd Statistics, 2024). The Kruskal-Wallis H test is nonparametric and relies on four assumptions. These assumptions, according to Laerd Statistics (2024), are (a) one dependent variable measured at the continuous or ordinal level; (b) one independent variable consisting of three or more categorical,

independent groups; (c) independent observations; and (d) a determination of whether the distribution of scores for each group of the independent variables has the same shape or a different one. Unlike the one-way ANOVA, the nonparametric Kruskal-Wallis H test does not assume a normal distribution of the underlying data (Taylor, 2020). Laerd Statistics (2024) suggests that the Kruskal-Wallis H test is appropriate for this study due to the nonnormal distribution of the data and the presence of outliers; it is more suitable to use ranks rather than actual values to avoid the influence of outliers or nonnormal data distribution.

This study included veteran-friendly institutions with gold or silver ratings, as initially proposed. Institutions utilize seven Veteran-Friendly School Program Certification Criteria to assist with each school's certification/rating process. The criteria include

- established a process for identifying current student veterans;
- a veteran-specific website;
- an active student veteran organization or club;
- veteran-specific career services, resources, advising, and outcome monitoring;
- an on-campus veterans' coordinator and/or designated staff point of contact;
- a system to evaluate and award academic credit based on prior military training and experience; and
- monitoring and evaluation of student veteran academic retention, progress, and graduation rates.

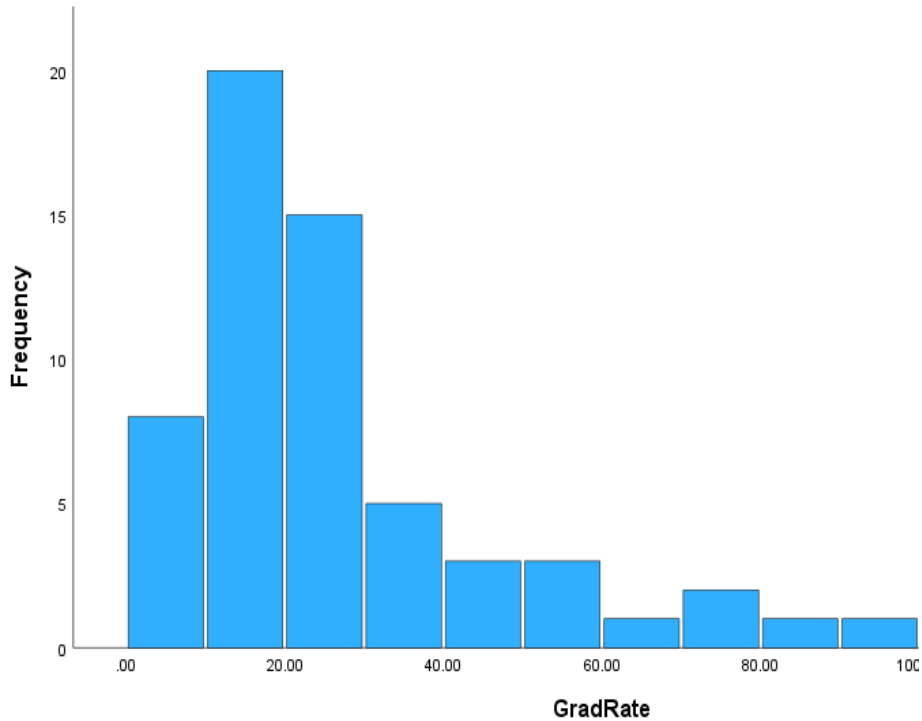
Gold, silver, and bronze are MVAA's veteran-friendly school certification levels. Six or more certification criteria must be completed to achieve gold-level certification. Silver-level certification requires completing a minimum of four criteria, while institutions must have three criteria in place to qualify for a bronze level (Michigan Veteran's Affairs Agency, 2021). This study utilizes public gold, private gold, public silver, and private silver classifications.

Results

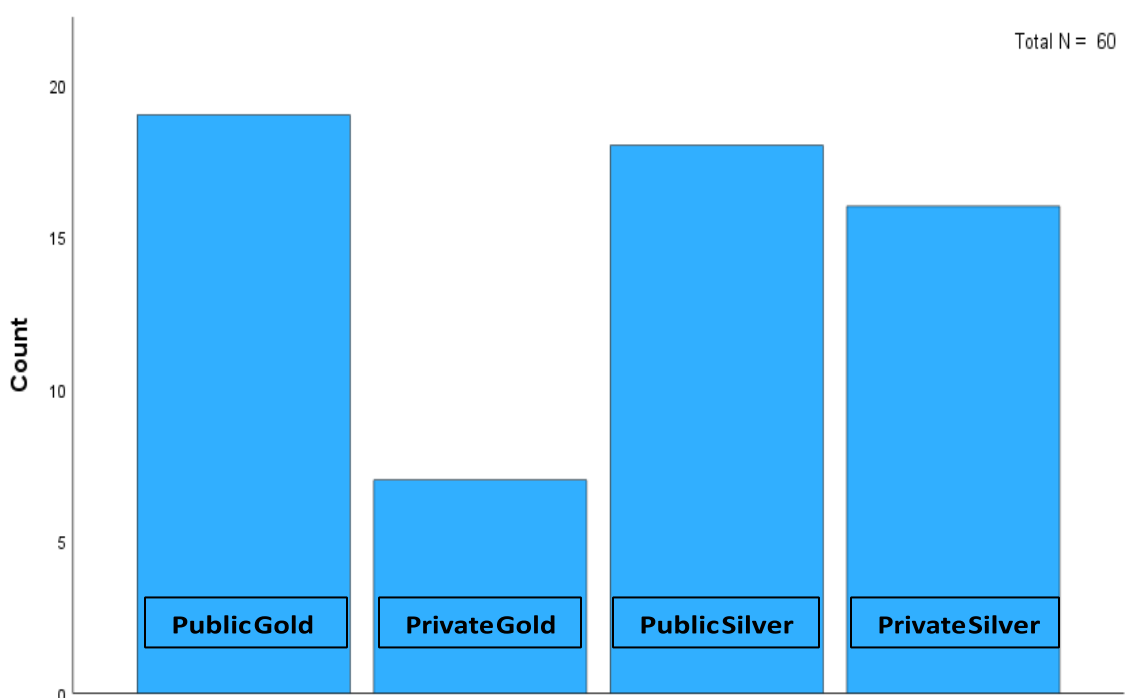
The sample used for this analysis included 60 colleges, universities, and trade schools throughout the United States. The number of institutions in each category is as follows: private gold ($n = 7$), private silver ($n = 16$), public silver ($n = 18$), and public gold ($n = 19$). Out of a group size of 60, the mean graduation rate was 26.98% ($SD = 22.54\%$). The graduation rate ranges from a minimum of 0% for some institutions to a maximum of 100% for others. The independent variable, institutional veteran classification group, has four levels: (a) public gold, (b) private gold, (c) public silver, and (d) private silver.

Assumptions Test

The first assumption is that one dependent variable (see Figure 1) is measured at the continuous or ordinal level. Graduation percentage is measured from 0% to 100%.

Figure 1*Graduation Rates*

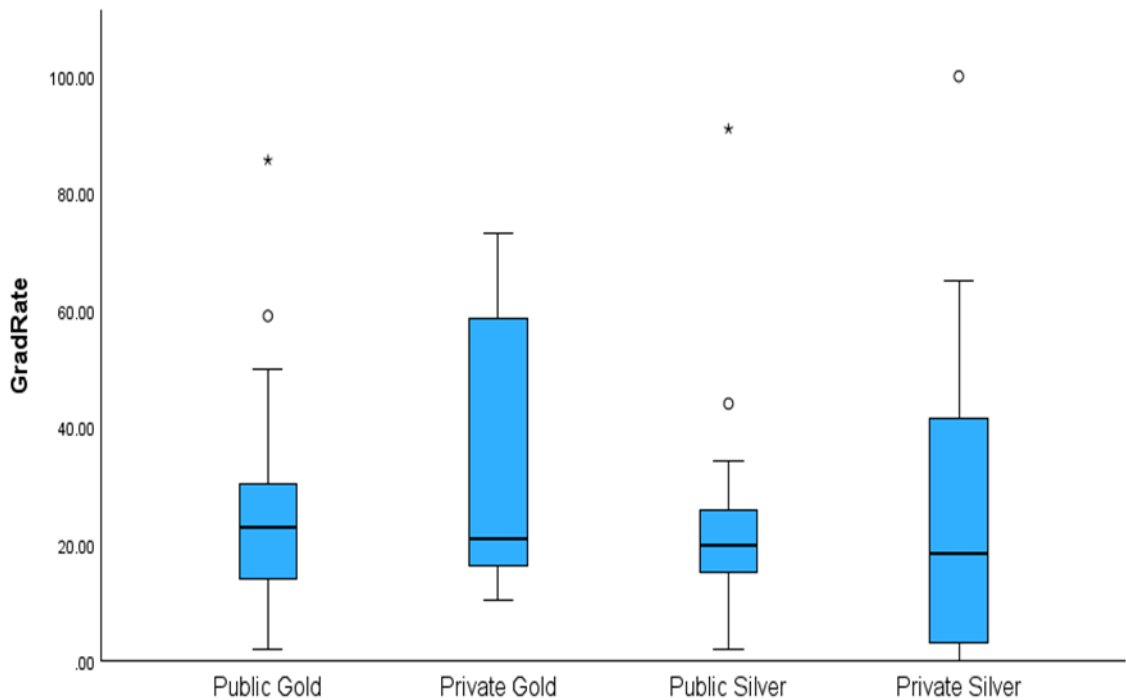
The second assumption includes one independent variable comprised of three or more categorical, independent groups (see Figure 2). The independent variable for this study meets this criterion, it consists of groups (public gold, private gold, public silver, and private silver).

Figure 2*Categorical Independent Variable*

The third assumption of independence of observations was satisfied by utilizing different institutions from across the United States. The study was also cross-checked to confirm that no institution participated in more than one group (the groups were independent of each other). The fourth assumption is to determine whether the score distribution for each independent group has the same or a different shape. Based on visual observation of the box plot (see Figure 3), the distributions do not exhibit similar shapes. Researchers note that no consensus exists for distinguishing similarities between distributions using box plots (Laerd Statistics, 2024; Vargha & Delaney, 1998).

Figure 3

Box Plot for the Kruskal-Wallis H Test



Statistical Analyses

Due to the recruitment of only 60 participants and the failure to meet the assumption of normal distribution for the 2x2 factorial ANOVA, a nonparametric test was employed for data analysis. The nonparametric independent samples Kruskal-Wallis H test was selected because it effectively compares three or more groups of cases with unequal or different sample sizes (McKnight & Najab, 2010). I used the Kruskal-Wallis H test to address the RQ: How graduation rates across colleges, universities, and trade schools differ based on school classification (gold, silver) and veteran-friendly ratings? Because I assumed that the distributions of the groups were not similar, I employed the

Kruskal-Wallis H test to compare the distributions and mean ranks. Graduation rates were compared to determine if there was a statistically significant difference across groups. The significance level was set at .05. The asymptotic significance was .789. The results of the Kruskal-Wallis H test indicate that the distribution of graduation rates is the same across groups. Based on these results, the null hypothesis is accepted (retained).

Additional results from the Kruskal-Wallis H test provide the GradRate test statistics. It supports accepting the null hypothesis by presenting a Kruskal-Wallis H test value of 1.050 with 3 degrees of freedom, which grants a p value of .789. Laerd Statistics (2024) state that asymptotic means that the p value approaches the real value as sample sizes increase. The results are $\chi^2(3) = 1.050, p = .789$. A Kruskal-Wallis H test was conducted to determine if there were significant differences in GradRate scores between groups: public gold ($n = 19$), private gold ($n = 7$), public silver ($n = 18$), and private silver ($n = 16$). Values are mean ranks unless otherwise stated. GradRate scores increased from private silver (18.45) to public silver (19.88), to private gold (21.00), and finally to public gold (22.87) groups, but the differences were not statistically significant, $\chi^2(3) = 1.050, p = .789$.

Summary

I examined the impact of school classification and veteran-friendly ratings on veteran graduation rates among colleges, universities, and trade schools. Responses were collected from trade schools, colleges, and universities (initially in Michigan) throughout the United States. The data collected from 60 institutions were analyzed using a Kruskal-Wallis H test. There was one overarching RQ in this study: How do graduation rates

across colleges, universities, and trade schools differ based on school classification (gold, silver) and veteran-friendly ratings? The results indicated that there is no significant difference in the graduation rate ranks. Therefore, the null hypothesis was retained (accepted). In Chapter 5, these results will be evaluated alongside previously presented literature, limitations of the study, recommendations for future research, and implications for social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

I examined the effect of school classification and veteran-friendly rating on veteran graduation rates (percentages) among colleges, universities, and trade schools throughout the United States. Tinto's (2017) theory of retention supports that a student's environment affects their aim/goals of graduation, which is apparent in veteran students' desire to attend college and persist through graduation (Choi et al., 2019). One of the benefits of being in the military is the training received. Successful military training provides the student veteran with aspirations for college success.

A record number of military veterans, described chiefly as nontraditional students, are taking advantage of the Department of Veterans Affairs college programs (United States Department of Veterans Affairs, n.d.). This study builds on the work of many researchers studying veteran students, including those who study students' transition experiences, resilience factors, military veteran student success, veteran affairs, and support services. Also, this inquiry was designed to aid veteran students, school classification, and veteran-friendly rating ranks on veteran graduation rate. Lopez (2019) furthered the understanding of practical insights into resources and funding allocation and pointed toward how this study of the effect of school classification and veteran-friendly rating on veteran graduation rates can influence veteran students' choice of educational institution.

Because I assumed the distributions of groups to be dissimilar, I employed the Kruskal–Wallis H test to compare the mean ranks and determine whether there was a

statistically significant difference across the groups. Results of the Kruskal–Wallis H test indicated that GradRate scores increased from Private Silver (18.45) to Public Silver (19.88), to Private Gold (21.00), and finally to Public Gold (22.87). However, the differences were not statistically significant, $\chi^2(3) = 1.050, p = .789$. Based on these results, the study failed to reject the null hypothesis.

Interpretation of the Findings

The study extends Jenner's (2019) work by providing more insights into the role of educational institutions in veteran success. Also, Jenner (2019) highlighted the need for understanding the veteran's role as a college student, this research emphasizes the importance of integrating resilience factors and support services, as highlighted by Eakman et al. (2016) and Kinney et al. (2020). Also, this study builds on Robertson and Eschenauer's (2020) research by revealing how institutional variables affect veteran students' performance.

The Kruskal–Wallis H test showed no significant variations in veteran graduation rates across the examined groups, $\chi^2(3) = 1.050, p = .789$. However, the mean rankings showed that public and private schools with gold ratings had higher graduation rates than those with silver ratings, regardless of whether the school was public or private. Although this tendency does not reach statistical significance standards, it suggests that veteran-specific support programs may improve results. According to Umucu et al. (2022), mentorship and tutoring programs, veteran service centers, and other comparable activities tend to foster veteran success.

The research also challenges past beliefs, such as the claim that veterans needed simply to attend school to succeed (Borazon & Chuang, 2023). Contrary to some assumptions found in the literature, the findings of my study suggest that more than simply attending college is needed for veteran success. The quality of support and integration into campus life is crucial, as Kinney et al. (2020) also argued. This research shows similar patterns to existing research (i.e., benefit high graduation rates) in institutions with great support systems and tailored services for veterans while addressing gaps in current research highlighted by Alschuler and Yarab (2018). This study shows that the quality of the institution's integration and support services may be important, thus supporting Umucu et al.'s (2022) findings that student participation and institutional support may matter more than opportunities. My results may also show that veterans may benefit from extensive support systems that meet their demands. These support networks may help veterans build resilience and transition.

This research also addresses gaps in the literature by demonstrating the importance of specialized support services and highlighting the seemingly insignificant differences in veteran graduation rates between public and private educational institutions. Additionally, my research found somewhat higher mean rankings for private schools, suggesting they have more resources or are better equipped to provide customized aid for veterans. My findings suggest a need for further study on institutional procedures and how they affect veterans' achievement.

My findings indicate a clear need for further studies on how specific services and institutional factors impact veteran graduation rates and addresses the gap

Krishnamoorthi and Kaissi (2020) and others identified. For example, the findings align with and confirm existing literature on the importance of participation, resilience, and unique success markers for veterans; extend the current understanding by offering additional concepts of comprehensive support strategies; and disconfirm some assumptions by showing that quality support services, rather than just college attendance, are critical. When considering the uniqueness of the veteran experiences on campus, universities, colleges, and trade schools can change their behavior from just acting veteran-friendly to veteran-friendly in practice through specific expenditures, resources, and teamwork within different departments (Barragan et al., 2021). This research ensures that veteran-friendly designations lead to meaningful assistance.

Limitations of the Study

Several constraints affected the generalizability and dependability of this research. The most pressing limitation was the use of prior data. I had little control over the quality and consistency of the information because I used archival data from educational institutions that may have been developed for a variety of reasons. Due to this reliance, biases or errors in the initial data collection methods may have altered the study's outcomes. Additionally, institutions had to supply data quickly, which was not always assured.

A potential limitation of the sample size was its limited power to detect significant differences between groups. While there appears to be no user-friendly tool freely available for calculating power and predicted sample sizes using the Kruskal-Wallis H test, the sample size of 60 may have limited the power to detect significant

differences between the groups (Clark et al., 2023). Thus, reducing the generalizability of the results to other U.S. colleges, universities, and trade schools. Moreover, since only universities with extensive veteran programs or those keen to show their veteran-friendliness participated, response bias may have been present.

Another drawback was that archival data were self-reported, which increased responder bias and the probability of erroneous or exaggerated observations. Additionally, I encountered issues with institution data recording accuracy, which may or may not have affected the validity of the findings. Despite the constraints, I used the latest data to minimize these effects. Future studies should seek more complete and responsive data sets. Research initiatives must also utilize more controlled data-gathering procedures to improve validity and dependability.

Recommendations

After reviewing the data, I developed several recommendations to improve veteran education and institution procedures, including requiring schools to record the percentage of veterans who graduate, which may increase reporting transparency, ensuring openness and accountability. Common performance metrics across all educational institutions may assist veterans in making better choices about where to continue their education and give a more accurate image of veteran-friendly courses.

In addition, educational institutions must develop extensive and realistic help systems to get a veteran-friendly ranking (Robertson & Eschenauer, 2020). Such support includes veteran-specific mentorship, tutoring, and counseling. Building veteran service centers is one example. Institutions seeking gold ratings must prioritize these resources to

help them establish favorable conditions that boost graduation rates. Another recommendation is to expand research into alternative education and trade schools as more veterans enroll in 2-year colleges and trade schools; more research is needed to optimize these pathways for veterans. Understanding veterans' needs and results in different contexts may help you understand how to alter support services across institutions.

Moreover, institutional leaders should collaborate across divisions to fully support veterans. Academic counseling, career services, and financial assistance offices must collaborate to create a military-specific support structure (Robertson & Eschenauer, 2020). This network must personalize its offerings to these students' academic, financial, and professional development requirements. In addition, Mahoney et al. (2021) found that even though some schools (public or private) offered many types of support services to veteran students, there is little information that made a comparative analysis of what makes one school more veteran-friendly than others. The veteran student support systems of private and public institutions warrant further exploration. These recommendations aim to enhance the veteran student's experience, academic and professional success, and ability to reintegrate into civilian life.

Implications

This research has implications for society, especially in terms of institutional reform and veteran education. This research may provide valuable information to educational leaders, legislators, and veterans that might lead to positive changes. Analyzing how veteran-friendly school classifications and evaluations affected

graduation rates provides these findings. Veterans may make better educational decisions when they know which schools have the best environments. Veterans may better choose their schooling with this information. Veteran-friendly schools, especially gold rated ones, may provide veterans with the full assistance they need to succeed academically. Services may include veteran service facilities, mentorship, and tutoring. Veterans may find this information useful in their search for conditions that minimize school dropouts and promote academic achievement.

Leaders of educational institutions might use these findings to analyze and enhance their organizational veteran support services (see Sullivan & Yoon, 2020). Educational institutions may create supportive environments for veterans by going beyond labels and implementing veteran-friendly policies. This category may include specialty curriculum, interdepartmental cooperation, and resources that specifically address veterans' academic transition issues.

The findings of this study also support more systematic policy-level veteran education. These include required reporting of veteran graduation rates and increased financing for veteran-focused programs. Educational institutions may guarantee that their support measures benefit students by implementing openness and accountability standards. This process would ensure that their assistance measures contribute to societal change by helping veterans reintegrate into civilian life and succeed in civilian professions.

Conclusion

Current literature on veteran-friendly schools is scarce. There needs to be more literature regarding this topic. Requests for archival data were sent to 1,400 colleges, trade schools, and universities throughout the United States. Sixty institutions responded, and data were analyzed using the Kruskal–Wallis H test. There were no statistically significant findings that supported the RQ. This study shows a similar pattern to what is found in the existing literature regarding the critical role of institutional support in shaping U.S. veterans. Although not statistically significant, the findings suggest that gold rated public and private institutions tend to foster slightly higher graduation rates. This insight highlights the potential benefits of veteran-specific support programs in enhancing academic outcomes. Despite limitations such as reliance on archival data and a small response sample, the research offers valuable perspectives on the importance of tailored support services for veteran students. Future studies should aim for more comprehensive data collection to further explore the impact of institutional practices on veterans' academic success. Strengthening these support systems could significantly aid veteran students in their educational and professional journeys.

References

- Aljohani, O. (2016). A comprehensive review of the major studies and theoretical models of student retention in higher education. *Journal of Higher Education Studies*, 6(2), 1–18. <https://doi.org/10.5539/hes.v6n2p1>
- Alschuler, M., & Yarab, J. (2018). Preventing student veteran attrition: What more can we do? *Journal of College Student Retention: Research and Practice*, 20(1), 47–66. <https://doi.org/10.1177/1521025116646382>
- Anderson, M. L. (2021). *A qualitative study exploring female veterans with post-traumatic stress disorder in postsecondary institutions* [Doctoral dissertation, Northcentral University]. <https://www.proquest.com/dissertations-theses/qualitative-study-exploring-female-veterans-with/docview/2530048000/se-2>
- Anonymous. (2017). Veteran Graduation Rate Higher Than Nonveterans. *National Guard*, 71(3), 19. <https://www.proquest.com/trade-journals/veteran-graduation-rate-higher-than-nonveterans/docview/1878752380/se-2>
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25(4), 297–308. <https://eric.ed.gov/?id=EJ309521>
- Barmak, S. A. (2020). *Effective institutional practices supporting student veterans in higher education* [Doctoral dissertation, University of California San Diego]. eScholarship. <https://escholarship.org/uc/item/1rm7h7p8>
- Barragan, C., Ryckman, L., & Doyle, W. (2021). Improving educational outcomes for

first year and first-generation veteran students: An exploratory study of a persistent outreach approach in a veteran-student support program. *The Journal of Continuing Higher Education*, 70(1), 42–57.

<https://doi.org/10.1080/07377363.2021.1908773>

Baskas, R. S. (2021). *Improving military veteran students' academic progress towards earning a college degree by using the MGIB Education Benefits: A white paper* (ED615121). <https://files.eric.ed.gov/fulltext/ED615121.pdf>

Bäulke, L., Grunschel, C., & Dresel, M. (2022). Student dropout at university: A phase-orientated view on quitting studies and changing majors. *European Journal of Psychology of Education*, 37(3), 853–876. <https://doi.org/10.1007/s10212-021-00557-x>

Bean, J., & Metzner, B. (1985). A conceptual model of non-traditional undergraduate student attrition. *Review of Educational Research*, 55(4), 485–540.

<https://doi.org/10.3102/00346543055004485>

Berger, J. B., Blanco-Ramírez, G., & Lyon, S. (2012). Past to present: A historical look at retention (pp. 7–34). In A. Seidman (Ed.), *College student retention: Formula for student success* (2nd ed.). Rowman & Littlefield Publishers.

Borazon, E. Q., & Chuang, H. H. (2023). Resilience in educational system: A systematic review and directions for future research. *International Journal of Educational Development*, 99, Article 102761. <https://doi.org/10.1016/j.ijedudev.2023.102761>

Borsari, B., Yurasek, A., Miller, M. B., Murphy, J. G., McDevitt-Murphy, M. E.,

Martens, M. P. & Carey, K. B. (2017). Student service members/veterans on

- campus: Challenges for reintegration. *American Journal of Orthopsychiatry*, 87(2), 166–175. <https://doi.org/10.1037/ort0000199>
- Bouchrika, I. (2022). *School, college and university in the USA: What is the difference?* Research.com. <https://research.com/universities-colleges/school-college-and-university-difference>
- Bridendolph, N. C. (2021). *A deeper inquiry into the transitional needs of student veterans* [Doctoral dissertation, West Virginia University]. <https://doi.org/10.33915/etd.8137>
- Brown, R. H. (2019). *Exploring possible predictors of student academic success* [Doctoral dissertation, Grand Canyon University]. <https://www.proquest.com/dissertations-theses/exploring-possible-predictors-student-veteran/docview/2322824813/se-2>
- Cable, G., Cathcart, D. G., & Almond, M. (2021). The case for veteran-friendly higher education in Canada and the United Kingdom. *Journal of Veterans Studies*, 7(1), 46–54. <https://doi.org/10.21061/jvs.v7i1.225>
- Cabrera, A., Nora, A., & Castaneda, M. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *The Journal of Higher Education*, 64(2), 123-139. <https://doi.org/10.2307/2960026>
- Cate, C. A. (2013). *Exploring student veterans' post-secondary completion rates with two national surveys* (Research brief). Student Veterans of America. https://www.academia.edu/3448218/Exploring_Student_Veterans_Post_Secondary_Completion_Rates_with_Two_National_Surveys

- Cate, C. A., Lyon, J. S., Schmeling, J., & Bogue, B. Y. (2017). National veteran education success tracker: A report on the academic success of student veterans using the Post-9/11 GI Bill. *Student Veterans of America, Washington, DC*.
<https://studentveterans.org/>
- Cathcart, D. G. (2019). Veteran-friendly colleges and universities: A primer for Canada. *Journal of Military, Veteran and Family Health*, 5(1), 127-130.
<https://doi.org/10.3138/jmvfh.2018-0021>
- Childers, C. P., & Maggard Gibbons, M. (2021). Same data, opposite results?: A call to improve surgical database research. *JAMA surgery*, 156(3), 219-220. [https://doi:10.1001/jamasurg.2020.4991](https://doi.org/10.1001/jamasurg.2020.4991)
- Choi, A. N., Curran, G. M., Morris, E. J., Salem, A. M., Curry, B. D., & Flowers, S. K. (2019). Pharmacy students' experiences of academic difficulty and Tinto's theory of student departure. *American Journal of Pharmaceutical Education*, 83(10), 7447. <https://doi.org/10.5688/ajpe7447>
- Clark, J. S., Kulig, P., Podsiadło, K., Rydzewska, K., Arabski, K., Białecka, M., & Ciechanowicz, A. (2023). Empirical investigations into Kruskal-Wallis power studies utilizing Bernstein fits, simulations and medical study datasets. *Scientific Reports* 13, 2352. <https://doi.org/10.1038/s41598-023-29308-2>
- Clary, K. L., & Byrne, L. (2021). Emerging adult military-connected students express challenges transitioning into higher education: Implications for helping professionals. *Community College Journal of Research and Practice*, 47(1), 1-16.
<https://doi.org/10.1080/10668926.2021.1925176>

- Cofield, C. S. (2019). Factors contributing to military-veteran student success.
<http://www.proquest.com/en-US/products/dissertations/individuals.shtml>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage publications.
- Eakman, A. M., Schelly, C., & Henry, K. L. (2016). Protective and vulnerability factors are contributing to resilience in post-9/11 veterans with service-related injuries in postsecondary education. *The American Journal of Occupational Therapy, 70*(1), 1-10. <http://dx.doi.org.ezp.waldenulibrary.org/10.5014/ajot.2016.016519>
- Ermeling, R. B. (2021). *Veterans' Perspectives of Veteran Support Services in Higher Education: A Case Study* (Doctoral dissertation, Southern Nazarene University)
<https://www.proquest.com/dissertations-theses/veterans-perspectives-veteran-support-services/docview/2624213954/se-2>
- Estetikha, A. K. A., Gutama, D. H., Pradana, M. G., & Wijaya, D. P. (2021). Comparison of K-means clustering & logistic regression on university data to differentiate between public and private universities. *International Journal of Informatics and Information Systems, 4*(1), 21-29. <https://doi.org/10.47738/ijjis.v4i1.74>
- Fagan, E., & McQuillen, J. S. (2020). The relationship between veterans' participation in school activities and their perceived ability to assimilate to campus culture. *Journal of Higher Education Theory and Practice, 20*(8), 56-65.
<https://doi.org/10.33423/jhetp.v20i8.3229>
- Falkey, M. E. (2016). An emerging population: student veterans in higher education in the 21st century. *Journal of Academic Administration in Higher Education, 12*(1),

27-39. <https://eric.ed.gov/?id=EJ1139143>

- Fernandez, F. (2019). Do classroom interactions relate to considerations of institutional departure among student veterans and service members? *Journal of Innovation in Higher Education* (44), 233–245. <https://doi.org/10.1007/s10755-019-9460-8>
- Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the Journal. *American Journal of Pharmaceutical Education*, 72(2), 42. <https://doi.org/10.5688/aj720243>
- Hafer, L. C., Gibson, N. M., York, T. T., Fiester, H. R., & Tsemunhu, R. (2021). An examination of student retention at a 2-year college through structural equation modeling. *Journal of College Student Retention: Research, Theory & Practice*, 22(4), 550-571. <https://doi.org/10.1177/152102511877081>
- Hallisy, E. E. (2021). *Learning Experiences of Women Student Veterans* (Order No. 28716534). <https://www.proquest.com/dissertations-theses/learning-experiences-women-student-veterans/docview/2572606279/se-2>
- Hare, S. (2020). *The association of romance movies, gender, and relational identity among emerging adults* (Doctoral dissertation, Walden University). <https://www.proquest.com/dissertations-theses/association-romance-movies-gender-relational/docview/2394409433/se-2>
- Haun, K. (2021). *A qualitative study of how the utilization of the veteran source center impacts long-term student veteran success*. (Doctoral dissertation, California State Polytechnic University, Pomona). [https://www.proquest.com/dissertations-theses/association-romance-movies-gender-relational/docview/2394409433/se-](https://www.proquest.com/dissertations-theses/association-romance-movies-gender-relational/docview/2394409433/se-2)

2?accountid=14872

Haynes, D. L. (2016). *Implications of military culture on student veterans' behavior at a western US community college* (Doctoral dissertation, Creighton University).

<http://dspace.creighton.edu:8080/xmlui/handle/10504/106906>

Hill, C., Kurzweil, M., Pisacreta, E., & Schwartz, E. (2019). *Enrolling more veterans at high-graduation-rate colleges and universities*.

<https://doi.org/10.18665/sr.310816>

Hlinka, K. R. (2017). Tailoring retention theories to meet the needs of rural Appalachian community college students. *Community College Review*, 45(2), 144-164.

<https://doi.org/10.1177/0991552116686403>

Holian, L., & Adam, T. (2020). *Stats in brief: Veterans' education benefits: A profile of military students who received federal veterans' education benefits in 2015-2016*.

U.S. Department of Education NCES, 2020-488rev

https://nces.ed.gov/pubs2020/20204_88rev.pdf

IBM Corp. (2021). Released 2021. IBM SPSS Statistics for Windows, version 28.0.

Armonk, NY:IBM Corp. (Computer Software).

<https://www.ibm.com/support/pages/how-cite-ibm-spss-statistics-or-earlier-versions-spss>

Jacks, L. (2021). *Tennessee Promise: Examining student retention strategies and support programs for preventing student departure* (Doctoral dissertation, College of Saint Mary).

<https://www.proquest.com/dissertations-theses/tennessee-promise-examining-student-retention/docview/2600953929/se-2?accountid=14872>

- Jenner, B. M. (2019). Veteran success in higher education: Augmenting traditional definitions. *Journal of Ethnographic & Qualitative Research*, 14(1), 25–41. <https://eric.ed.gov/?id=EJ1256912>
- Jones, K. C. (2013). Understanding student veterans in transition. *The Qualitative Report*, 18(37), 1-14. <https://eric.ed.gov/?id=EJ1043515>
- Kapp Heifner, K. E., & Kelli, E. (2018). *Professional learning communities: Perceptions of online faculty*. Grand Canyon University. ProQuest Dissertations Publishing, 2018. <https://eric.ed.gov/?id=ED588142>
- Kinney, A. R., Graham, J. E., & Eakman, A. M. (2020). Factors distinguishing veterans participating in supported education services from veterans on campus: Evidence supporting modifiable intervention targets. *Psychiatric Rehabilitation Journal*, 43(3), 261–269. <https://doi-org.ezp.waldenulibrary.org/10.1037/prj0000399>
- Klaw, E., Young, B., Li, K., & O'Rourke, P. (2021). Best practices in serving college student Veterans: A scoping review. *Journal of Military, Veteran and Family Health*, 7(1), 76-86. <https://doi.org/10.3138/JMVFH-2020-0024>
- Krishnamoorthi, R., & Kaissi, B. (2020). The college transparency act: Strengthening transparency, equity, and student success in American higher education. *Harv. J. on Legislation*, 57(1), 1-23. <https://journals.law.harvard.edu/jol/archive/volume-57-number-1/>
- Laerd Statistics (2024). Kruskal-Wallis H test using SPSS Statistics. Statistical Tutorial and Software Guides. <https://statistics.laerd.com/>
- Lani, J. (2010). Assumptions of factorial ANOVA.

<https://www.statisticssolutions.com/free-resources/directory-of-statistical-analyses/assumptions-of-the-factorial-anova/>

Leader, M. T. (2021). *Student veterans' postsecondary education experience* (Doctoral dissertation, University of Massachusetts Global).

<https://www.proquest.com/dissertations-theses/tennessee-promise-examining-student-retention/docview/2600953929/se-2?accountid=14872>

Lechuga, V. M., Woodruff, T., Grichko, V., & Bazner, K. (2021). Adapting to college life after military service: A motivational perspective. *Journal of College Orientation, Transition, and Retention*, 28(1), 1-17.

<https://doi.org/10.24926/jcotr.v28i1.3062>

Lopez, J. (2019). Evaluating the efficacy of programs for veteran students. University of Arkansas, Fayetteville. <https://scholarworks.uark.edu/etd/3132>

Mahoney, M. A., Rings, J. A., Softas Nall, B. C., Alverio, T. & Hall, D. M. (2021). Homecoming and college transition: Narratives of student military veterans, *Journal of College Student Psychotherapy*, 35(1), 1-23.

<https://doi.org/10.1080/87568225.2021.1926034>

Maldonado, S., Miranda, J., Olaya, D., Vásquez, J., & Verbeke, W. (2021). Redefining profit metrics for boosting student retention in higher education. *Decision Support Systems*, 3(143), 113493. <https://doi.org/10.1016/j.dss.2021.11349>

Mason, N., & Moore, C. (2018). *An examination of behavioral data as indicators of student-athletes' academic success*. Murry State University, Washington D.C. <https://digitalcommons.murraystate.edu/postersatthecapitol/2012/Morehead/9/>

- McCaslin, S. E., Mackintosh, M. A., Chang, A., Sanborn, A. J., & Rosen, C. S. (2021).
Serving veterans in their communities: Evaluation of an online resource for
behavioral health care providers. *Community Mental Health Journal*, 57(8), 1499-
1504. <https://doi.org/10.1007/s10597-020-00766-6>
- McKnight, P. E., & Najab, J. (2010). Mann-Whitney U Test. *Corsini Encycl. Psychol.*
<https://doi.org/10.1002/9780470479216>
- Menon, V., & Muraleedharan, A. (2020). Internet-based surveys: relevance,
methodological considerations and troubleshooting strategies. *General
Psychiatry*, 33(5). <https://doi.org/0.1136/gpsych-2020-100264>
- Michigan Veteran's Affairs Agency (2021). Michigan recognizes 63 veteran-friendly
schools. <http://www.michigan.gov/mvaa/0,9878,7-414-105320-567540--,00.html>
- Nadeem, R. (2021). *The impact of living at home on progression and performance in
U.K. higher education's ethnic minorities: a focus on British Pakistani
students* (Doctoral dissertation, University of Huddersfield).
<http://eprints.hud.ac.uk/id/eprint/35634/>
- Nicoletti, M. D. C. (2019). Revisiting The Tinto's Theoretical Dropout Model. *Higher
Education Studies*, 9(3), 52-64. <https://doi.org/10.5539/hes.v9n3p52>
- Nurdin, L. (2021). Archives as information infrastructure and their urgency toward
research. *Khizanah al-Hikmah: Jurnal Ilmu Perpustakaan, Informasi, dan
Kearsipan*, 9(1), 28-38. <https://doi.org/10.24252/v9i1a4>
- O'Connor, A., Herbst, E., McCaslin, S., Armstrong, K., Leach, B., & Jersky, B. (2017).
Supporting Veteran Transitions to the Academic Setting: VA on

Campus. *Community College Journal of Research and Practice*, 42(5), 305–315.

<https://doi.org/10.1080/10668926.2017.1294121>

Pascarella, E. T. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research*, 50(4), 545-595. <https://doi.org/10.2307/1170295>

Rattray, N. A., True, G., Natividad, D. M., Salyers, M. P., Frankel, R. M., & Kukla, M. (2019). The long and winding road to postsecondary education for US veterans with invisible injuries. *Psychiatric Rehabilitation Journal*, 42(3), 284.

<https://doi.org/10.1037/prj0000375>

Robertson, H. C., & Eschenauer, R. K. (2020). Student veteran perceptions of college-to-career transition. *College Student Affairs Journal*, 38(1), 52-64.

<https://eric.ed.gov/?id=EJ1255495>

Rouscher, G. Y. (2018). *The lived experiences of veteran and military students in the context of a "Military Friendly" institution: A Phenomenological Case Study*. Western Michigan University.

<https://api.semanticscholar.org/CorpusID:158461066>

Ruggiano, N., & Perry, T. E. (2019). Conducting secondary analysis of qualitative data: Should we, can we, and how? *Qualitative Social Work*, 18(1), 81-97.

<https://doi.org/10.1177/147332501770070>

Salzman, N., Welch, T. B., Subbaraman, H., & Wright, C. H. (2018, June). Using veterans' technical skills in an engineering laboratory [Paper presentation]. ASEE Annual Conference & Exposition, Salt Lake City, Utah.

Sansone, V. A., & Segura, J. S. T. (2020). Exploring factors contributing to college

- success among student veteran transfers at a four-year university. *The Review of Higher Education*, 43(3), 888-916. <https://doi.org/10.1353/rhe.2020.0011>
- Sartin, S. R. (2019). *The correlation between the predictive relationship between supervisor commitment and student competence* (Doctoral dissertation, Grand Canyon University). <https://www.proquest.com/dissertations-theses/correlation-between-predictive-relationship/docview/2284212801/se-2?accountid=14872>
- Scheunemann, A., Schnettler, T., Bobe, J., Fries, S., & Grunschel, C. (2021). A longitudinal analysis of the reciprocal relationship between academic procrastination, study satisfaction, and dropout intentions in higher education. *European Journal of Psychology of Education*, 37(4), 1141–1164. <https://doi.org/10.1007/s10212-021-00571-z>
- Seidman, A. (Ed.). (2005). *College student retention: Formula for student success*. Greenwood Publishing Group. <https://eric.ed.gov/?id=ED491930>
- Shum, C., Garlington, J., Ghosh, A., & Baloglu, S. (2021). A content analysis of hospitality research's research methods in the 2010s. *International Hospitality Review*. 37(2), 286-313. <https://doi.org/10.1108/IHR-03-2021-0020>
- Sikes, D. L., Patterson, B. J., Chargualaf, K. A., Elliott, B., Song, H., Boyd, J., & Armstrong, M. L. (2021). Predictors of student veterans' progression and graduation in Veteran to Bachelor of Science in Nursing (VBSN) Programs: A multisite study. *Journal of Professional Nursing*, 37(3), 632-639. <https://doi.org/doi:10.1016/j.profnurs.2021.03.008>
- Spady, W. G. (1971). Dropouts from higher education: Toward an empirical

model. *Interchange*, 2(3), 38-62. <https://doi.org/10.1007/BF02282469>

Student Veterans of America. (2017). Profile of the contemporary student veteran. In National Veteran Education Success Tracker. Retrieved from <http://nvest.studentveterans.org/wp-content/uploads/2017/04/Profiles-of-a-Contemporary-Student-Veteran.pdf>

Study in the States. (2013, January 3). *What is a public university? What is a private university?* U.S. Department of Homeland Security. <https://studyinthestates.dhs.gov/2013/01/what-public-university-what-private-university#:~:text=A%20public%20school%20is%20a%20college%20or%cialized%20programs>

Sullivan, K., & Yoon, K. (2020). Student veterans' strengths: Exploring student veterans' perceptions of their strengths and how to harness them in higher education. *The Journal of Continuing Higher Education*, 68(3), 164-180. <https://doi.org/10.1080/07377363.2020.1806013>

Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The Ph.D. experience: A review of the factors influencing doctoral students' completion, achievement, and well-being. *International Journal of Doctoral Studies*, 13, 361-388. <https://doi.org/10.28945/4113>

Taylor, R. R. (2020). Therapeutic use of self in occupational therapy: The importance of empathy and intentionality. In F.A. Davis (Ed.), *The intentional relationship: Occupational therapy and use of self* (pp. 2-24). F.A. Davis Company.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*

(2nd ed.). University of Chicago Press, Chicago, IL.

Tinto, V. (2017). Through the eyes of students. *Journal of College Student Retention: Research, Theory & Practice*, 19(3), 254 - 269.

<https://doi.org/10.1177/1521025115621917>

Tripathy, J. P. (2013). Secondary data analysis: Ethical issues and challenges. *Iranian Journal of Public Health*, 42(12), 1478. [https://www.proquest.com/scholarly-journals/secondary-data-analysis-ethical-issues-](https://www.proquest.com/scholarly-journals/secondary-data-analysis-ethical-issues-challenges/docview/1477356490/se-2)

[journals/secondary-data-analysis-ethical-issues-](https://www.proquest.com/scholarly-journals/secondary-data-analysis-ethical-issues-challenges/docview/1477356490/se-2)

[challenges/docview/1477356490/se-2](https://www.proquest.com/scholarly-journals/secondary-data-analysis-ethical-issues-challenges/docview/1477356490/se-2)

Umucu, E., Chan, F., Lee, B., Brooks, J., Reyes, A., Mangadu, T., Chiu, C.-Y., & Ferreir-

Pinto, J. (2022). Well being, PTSD, Colledge Adjustment in Student Veterans

With and Without Disabilities. *Frontiers in Education*, 6,793286.

<https://doi.org/10.3389/feduc.2021.793286>

United States Department of Education. (2019). *Centers of Excellence for Veteran*

Student Success. <https://www2.ed.gov/programs/cevss/index.html>

United States Department of Veterans Affairs. (n.d.). VA college toolkit: Learn about

student veterans. [https://www.mentalhealth.va.gov/studentveteran/learn-about-](https://www.mentalhealth.va.gov/studentveteran/learn-about-student-veterans.asp)

[student-veterans.asp](https://www.mentalhealth.va.gov/studentveteran/learn-about-student-veterans.asp)

Vanterpool, S. M. (2021). *Exploring how a university's veteran services office supports*

their students' civilian career readiness and transition (Doctoral dissertation,

University of South Florida). [https://www.proquest.com/dissertations-](https://www.proquest.com/dissertations-theses/exploring-how-universitys-veteran-services-office/docview/2526063856/se-)

[theses/exploring-how-universitys-veteran-services-](https://www.proquest.com/dissertations-theses/exploring-how-universitys-veteran-services-office/docview/2526063856/se-)

[office/docview/2526063856/se-](https://www.proquest.com/dissertations-theses/exploring-how-universitys-veteran-services-office/docview/2526063856/se-)

- Vargha, A., & Delaney, H. D. (1998). Kruskal-Wallis test and stochastic homogeneity. *Journal of Educational and behavioral Statistics*, 23(2), 170-192.
<https://doi.org/10.2307/1165320>
- Walden University (2021). Social change. <https://academicguides.waldenu.edu>
- Wewiorski, N. J., Gorman, J. A., Scoglio, A. A., Fukuda, S., Reilly, E., Mueller, L., & Drebing, C. E. (2018). Promising practices in vocational services for the community reintegration of returning veterans: The individual placement and support model and beyond. *Psychological Services*, 15(2), 191.
<https://doi.org/10.1037/ser0000177>
- Williams, G. (2019). *Applied qualitative research design*. Scientific e-Resources.
- Williams, G. (2022). *A qualitative study of student veterans' integration into higher education*. <https://www.proquest.com/dissertations-theses/correlation-between-predictive-relationship/docview/2284212801/se-2?accountid=14872>
- Zickar, J. (2019). *The effect of veteran student support services on veteran students' academic achievement* (Publication No. 8381) [Doctoral dissertation, Walden University]. <https://www.proquest.com/dissertations-theses/effect-veteran-student-support-services-on/docview/2245794869/se-2>