

*The Effects of the ASVAB Career Exploration Program on High School Students' Career
Decision Self-Efficacy*

by

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A Dissertation

Submitted in Partial Fulfillment of the Requirements for the
Doctor in Education in Career and Technical Education Degree

Fall 2019

Style Manual Used: American Psychological Associate, 6th Edition

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Abstract

The purpose of this mixed-methods study was to better understand the effects the Armed Services Vocational Aptitude Battery Career Exploration Program has on 10th, 11th or 12th grade high school students' confidence in making career-related decisions following participation in the program. The Career Decision Self-Efficacy-Short Form (CDSE-SF), surveys, and focus group conversations were used to gather data. A pre- and post-test was a key part of this study's design and results of a paired sample *t*-test revealed that participation in the program had a statistically significant impact on the students' Career Decision Self-efficacy (CDSE). However, results of an independent *t*-test revealed that there was little difference in confidence levels between students that participated in the ASVAB CEP during this study and those that participated the previous school year. Schools are succeeding at providing students career-related information and career-related experiences; however, emphasis on planning students' futures, problem-solving, and creating goals may be necessary. Recommendations as a result of this study include ensuring all stakeholders are fully aware of career interventions offered in a high school and students receive their intervention results in a timely, professional manner. In addition, as part of a school's comprehensive school counseling program, school counselors could solicit motivated teachers to become certified School Career Development Advisors to assist with meeting students' career-related needs. Lastly, a range of career-related experiences for all students such as work-based learning, post-secondary enrollment options and a modern CTE program, could assist students with gaining the confidence required for making good career-related decisions.

Acknowledgments

Where do I begin? Anyone, I have a relationship with paid a little toward the cost of me achieving this milestone. My family, friends, professors, customers and co-workers. First, I want to thank Dr. Deanna Schultz my advisor, mentor and friend. Thank you for your guidance, persistence and especially your patience. You are a saint! A special thank-you to the rest of my committee: Dr. Matt Simoneau and Dr. Gregg Curtis. I appreciate your time, professionalism and passion for what you do. We are all in a better place with you three in it. The three of you are true scholars and a great example for the rest of us to follow. Thank you. I would also like to thank all of my professors for helping me grow and preparing me for the next stage in my career and life. Thank you all!

I'd like to thank my wife Nancy for believing in my cause. I believe you sacrificed the most but continued to love me unconditionally anyway. Thank you for your patience and willingness to hold my hand the entire way. Thank you to my children and their children for understanding all the times I had to say no. Thank you for allowing me to press on without making me feel I was less of a father or grandpa than what I really am. Thank you to my parents, Roger and Karen. You sacrificed so much for me. My hope is to continue making you proud. Thank you to Duane Woerpel for convincing me that completing high school was a good idea. A special thank you to my little fury friend Ms. Nora. You were by my side every minute of every day, right up to the end. I never felt alone, and you never let me down. Last but certainly not least, I wish to thank my Lord and Savior Jesus Christ. You gave me the strength when I was weak and the courage to continue when I felt I couldn't no more. Thank you, Lord.

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Chapter I: Introduction

As our country moves forward into the 21st century, high schools continue to be charged with ensuring students graduate academically prepared for a postsecondary education option or by having acquired the skills desired by employers to enter the workforce. Stone and Lewis (2012) suggest that high school students may not be prepared to make career-related decisions, let alone have the academic and job skills necessary for either option. They argue that students have a low career-decision self-efficacy, lack knowledge and experience regarding the world-of-work, possess limited or no previous career-guidance, lack motivation, and, lastly, a student's socio-economic situation may be precluding them from making well-informed, college and career-related decisions. Throughout their book, the authors not only illustrate how students need adequate career-related information but also make a point that our adolescents need guidance from a total school and community perspective to acquire the information and experience necessary to make good career-related decisions.

The National Center for Education Statistics (NCES) (2019) reports that the adjusted cohort graduation rate for the 2016/17 school year reached 84.6%, the highest percentage of public high school graduates in U.S. history. This gain might imply that there are more high school students than ever before that are prepared to attend a college or university or enter directly into the workforce. Unfortunately, this isn't the case. ACT, Inc. (2018) recently published their annual report, *The Condition of College and Career Readiness 2018*, which indicated that only 27% of the 2018 graduating class who took the ACT were classified as meeting college and career readiness benchmarks in all four of the core areas of high school subjects. This is down 1% from the previous graduating class of 2017. In addition, "26% of ACT-tested 2018 graduates likely have the foundational work readiness skills needed for more

than nine out of 10 jobs recently profiled in the ACT JobPro database” (ACT, 2018, p.3). ACT also claims interest in Science, Technology, Engineering & Mathematics (STEM) related professions is on the decline. They indicated that high school graduates’ interest in STEM related majors and professions dropped from 48% in 2017 to 45% in 2018. Of the total number of graduates that participated in the ACT, only 20% met the established ACT STEM Readiness Benchmarks, which was down from 21% the previous year. Lastly, in 2017, 82% of the graduates that tested indicated they had intentions of choosing post-secondary education, while only 66% actually enrolled.

Overall, there is indication that U.S. secondary education systems are making progress with seeing their students graduate. However, there is also indication that graduates fall short of the skills necessary for a successful transition into one’s choice of postsecondary education or training, or for entering today’s mid-to-high skill technical workforce.

Efforts are being made to address these short falls of college and career preparedness and one particular area of interest for researchers has been to consider one’s career decision self-efficacy (CDSE). “CDSE refers to the extent to which individuals show confidence in their competencies to successfully perform career decision-making tasks that are related to self-appraisal, collection of occupational information, problem solving, goal selection and planning for the future” (Jiang, 2015, p.1). Research shows that CDSE serves as an essential aspect of one’s ability to make career decisions and it recommends exploring ways to develop CDSE, especially during one’s career development voyage (Betz, 2000; Jiang, 2015; Lent, Brown & Hackett, 2000). Those found with a higher degree of CDSE are more likely to see themselves engaged in career-related activities and completing career-related tasks that lead up to one making good career-related decisions (Betz, 2004). The positive outcomes for students with

greater CDSE means seeing themselves better prepared for what's to follow their high school careers no matter what their aspirations (Betz, 2000; Reddan, 2015).

There are states going to great lengths to ensure all students are getting the career-related information that may directly or indirectly impact students' CDSE and better prepare them for their futures. For example, in Wisconsin (WI), according to the Department of Public Instruction (DPI), state law requires all students in the 6th through 12th grades to participate in a relatively new program called *Academic and Career Planning (ACP)* (Wisconsin Legislation, 115.28(59)). Unlike the traditional Individual Career Plan (ICP), ACP includes a community approach to ensure all students and their families have the resources necessary for making good career-related decisions prior to high school graduation (Evers, 2016). Some high schools identify ACP as a “process where students come up with their own informed decisions regarding post-secondary success...” (Ellsworth Community School District ACP Newsletter, 2018, p.1). Ellsworth students are being placed in charge of their future prospects; however, they're not doing it alone. The Ellsworth School District's ACP initiative outlines the responsibilities of all stakeholders, e.g., students, their parents, the school counselors, teachers, administrators, postsecondary schools, and local industry; It is a whole community approach to helping students succeed. One of Wisconsin's primary objectives of the ACP initiative is to see students empowered not only in making career-related decisions but also having the confidence to make career-related decisions for the right reasons (Evers, 2016). Efforts such as those in the Ellsworth School District are being put forth in many school districts across the state to ensure all students in every community receive similar or the same career-related support. Although the ACP initiative is relatively new, program evaluations show positive returns in collaboration with

parents and educators, increases in career awareness, and increases in student expectations and career decidedness within the state's schools (Worth, Sim, Arrigoni, Marlin & Gu, 2018).

In Minnesota, to create the momentum necessary to move forward with students reaching established college and career preparedness goals, the state developed an initiative called the *World's Best Workforce* (MN Department of Education, 2019). The state now mandates each school district provide an annual strategic plan showing how their institutions intend to provide students with the resources necessary to not only graduate but also to be best prepared for future education and training, or for entering today's workforce (MN Department of Education (DOE), 2018). Each school district is required to create a quality improvement plan that will see every student graduate and meet college and career readiness targets established by the state. In addition, all college and career readiness goals, also known as *SMART* goals, must be in alignment with Minnesota's version of the federal *Every Student Succeeds Act* (ESSA), which is currently a federal reporting requirement for all states as a result of the latest reauthorization of the *Elementary and Secondary Education Act of 1965*, (Every Student Succeeds Act (ESSA), 2019, MN DOE, 2018).

In addition to career-related initiatives like those in Wisconsin and Minnesota, Niles and Harris-Bowlsbey (2017) report that there are career-oriented programs and specific instruments available and being used by educators to provide high school students essential career-related information and practical experience to make career-related decisions. Comprehensive career-related programs frequently used by secondary school systems in the U.S. include: ACT Aspire, ACT WorkKeys, Xello (also known as Career Cruising), Naviance, Kuder Skills Confidence Assessment, Self-Directed Search (SDS), Career Wise, GPS LifePlan, Armed Services Vocational Aptitude Battery Career Exploration Program (ASVAB CEP) and the SkillScan

Professional Pack (Minnesota State Colleges and Universities, 2019, Niles & Harris-Bowlsbey, 2017). In some states, these same programs are being used by high schools to meet federal accountability requirements under ESSA (ESSA, 2019). For example, since the 2014-15 school year, Wisconsin mandates all 9th and 10th grade level students participate in the ACT Aspire, while all 11th graders are required to participate in ACT WorkKeys in addition to taking the ACT with writing in the spring semester (WI DPI, n.d.a). The outcomes provide valuable career-related information for students, their families, and educators, in addition to satisfying the state's requirement to report progress on students' preparedness for post-secondary and workforce options. According to Education Week (2019), 14 states require their students to participate in college and career assessments designed by ACT. Twelve of these 14 states use ACT to meet federal accountability requirements defined in the federally mandated ESSA requirements (Education Week, 2019).

One well-known comprehensive careers program, the ASVAB CEP, is annually used in approximately 14,000 high schools across the country. Over the past 5 years, approximately 3.4 million 10th, 11th and 12th grade students participated in the ASVAB CEP prior to graduation (ASVAB Career Exploration Program, n.d.a). The ASVAB CEP provides valuable career-related information for educators, parents and their students that assists students with making career-related decisions (Baker, 2002). Although this program, like others used across the country, is trusted to provide resources one needs for making good career-related decisions, it is unclear if the ASVAB CEP gives students the confidence necessary in making career decisions.

Statement of the Problem

High school students require career-related information to make good career-related decisions (Grubb, 2002). Approximately 75% of the documented private and public schools located in the Minneapolis ASVAB CEP region offer the comprehensive career exploration program called the ASVAB CEP to their students (Minneapolis Market Plan, 2018). Although the ASVAB CEP specifically indicates that the program succeeds at offering students and educators the essentials for high school students to make career-related decisions, it is unclear whether a student's CDSE, a key factor for making career-related decisions, is influenced by participating in the ASVAB CEP.

Purpose of the Study

In addition to adding to the existing research on CDSE, the primary purpose of this mixed-methods study was to better understand the effects the ASVAB CEP has on 10th, 11th or 12th grade high school students' confidence in making career-related decisions following participation in the program.

Research Questions

The following questions were used as a basis for this study:

1. What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program?
2. What additional career-related activities may be affecting student participants' confidence in making career decisions?
3. What are educator's perceptions of the effects the ASVAB CEP has on students who participate in the ASVAB CEP?

Significance of the Study

This mixed-methods study is significant for two reasons. The first reason is there is currently no research on the effects the ASVAB CEP may have on a participant's CDSE. Although one study conducted in 2002 learned that the program can assist students with reducing one's indecision as a result of participating in the program (Baker, 2002), it didn't measure one's CDSE. If research indicates that the program has a positive effect on one's confidence for making career-related decisions, it could warrant school leadership's use of the ASVAB CEP for students. The Department of Education (2019) tells us that ESSA requires schools to use assessments for 100% of all students for both career and academic preparedness. ESSA also requires that the assessments used by schools should be in alignment with the district's specific goals for their students. Leadership knowing that the program has the potential to impact student's confidence with making career-related decisions could mean an increase in a student's motivation and persistence to see themselves taking the necessary steps to be better prepared for their transition from high school.

Secondly, if all students understood that participating in the ASVAB CEP could help them with gaining the confidence necessary to make post-secondary education or career choices, students may enter the program with greater optimism and positive outcome expectations.

Assumptions of the Study

Based on the ASVAB CEP's historical use by the majority of public and private high schools over the past 50 years, the components that make up the program, e.g., ASVAB skills assessment, Find Your Interest - Interest Inventory, and OCCU-Find are as valid and reliable as its creator intended them to be (ASVAB Career Exploration Program, n.d.b). In addition, it is

assumed that the majority of schools that participate in the program understand and value the known benefits the ASVAB CEP offers their students.

Limitations of the Study

Limitations of this study include:

- Research is limited to the schools that haven't participated in ASVAB testing to date in the current school year.
- This study will be limited to the Minneapolis ASVAB CEP region and not generalizable due to the limited school populations being considered for research.
- Students who participate may be given biased opinion(s) from others, e.g. peer(s), parent(s), or teacher(s) about the program so they choose not to participate or don't take participation in the program seriously.

Definition of Terms

This section defines key terms that are used throughout this study for better understanding by the reader.

Academic and Career Planning (ACP). Career development program created and implemented in 2017-2018 by the Wisconsin Department of Public Instruction for students in the 6th – 12th grade levels (Evers, 2016).

Armed Services Vocational Aptitude Battery (ASVAB). Aptitude assessment used as one of the three components found in the comprehensive ASVAB Career Exploration Program (CEP) and the aptitude battery used by the Department of Defense for enlistment into the U.S. Military.

Career-Decision Self-Efficacy (CDSE). CDSE is a series of beliefs in one's self and abilities that can influence career-related decisions one might make and one's career success (Bubic, Krile, & Kuzman, 2015).

Career-Decision Self-Efficacy Scale – Short Form (CDSES-SF). The CDSE-SF is a 25-item instrument used to assess an individual's degree of confidence in being able to complete career decision making tasks. The subscales of the CDSE-SF include: Self-Appraisal, Gathering Occupational Information, Goal Selection, Making Plans, and Problem Solving. Responses are made on a 5-point Likert scale. (Betz & Taylor, 1983).

Every Student Succeeds Act (ESSA). Reauthorization of the *Elementary and Secondary Education Act of 1965*. This act shifted some of the decision-making responsibilities for education progress from the U.S. Federal Government onto state and local agencies. (Taking a pulse on ESSA implementation, 2018).

Individual Career Plan (ICP). An ICP is a common document high school students have which maps out their future career plan. Several states require all students graduating from high school to have an ICP.

Self-efficacy. Self-efficacy refers to individuals' perceptions about their capabilities of learning or performing tasks within a specific domain such as career-decision making (Bandura, 1997).

Chapter II: Literature Review

Career-related decisions are some of the most important and difficult decisions one can make over their lifetime (Milot-Lapointe, Savard, & Corff, 2018). Education systems in the U.S. are charged with delivering high school graduates prepared for college or the workforce. There is, however, indication that our nation as a whole hasn't achieved this quest. The National Student Clearinghouse Research Center (NSCRC) (2018) in their signature report indicates that the overall postsecondary completion rates for the 2012 cohort remain below 60% (58.6%). Only 39.22% were 2-yr public college students while 65.66% were 4-yr public college students.

The purpose of this mixed-methods study was to better understand the effects the ASVAB CEP has on 10th, 11th or 12th grade high school students' confidence in making career-related decisions following participation in the program. The research questions guiding this study were:

1. What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program?
2. What additional career-related activities may be affecting student participants' confidence in making career decisions?
3. What are educator's perceptions of the effects the ASVAB CEP has on students who participate in the ASVAB CEP?

This literature review is presented into two sections for purposes of this study: (1) career decision self-efficacy and (2) the ASVAB CEP. The chapter will begin with a look at the social cognitive theory which includes self-efficacy, social cognitive career theory (SCCT), and finally, CDSE. Next, this review will provide detail regarding the ASVAB CEP and a review of past research involving the ASVAB program specifically related to making career decisions.

Self-Efficacy and Related Career Development Theories

The framework for self-efficacy stems from Bandura's development of the Social Learning Theory (SLT) and the short period thereafter, when SLT became known as the Social Cognitive Theory (SCT) (McKim & Velez, 2016). SCT describes how one's personal factors, environmental influences and behaviors reciprocally and continuously intermingle with one another to gain either a positive or negative result (Bandura, 1994; LaMorte, 2018; McKim & Velez, 2016). Two basic but key principles of SCT is that people learn from their past experiences but also learn by observing others and their actions (LaMorte, 2018). Among the core components of SCT is the concept of self-efficacy. Self-efficacy is one believing they have the capability to take on a given task and accomplish it. "Self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (Bandura, 1994, p.1). Saying one has a high degree of self-efficacy is saying one has the confidence in themselves to take on a task and look at it as a challenge versus an impossible task. On the contrary, if a person has low self-efficacy, they lack confidence in themselves and don't believe they have the capability to perform a task. Therefore, they shy away from taking on the task with any effort or avoid it altogether. Bandura theorized and associated four main sources as self-efficacy builders that are essential for one to develop their self-efficacy. These four sources are (1) mastery experiences, (2) vicarious experiences (3) social persuasion, and (4) physiological and emotional reaction. Mastery experience refers to a person successfully accomplishing a given behavior, and as a result of the success, the person is more likely to perform the task again and move toward success, rather than avoid the task (McKim & Velez, 2016). Vicarious experiences demonstrate how one is observing another person performing a task successfully, and the closer the observer can perceive to being like the observed person, the greater the vicarious experience influences self-efficacy. Social

persuasion is present when someone from one's environment encourages the individual performing the task. For example, social persuasion might be a mother or father of a student saying something like, "You're doing great!", to their student (child) which may be enough to give the student the confidence they need to continue studying the evening before a test the next day instead of skipping school. The last of the self-efficacy information sources is the physiological and emotional state. An example of this might be the anxiety e.g., rapid heart rate, shallow breathing, nausea, etc., a student may experience before taking a high stakes test. The student may get so anxious that they avoid taking the test all together versus having the confidence to take the test (Betz, 2000; McKim & Velez, 2016).

Whether one is making career-related decisions, working mathematic formulas or driving a car, one's self-efficacy determines how well any task will be performed if performed at all (Betz, 2000). If one believes they don't have the capability, experience, reinforcements, or become physical and emotional stability, there may be a tendency to avoid taking on a given task (LaMorte, 2018).

Social Cognitive Career Theory (SCCT). SCCT, a derivative of Bandura's SCT, enhances understanding of "the processes through which people form interests, make choices and achieve varying levels of success in education and occupational pursuits" (Lent, Brown & Hackett, 1994, p. 36). SCCT concentrates on the cognitive variables that include self-efficacy, outcome expectations, and goals. The theory explains how these variables interrelate with other characteristics of the individual and their surroundings, to include one's gender, ethnicity, social supports, and barriers and how they may influence one's ability to make career-related decisions (Lent, Brown & Hackett, 1994).

SCCT suggests that gathering information and proposing career-related activities are essential for one to gain the confidence necessary for making career-related decisions. Patten and McMahon (2014) explain that SCCT “focuses on three interlocking segmental processes: how career and academic interest develops; how career choices are made and enacted; and how performance outcomes are achieved” (p. 101). This was the basis for two Australian researchers (Rogers & Creed, 2011) who used the theory as their study’s framework to research predictors of career choice actions, operationalized as career planning and career exploration, in two samples of students from two high schools in the grades 10-12. Although it is understood that the variables studied were essential and directly related to making career-related decisions, the purpose of this longitudinal study was to discover which variables were most important to consider at the various grade levels and which had the greatest impact on a student’s final career choice over time. The researchers measured career planning and exploration, career decision self-efficacy (CDSE), career outcome expectations, career goals, career supports, and personality to determine the variation and impact each had on the students. The study was conducted over a 3-year period, and they used standard multiple regression analysis to test for the effect of changes in the predictor variables between the two groups of students being studied. Although the researchers confirmed that all variables considered in this study played a part in the student’s career choices over time, CDSE and career goals were the most consistent variables over all 3 grade levels and one’s CDSE was the most consistent predictor of change through the course of the whole study. In other words, when one’s CDSE increased, which was determined by the Career-Decision Self-efficacy – Short Form (CDSE-SF), there was also an increase in students’ career planning, greater career outcome expectations, establishment of goals, and positive attitudes toward career-related activities. Although the researchers in this particular study were

able to illustrate how important career influencers are over a period of time with students performing certain career-related tasks, researchers also recognized that it may be just as important to consider one's level of CDSE as a key component in one's career-related decision-making abilities (Betz, 2000; Betz & Hackett, 2006; Bubic et al., 2015). If one doesn't have the confidence necessary to engage in various career-related activities, they won't have the necessary information, or confidence in themselves to make important career-related decisions.

Career-Decision Self-Efficacy. It was Betz and Hackett (1981) who first realized that the career or vocational domain could benefit from Bandura's self-efficacy theory and led to its applicability for making career-related decisions (Betz, 2000). As defined by Betz and Taylor (1983), career-decision self-efficacy (CDSE) is one's level of belief (or confidence) in themselves, that they can complete the career related tasks necessary to make career related decisions. The definition of CDSE suggests that one's CDSE level can have a direct effect on one's ability to complete the tasks necessary to make career-related decisions and make a good career choice. Taylor's and Betz's definition of CDSE outlines the desired domain necessary for self-efficacy to apply to one's CDSE. However, it was Betz (2000) that stated "efficacy beliefs are behavioral specific and not general. The concept of self-efficacy must therefore have a behavioral referent to be meaningful" (Betz, 2000, p. 206). To outline the tasks associated with the career-decision making domain, Taylor and Betz (1983) used John Crite's theory for career maturity. Crite's five career choice competencies are (1) accurate self-appraisal (knowing yourself), (2) occupational information (knowing about jobs), (3) goal selection (choosing a job), (4) planning (looking ahead) and (5) problem solving (what should they do) in relation to making a career choice (Walsh, 1988). Crite's basis for development of the five competencies were influenced by Super's theory of vocational development and the belief that career maturity, like

career development, develops over time (Walsh, 1988). In addition, the five competencies are also a result of the development of Crite's original career maturity competency test which at the time (1978) was used to measure the degree to which one has the career-related knowledge and information to make wise education and career-related decisions (Walsh, 1988).

A measure of one's CDSE has become a common variable measured in research related to one's career development for both young and old learners (Bubic & Ivenisevic, 2016; Hayes, Huey, Hull & Saxon, 2012; Rogers & Creed, 2011) and there are many variables that can influence one's CDSE levels. Some of these variables are age, race, ethnicity, gender, parents, teachers, peers, and one's socio-economic status. In one study, it was determined that one's emotional intelligence can influence one's confidence with making career-related decisions. The study was conducted in the United Kingdom on university students, where researchers addressed emotional intelligence (EI), career decision-making difficulties (CDD) and its effects on their students (Santos, Wang, & Lewis, 2018). In their study, the researchers attempted to better understand CDSE as a potential mediator between one's EI and CDD (Santos et al., 2018). According to the researchers, it has been determined through other research that EI is negatively related to career decision-making difficulties. Furthermore, additional research found that emotions in general are closely related in that they can impact career construction and govern actions and facilitate development of useful career-related narratives (Jiang, 2014). Prior studies have specified that EI is an influential forecaster of CDSE (Santos et al., 2018). The theoretical framework for this particular study was SCCT, and in regard to CDSE, one of the research questions they were seeking answers for was, what is the impact on EI and its components on CDD and CDSE? The measure of EI was accomplished by administering the Wong and Law Emotional Intelligence Scale (WLEIS), the CDSE-SF was used to measure the students CDSE

and the CDD were measured through use of a 34-item revised version of Career Decision Difficulties Questionnaire (CDDQr) (Santos et al., 2018). Confirmatory factor analyses were conducted on the EI, CDSE and CDD scales in order to verify the factorial structure of the measures. The results indicated that there were significant, indirect effects on total CDD and its three categories, e.g., readiness, lack of information, and inconsistent information. It was determined that EI is an important attribute to consider when offering career-related advice to a student or client. The results of this study support the notion that self-awareness is a key factor to consider when making career-related decisions. However, this study was also a good demonstration of the versatility of the social cognitive career theory itself. Although SCCT is hinged to self-efficacy, outcome expectations and goals, it is important to see that it includes all influences whether they be internal or coming from another source outside the control of the individual.

Use of the Career Decision Self-efficacy –Short Form (CDSE-SF) to determine impact on students. The CDSE-SF will be the instrument employed for this study. The CDSE-SF is a shortened version of the lengthy career decision self-efficacy scale (CDESES) and is currently one of the most frequently used scales in providing vocational and career guidance (Redden, 2015). Betz, Klein, and Taylor (1996) published the short form which demonstrates similar validity, reliability and outcomes to the original 50 question CDESES questionnaire originally developed by Betz and Taylor (Redden, 2015). The scores received from the responses to the short form, 25 question, questionnaire with a 5-level confidence continuum, can lead to a measure of several career-related factors which include: vocational identity, career search activity, career maturity, career commitment, career indecision, and patterns of career choices

(Redden, 2015). The following is a review of other studies that performed research with other career-related interventions.

In one study, researchers Miles and Naidoo (2017) describe how they used a career development intervention designed in alignment with SCCT with hopes to increase students' abilities to make good career-related decisions. The intervention was specifically designed to increase one's Career Decision Self-Efficacy (CDSE) with hopes student's attention and interests for career exploration and career planning would also grow. They created a career intervention program for South African 11th graders who were socio-economically challenged and where professional career guidance was rarely if at all available. There was minimal career-related assistance available for students wishing to discuss future plans beyond high school with anyone, and students were inherently influenced by their negative, persuasive environmental surroundings (Miles & Naidoo, 2017).

The research design consisted of administering the CDSE-SF to students prior to their participation in the intervention program and then 8 weeks following the completion date of the intervention period. A quantitative, quasi-experimental design (pretest/posttest) was used to conduct the analysis of the data and the researchers concluded that there was an increase in students' CDSE. The researchers found that the intervention provided student participants with the knowledge, information and confidence for making career-related decisions. This study's findings suggest that an intervention program can have an impact on one's CDSE over a short period of time.

Similarly, another study conducted in Italy by Chiesa, Massei, and Guglielmi, (2016) demonstrated how a structured career intervention with career-related activities had increased high school aged students' CDMSE prior to making the transition to a work experience program,

postsecondary education or the workforce. Before this study, Italy had no systematic career development program to provide students with career-related information or career planning assistance (Chiesa et al., 2016). Italian schools rarely offered any type of counseling services for their adolescents and typically, a high school student could spend their high school career without ever speaking to a counselor. The researchers specifically concentrated on the challenges students faced with exploring careers and having career choice anxiety. Their study was based upon Donald Super's Life Span Career model, Taylor and Betz's (1983) CDMSE theory and Bandura's (2001) social cognitive theory (SCT). The researchers' hope was that students' career exploration and career choice anxiety would change as a result of performing career exploration activities. The study found that students' CDMSE increased significantly as a result of exploring careers; however, the career choice anxiety was unaffected. The two preceding studies, although geographically different, suggest that students, given the relevant career information and having conversation about their futures, can overcome the barriers that preclude them from making career-related decisions and make decisions that are in line with their interest and values.

Another study, conducted by Cunningham and Smothers (2014) in an Iowa university, was conducted to better understand the impact a career-oriented program called Career Cruising (known as Xello as of 2018) accompanied by a career advisory session, had on students in deciding on a college major. The study began when academic advisors were curious if what they'd been doing for the past 10 years to assist incoming students with deciding on a college major actually helped their students. The research consisted of two randomly assigned groups, one group was experimental and the other was the control group. Both groups were guided to complete the self-assessments found in Career Cruising. However, in addition to completing the assessments in the program, the students in the experimental group received a facilitated

advisory session with a seasoned academic advisor. The control group did not receive the advisory session upon completion of the self-assessments. Following the researcher's pre-test/post-test experiment using the CDSE-SF and their statistical analysis using a paired and independent t-test, the researchers concluded that there was a significant increase in the students' CDSE.

It is evident that CDSE-SF is used in research to determine the effectiveness of a given career intervention or career's program on a person's self-efficacy. Therefore, the CDSE-SF will be a good instrument for measuring the impact the ASVAB CEP has on a student's CDSE. In addition, research used a pre/post-test design, suggesting it be appropriate for this researcher's study.

The ASVAB Career Exploration Program

The Armed Services Vocational Aptitude Battery Career Exploration Program (ASVAB CEP) is a Department of Defense (DOD) funded, comprehensive career exploration program designed to assist educators with providing their students in the 10th, 11th and 12th grades (and some postsecondary students), with career-related information to enhance their student's career exploration and career planning opportunities (ASVAB CEP Official Website, 2018). In addition, the program is designed to provide military recruiting services with qualified potential prospects for the military. The program has no cost to the school or students who participate.

According to the ASVAB Career Exploration Program (n.d.b), individual schools may include the ASVAB CEP as an integral part of their school's career development or as a standalone career activity. Because the program is funded by the DOD, and the ASVAB is the military entrance test, schools choose whether or not to release student's testing outcomes to the military so recruiters can contact students to discuss options in the U.S. military. In addition, all

students in the 11th and 12th grades can use their ASVAB scores for enlistment into the U.S. military for up to two years from the date of taking the test. Sophomore students' test results are invalid for enlistment purposes; therefore, they must retake the ASVAB if they choose to enlist in the military (ASVAB Career Exploration Program, n.d.b).

The ASVAB test battery was first introduced in 1968 with a dual purpose (Wall, 1994). First, the ASVAB was to become the choice aptitude battery for all military branches to determine an applicant's aptitudes. The results were to be used to predict one's abilities to learn specific vocations in one's choice of military branch. Second, the ASVAB test battery was authorized for use in the U.S. public and private education systems to assist educators with giving students significant career information and for guiding them to make career and education related decisions. Initially, the ASVAB was used in schools to introduce students to the military and then in 1992, the ASVAB test battery became a part of the revised, comprehensive career exploration program (Wall, 1994). The program remained dual purpose and available to all public and private secondary and postsecondary schools. However, the program today is used by the majority of its users as a career exploration tool and resource for eligible high school students. The traditional ASVAB test battery is currently in the test phase of being offered as a web-based assessment (ASVAB CEP Annual Report, 2018).

According to the U.S. Military Entrance Processing Commander (USMEPCOM) (2019), there are 65 ASVAB CEP Office locations around the U.S., including Hawaii, Alaska and Puerto Rico and the national ASVAB CEP headquarters is located in Seaside, California. American high schools located overseas in Europe and the Pacific areas are serviced by the New York and Honolulu ASVAB CEP Offices, respectively. Each ASVAB CEP Office is managed by a civilian federal civil servant carrying the title of Education Services Specialist (ESS)/ASVAB

Program Manager and are assigned to the U.S. Military Entrance Processing Station (MEPS) located in one of the 65 regions or areas of responsibility (AOR). The ESS's are civilian government employees with education experience and trained to be the go between for the educators in schools and the ASVAB CEP (ASVAB Career Exploration Program, n.d.b)

On a national level, during the 2017/18 school year, approximately 713,777 eligible high school students in the 10th, 11th and 12th grades, located in 12,408 high schools and colleges participated in the ASVAB CEP (ASVAB CEP Annual Report, 2018). On a local level, the Minneapolis ASVAB CEP office sees approximately 75% of its assigned high schools (509) participate each year, seeing approximately 11,000 high school students annually (Foster, 2018). This researcher is the ASVAB CEP program manager and ESS for the Minneapolis ASVAB CEP office.

According to the ASVAB Career Exploration Program (n.d.a) the Armed Services Vocational Aptitude Battery (ASVAB) is the aptitude battery and one of three components of the ASVAB CEP. The aptitude test is best known for its primary purpose which is to determine if a prospective applicant for the U.S. military has the aptitude and ability to learn specific skills found in the many vocations in all branches of the U.S. military. The ASVAB has eight subtests and 4 composite scores derived from a combination of the subtests (Table 1).

Table 1

Armed Services Vocational Aptitude Battery Sub-Tests

Test	Description	Test Time
(GS) General Science	25-item test measuring knowledge of life science, earth and space science, and physical science	11 minutes
(AR) Arithmetic Reasoning	30-item test measuring ability to solve basic arithmetic word problems.	36 minutes
(WK) Word Knowledge	35-item test measuring ability to understand the meaning of words through synonyms.	11 minutes
(PC) Paragraph Comprehension	15-item test measuring ability to obtain information from written material.	13 minutes
(MK) Mathematics Knowledge	25-item test measuring knowledge of mathematical concepts and applications.	24 minutes
(EI) Electronics Information	20-item test of knowledge of electrical current, circuits, devices, and electronic systems.	9 minutes
(AS) Auto & Shop Information	25-item test measuring knowledge of automotive maintenance and repair, and wood and metal shop practices.	11 minutes
(MC) Mechanical Comprehension	25-item test measuring knowledge of the principles of mechanical devices, structural support, and properties of materials.	19 minutes
(AO) Assembling Objects	16-item test measuring ability to determine how an object will look when its parts are put together. (Web-based ASVAB only)	N/A
Totals	200 Items	134 mins
Administrative time		36 mins
Total testing time		170 mins
Composite Scores	Verbal Skills = PC + WK, Math Skills = AR+MK Science and Technical Skills = GS+ES+MC Armed Forces Qualification Test (AFQT) = AR+MK+WK+PC	

Note: ASVAB Career Exploration Program. (n.d.b). *Counselor guide: Empower your students*. Retrieved from https://www.asvabprogram.com/pdf/ASVAB_CEP_Counselor_Manual.pdf

Each vocation in the military has minimum aptitude requirements that military prospects must meet in addition to other requirements such as physical and character related requirements,

for enlistment in the U.S. military. The minimum Armed Forces Qualification Test (AFQT) score, also known as the military entrance score, for entrance into the U.S. military ranges between a score of 31 and 50 and varies slightly between the different branches of military. The higher one's scores (aptitudes), the more vocational options the prospect will have to choose from in the military. The ASVAB takes approximately 3 hours to administer in a high school setting; and as of 2016, it comes in both paper/pencil and web-based formats. The other two components of the program are the Find Your Interest (FYI) interest inventory and the programs occupation information database search tool called the OCCU-Find.

The FYI is the Department of Defense's (DOD's) version of a theoretically based tool created to assist students with aligning their career-related interest with various occupations. The FYI is based on Dr. John Holland's theory of career choice which is best known for aligning personality characteristics of an individual with work environments that are likely best suited for various personality characteristics (ASVAB Career Exploration Program, n.d.b). According to Pommerich (2004), Holland believed one's work related personality or personal characteristics fall into six possible categories: (1) Realistic, (2) Investigative, (3) Artistic, (4) Social, (5) Enterprising and (6) Conventional. This is best known by the acronym, RIASEC. Likewise, all work environments can be categorized into one of the six RIASEC categories. When one's personality and work environment are congruent, one will likely find greater job satisfaction in their choice of occupation and persist longer in that occupation (Pommerich, 2004).

The third tool found in the ASVAB CEP is the Department of Defense's version of a career information research tool called the OCCU-Find. The OCCU-Find allows students to search up to 1000+ occupations, and it leads to specific information for each occupation identified based on their RIASEC codes (interest), aptitudes and value system (ASVAB Career

Exploration Program, n.d.b) Lastly, the ASVAB CEP is linked to many career-related resources that could provide career-related information students seek to make good career-related decisions such as the Department of Labor's Occupational Outlook Handbook and CareerOneStop, and Free Application for Federal Student Aid (FAFSA), to mention a few (DMDC, 2018). The ASVAB has been in high schools since 1968 and the program has changed its format and delivery, multiple times over the past 50 years since its implementation.

Administration of the ASVAB CEP consists of students taking the ASVAB aptitude test and students attending a facilitated career seminar which includes an explanation of their aptitude test results, completion of the program's interest inventory, and a career exploration activity using the OCCU-Find and other career information resources made available to them.

The ASVAB aptitude test. The test is administered to students in their school over a 3-hour period of time by ASVAB office personnel. One military recruiter must be present for every 40 students, to assist the ASVAB Test Administrator during the test session for test security reasons and distribution and collection of test material. Although recruiter(s) are present during various aspects of the program, they are barred from conducting any recruiting activity immediately before, during or immediately after any ASVAB CEP activity (U.S. Military Entrance Processing Station, Regulation 601-4, 2016).

ASVAB career seminar or post-test interpretation. Approximately 14 days or less after students complete the ASVAB test, schools receive 2 copies of an ASVAB Summary Results sheet (Appendix A). Schools receiving the ASVAB Summary Results sheet(s), are provided a "How to" brochure that explains the process for students (parents) to gain access to the ASVAB CEP website and important website navigating information. After the school receives their student's ASVAB test results and follow-up information, the ASVAB CEP office

extends an invitation for the school to receive a facilitated ASVAB career seminar or post-test score interpretation. If the school accepts the invitation for the ASVAB career seminar, the Education Services Specialist or a trained military recruiter in that school's region will make arrangements with the high school to have such an event. If a trained military recruiter is requested, this person must be fully trained and certified by the ASVAB CEP region's Education Services Specialist (ESS). At no time during the career seminar can a recruiter specifically recruit a participant, however, they are allowed to share entrance requirements such as the minimum scores for specific vocations in the military for the recruiter's branch of service. The ASVAB career seminar takes approximately 50 minutes or one classroom period. During this time, students are provided a User Access Code which is included on the student's individual ASVAB summary results sheet and grants them access to the ASVAB CEP career resources for approximately 2-years from the date of participating in the program.

Research on the ASVAB CEP and its effects on its participants is limited. There is one study by Baker (2002) that investigated reducing adolescent career indecision and acquiring self-knowledge and career information through career exploration. The purpose of the study was to determine if the students that participated in the ASVAB CEP saw a reduction in career indecision and if participation in the program increased one's self-knowledge relevant to career exploration. The study was conducted involving students from Defense Manpower Data Center's (DMDC) 65 regions in the U.S. which included inviting 971 students to participate; however, only 725 students participated. The students were limited to those found in the 10th, 11th and 12th grades. The instrument to measure students career indecision was the Career Decision Scale (CDS). Unlike the CDSE-SF, the CDS is used to identify the antecedents that preclude a career decision and the outcomes assist in counseling interventions for students that are having

difficulty making decisions related to selecting a vocation (Feldt et al., 2010). The first of the 3 groups of students randomly selected to participate in Baker's (2002) study took the CDS before and after participating in the ASVAB CEP. The results indicated that students (a) gained a greater degree of confidence about their ability to engage the career planning process and (b) had a starting point from which to launch the task of conducting career exploration (Baker, 2002). Results also indicated students' career relevant self-knowledge increased and career indecision decreased as a result of participating in the career exploration portion of the program. As a result of students participating in the program, the Career Decision Scale gave indication that student's career indecision decreased. However, it was unclear whether a student's confidence to take on tasks associated with making career-related decisions increased or not.

Summary

Social Cognitive Theory (SCT) illustrates that self-efficacy is an important trait to consider when attempting to predict one's behavior or actions for completing a task (Bandura, 1997). The greater a subject's self-efficacy the more likely the subject will believe in themselves or behave in a way to accomplish a task. SCT and Social Cognitive Career Theory (SCCT) suggest that one's self-efficacy is determined and predictable as a result of one's experiences, surrounding environments, supports and barriers. One's self-efficacy in relation to having the confidence or willingness to take on tasks associated with making career-related decisions is called Career Decision Self-efficacy (Betz, 2000). In recent years, CDSE has been a key variable measured by researchers to determine one's level of readiness to take on career-related tasks that are essential for making career related decisions. One with low-CDSE is less likely to attempt a task associated with making a career-related decision than one with high-CDSE who looks at the same task as a challenge and willing to take action to accomplish the task.

The Career Decision Self-Efficacy-Short Form (CDSE-SF) has been the valid, reliable instrument of choice for identifying and predicting one's confidence level for making career-related decisions. Studies, as provided in this literature review, have been conducted that reveal one's CDSE can be impacted by a single career intervention. In some cases, career interventions have been known to have an immediate impact on one's CDSE. In support of the research in this study, it was decided to use the CDSE-SF to better understand the effects the ASVAB CEP has on high school participant's confidence with making career-related decisions.

Chapter III: Methodology

High schools are pressured more and more to see their graduates best prepared for making the transition from high school into a postsecondary education and training setting to enter directly into the workforce (Stone & Lewis, 2012). To accomplish this, schools must provide students with career-related information and opportunities to explore their post-high school options prior to their high school graduation. Grubb (2002) indicated that schools depend on various programs and career guidance activities for graduates to acquire the information necessary to make career-related decisions. However, having the right mix or amount of information and guidance remains undetermined.

The purpose of this study was to better understand the effects the ASVAB CEP has on 10th, 11th or 12th grade high school students' confidence in making career-related decisions following participation in the program.

The following questions were the basis for this study:

1. What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program?
2. What additional career-related activities may be affecting student participants' confidence in making career decisions?
3. What are educator's perceptions of the affects the ASVAB CEP has on students who participate in the ASVAB CEP?

This chapter describes the research methodology selected for this study, subject selection and description, selection of the sample, instrumentation and data collection, procedures to conduct and analyze the data, and limitations.

Research Methodology

The research questions in this study outlined the direction of the research that was conducted. A quasi-experimental, mixed-methods approach was used. Mixed-method studies are appropriate when a combination of quantitative and qualitative data is present (Creswell & Guetterman, 2019) and it was key to gain maximum discovery possibilities for this particular study. This study consisted of pre-test/post-test design, use of a researcher developed survey, and focus groups. In essence, having both quantitative and qualitative approaches, the researcher hoped to discover a more in-depth understanding of the outcomes of this study.

This researcher took a post-positivistic point of view throughout the study because theoretically, it is in alignment with the concept of using multiple methods of gathering data (Panhwar, Ansari, & Shah, 2017). The quasi-experimental design was most appropriate due to the nature of the group assignment in this study (Creswell & Guetterman, 2019). Student participants were not randomly assigned. Rather they participated as a result of their school being randomly selected and agreeing to participate in this study, their grade level, and in one instance, participants were mandated by their school to participate as a part of their school's requirements. There were, however, volunteers solicited by each school from the pool of students that participated in the ASVAB CEP in their school during the previous school year.

Subject Selection and Description

The high schools considered for the purpose of this study met basic ASVAB CEP and researcher eligibility requirements. The eligibility requirements were: (1) each private and public high school had to be scheduled to participate in the ASVAB CEP during the 2nd half of the 2018/2019 school year with eligible 10th, 11th and 12th grade students; (2) each school considered for participation in this study had to forecast a minimum of 20 eligible students, e.g., 10th, 11th or

12th grades, to participate; (3) each school had to have a minimum of 20 students in the 10th, 11th or 12th grade levels, scheduled to participate in the program during the 2017/2018 school year; and (4) this researcher wanted to have at least one of the research schools require their students to participate and at least one school where the school encourages student participation. To meet the research criteria, a minimum of three schools were selected. Upon the randomized selection of the schools, this researcher made contact with each school official(s) responsible for the ASVAB CEP in their school. Upon the school officials agreeing to have their school as a part of this study, communications began regarding acquiring consent from parents and students. Consent letters were created and approved by the University of Wisconsin-Stout's IRB. The researcher shared the consent forms with each of the schools and each school agreed to notify parents and students that the research had been authorized.

Population and Sample

A stratified/simple randomized sampling process was used to select the predetermined number of schools for this study. This allowed all eligible schools a fair and equal chance of being selected to participate in this study (Creswell & Guetterman, 2019). Each school that met the four eligibility requirements was assigned a number and categorized as urban, suburban or rural. Schools on the selection list were color coded to indicate whether they required their students to participate in the ASVAB CEP or encourage students to participate voluntarily. Three schools were selected and identified as School A (Urban), School B (Rural) and School C (Suburban). School A required their 10th graders to participate in the ASVAB CEP and Schools B and C encouraged participation in the program to all eligible students, e.g., 10th, 11th and 12th grade students. Lastly, the schools selected scheduled a minimum of 20 students who participated during the previous school year.

Instrumentation

Three tools were used to gather data.

Career Decision Self-efficacy – Short Form. The main purpose of this study was to determine if the ASVAB CEP had an effect on students' confidence with making career-related decisions, therefore, the Career Decision Self-efficacy–Short Form (CDSE-SF) was used. All students in the study were invited to participate in taking the CDSE-SF. Group 1 students were administered the CDSE-SF prior to and after participating in the ASVAB CEP (pre/post-test). Group 2 students completed the CDSE-SF prior to completing the student survey and participating in the focus group. The 25 question, CDSE-SF is a shortened version of the original 50 question CDSE instrument first designed and implemented by Taylor and Betz (1983). The short form, like the original version, measures one's perceptions of their confidence to make educational and vocational decisions (Reddan, 2015). As the literature illustrates, the CDSE-SF is one of the most frequent, reliable and valid instruments used to determine the degree of confidence one has in themselves to identify resources and potential constraints for making career-related decisions (Reddan, 2015). There are five subscales used in the CDSE-SF which were a part of Crites' theory of career maturity. They are: (1) self-appraisal, (2) gathering occupational information, (3) goal selection, (4) planning and (5) problem-solving. The instrument has 5, Likert-type items for each sub-scale to be answered on a 5-level confidence continuum – 1 being 'no confidence at all' to 5 referring to 'complete confidence' (Betz, Hammond, & Milton, 2005). There are 5 questions for each subscale. The CDSE-SF can be administered in paper or electronic format. For the purposes of this study, the means of administering the CDSE-SF online was arranged by the researcher through a company called Mind Garden Inc., located in Menlo Park, CA. It was confirmed with the University of

Wisconsin-Stout's Applied Research Center that Mind Garden Inc. was a legitimate psychological assessment tool supplier.

Student and educator participant surveys. Two surveys were used to gather the students' and educators' perceptions of the ASVAB CEP. The University of Wisconsin-Stout's survey tool, called Qualtrics, was used for the purpose of creating and collecting data for both surveys. Due to the program-specific information being gathered, both surveys were developed by the researcher and required review/approval for use through the National ASVAB Career Exploration Director. Following a couple of minor edits, the surveys were approved by the National ASVAB CEP Director for use in this study. The student survey (Appendix B) was used to gather data from Group 2 students in the study. The educator survey (Appendix C) was used to gather data from high school educators employed by the participating schools in this study. Both surveys were designed to gather perceptions regarding attitudes, opinions and beliefs in relation to the ASVAB CEP and other career-related activities in their school. Both surveys used a Likert-type scale for ease of completion and to maintain anonymity of respondents (Creswell & Guetterman, 2019). Questions found in both surveys were answered on a 4-level agreement continuum – 1 being 'strongly disagree' to 4, referring to 'strongly agree'. In addition, there were two open-ended questions in the educator survey.

Focus group script. Lastly, Group 2 students were asked to participate in a focus group immediately following completion of the CDSE-SF and student survey to share and discuss career-related activities they participated in over the past year. The researcher created and used a script for the purpose of guiding the discussion with each focus group (Appendix F).

Data Collection Procedures

This section describes procedures followed for collective data in the study.

Prior to administration of the ASVAB Test: Group 1 students (pre-test). After receiving all necessary approvals, e.g., university IRB, selected school district agreements, and parental consents, times and locations were arranged to administer the CDSE-SF (pre-test) to Group 1 students prior to administration of the ASVAB test. Group 1 students were comprised of students to be administered the ASVAB CEP and CDSE-SF (pre-test). In Schools A and B, Group 1 students were scheduled to be administered the CDSE-SF (pre-test) the day before administration of the ASVAB test. In School C, Group 1 students were scheduled to be administered the CDSE-SF (pre-test) on the same day as the ASVAB test. Each school provided a conducive testing environment for this researcher to administer the CDSE-SF in compliance with the CDSE-SF administrator's manual. Prior to administration of the CDSE-SF (pre-test), this researcher explained in detail to the participants what to expect as both a study subject and ASVAB CEP participant, and read the consent letter approved by the University's IRB and their school district. The researcher answered all applicable questions and provided clarification as needed. In each school, students used their cell phone or Chromebook to complete the CDSE-SF (pre-test). Students were emailed a link to the CDSE-SF for completion. Students were asked to provide their name, email, gender, and age. Students were reminded that all data was strictly confidential per outlined in the IRB, school district agreements and parental consents.

Administration of CDSE-SF, student survey and focus group: Group 2 students. Group 2 students for each school were comprised of students that participated in the ASVAB CEP during the previous school year. School A, B and C, Group 2 students were scheduled to visit with the researcher for 60 minutes. Each school provided a conducive and appropriate environment to meet with Group 2 students. Prior to administration of the CDSE-SF and student survey, students were advised that their participation was strictly voluntary and at any time, they

could discontinue participation in the study. The researcher read the student consent letter approved by the University's IRB and school district. On a device of the students' choice, students were sent a link via email to take the CDSE-SF and the student survey. First, the researcher walked the students through the log-in process to complete the CDSE-SF. Like Group 1 students, Group 2 students provided their name, email, age and gender for the CDSE-SF. Following completion of the CDSE-SF, the researcher prepared the students for completing the electronic student survey (Appendix B). For the student survey, students provided their gender, grade level, and race/ethnic origin. Prior to starting the student survey, students were reminded that this activity was voluntary and anonymous. Completing the CDSE-SF and student survey took 30 minutes or less. Following the successful completion of the CDSE-SF and student survey, students were invited to stay and participate in the focus group. The researcher explained that it wasn't necessary for all students to participate in the focus group and if any students had somewhere else to be, they could go. The purpose of each focus group was to further discuss student's ASVAB CEP experience and to discuss other career-related activities. In School B and School C, the focus groups were voice-recorded with prior consent. In School A, it was determined by the researcher that one of the four students in the focus group was not comfortable with voices being recorded. Therefore, without hesitation, the researcher converted to taking notes of the discussion only. Prior to each focus groups' discussion, students were reminded that their participation was strictly voluntary, and they could discontinue participation at any time. The length of the discussions ranged from 16 to 19 minutes.

During administration of the ASVAB test. The data collected for ASVAB testing purposes was: (1) Last name, (2) First name, (3) School information, (4) Date of birth, (5) Gender, (6) School code, (7) Test version, (8) Test booklet #, and (9) Career intentions. Race and

ethnicity were optional for students to complete. The ASVAB Test Administrator collected the data by instructing students to complete the appropriate blocks on the ASVAB Answer Sheet they were provided or to fill in the digital text spaces in the computer for those that took the digital version of the ASVAB test. Upon completion, the information the students provided was checked for completion and accuracy. If there was any missing data, the ASVAB Test Administrator worked with students as needed to ensure all portions were completed. Upon completion of the assessment, pages 1 and 2 were joined with page 3 of the ASVAB Answer Sheet at the end of the test and sent FEDEX to the ASVAB CEP office located in Minneapolis, in care of the Minneapolis Test Coordinator who scored each individual test upon arrival. Upon completion of scoring the assessments, two copies of the ASVAB Summary Score sheet (Appendix A) and an ASVAB Post-test information pamphlet were mailed to each school for each student that participated. Upon each school official receiving their students' ASVAB results, the school official held onto the student's results until the ASVAB Career Seminar. Arrangements were made between the researcher and school official for each school for the researcher to return, facilitate the ASVAB Career Seminar and administer the CDSE-SF (post-test). ASVAB testing results were not allowed to be used as a part of this study. However, race and ethnic information was approved for use per the National ASVAB CEP office. School officials and students that participated in the study were given full access to the test results for individual career planning and guidance.

After administration of the program (post-test) - Group 1 students. Within two weeks following the administration of the ASVAB test, arrangements were made to deliver the ASVAB Career Seminar and to administer the CDSE-SF (post-test) to Group 1 students. Initially, the intent was to administer the CDSE-SF (post-test) within two weeks of completing

the ASVAB Career Seminar. However, for the convenience of the school due to time restraints, the post-test administration took place immediately following the ASVAB Career Seminar in each school. The ASVAB Career Seminar consisted of returning to each of the schools to interpret students' ASVAB scores, completing the ASVAB CEP 'Find-Your-Interest' (FYI) interest inventory, facilitation of a career exploration activity and administration of the CDSE-SF (post-test) to all Group 1 students. The ASVAB Career Seminar took approximately 50 minutes to facilitate and administration of the CDSE-SF took 10 minutes or less. A total of 46 students (n=46) participated in the CDSE-SF pre-test and 34 students (n=34) successfully completed both the pre- and post-test for a 73.9% response rate.

Distribution of the educator survey. All educators had the possibility of being directly or indirectly impacted by students that participated in the ASVAB CEP. Therefore, all educators in each of the schools were invited to complete the educator survey. Staff directories with email addresses were obtained through each of the school's websites and used for this purpose. An invitation and link to the educator's survey was sent upon completion of the ASVAB Career Seminar and the CDSE-SF post-test in each of the schools (Appendix C). The purpose of the survey and instructions on how to complete the survey were provided in the email along with the researcher's contact information in the event there were any issues with the survey or questions. By beginning the survey, the educators consented to completing the survey and were informed that the information they provided was totally anonymous. A reminder to encourage educators to complete the survey was sent out two weeks and four weeks following the initial emailing of the invitation.

Data Analysis and Interpretation

As a result of using the online version of the CDSE-SF and creation of surveys through Qualtrics, results for each school were easily obtained by downloading the data. CDSE-SF data download from Mind Garden Inc. was in Excel format. Survey data was exported from Qualtrics in Microsoft Word and Excel for analysis. Files were saved and identified by their school designation, e.g., School A, School B or School C., and group number. Quantifiable data from all three schools were password secured and maintained in a locked office when the researcher wasn't present. Data was initially analyzed using Microsoft Excel and Word programs. While the data was in its original state, a review for missing data were identified and removed if not complete (Creswell & Guetterman, 2019). Data was not used unless the respondent successfully completed 90% or more of the instrument.

Qualitative data gathered during the focus group discussions were professionally transcribed and analyzed for each school. All names used in this study are pseudonyms in support of total anonymity. Voice-recordings were deleted after the researcher had the opportunity to listen to the recordings multiple times and each were successfully transcribed to the researcher's satisfaction. The researcher used a combination of generic and qualitative comparative analysis to derive to the four themes that linked all three focus groups together (Creswell & Guetterman, 2019). Initially, the researcher reviewed and analyzed results from each focus group individually and then together. Similarities and differences between the discussions were sought and there were several themes. The final analysis and reduction were documented in a thematic reduction map (see Appendix E). The favored computer program for conducting the analysis was Microsoft Office Excel and Word.

Paired sample and independent *t*-tests were used to compare Group 1 pre- and post-test data and Group 2 participants' CDSE-SF data respectively, with assistance from the University's Applied Research Center the researcher used the IBM Statistical Package for Social Sciences (SPSS) program for running the statistical tests for this study. It was appropriate to conduct the paired sample *t*-test to determine the statistical significance for Group 1 students because it was the same group of participants for both the pre- and post-test. To determine the statistical significance between the two different groups of participants, the independent sample *t*-test was most appropriate (Creswell & Guetterman, 2019).

Limitations

The first limitation of this study is the population sample. This research was based on a fraction of the total number of high schools that participated for the 2018/2019 school year. Approximately 60% of the schools that take advantage of the ASVAB CEP throughout the school year participated before the month of January, therefore, the sample of this study was limited to those few that were scheduled to participate during the time of year that the study was conducted. As a result, it would be difficult to have any generalization outside the Minneapolis ASVAB CEP area of responsibility.

The second limitation is not all data that was gathered was allowed to be a part of the study due to the school district(s) policy and the ASVAB CEP National Office's policy. An example of how this was a limitation is the aptitude test results, interest inventory results, and students career intentions were not accessible for use in this study. These variables could have played a role in learning more about one's confidence and aptitude levels in the topic's students were assessed. For instance, it may have been determined that students with a high aptitude in

reading comprehension are more confident about making career-related decisions compared to students with a lower aptitude in reading comprehension

Lastly, and most importantly, time was a limitation. Prior to and during the duration of this study, schools in the Minneapolis ASVAB CEP office area of responsibility had experienced unusual numbers of unexpected school closings due to weather. Therefore, schools that had students voluntarily sign-up to participate, may have been limited due to make-up days required by the students. All three research schools were impacted by the weather.

Chapter IV: Presentation of Findings

The Armed Services Vocational Aptitude Battery Career Exploration Program (ASVAB CEP) is one comprehensive career exploration program used annually by thousands of high schools. The program provides 10th, 11th and 12th grade level students with their current aptitudes, information about the world of work, occupational information, labor market insight and details on post-secondary options available for students to acquire the skills necessary to be successful no matter what the student's aspirations. Although the ASVAB CEP has demonstrated over the past 50 years its ability to deliver career-related information to high school aged students for making career-related decisions (Baker, 2002), little research is available to show how the program affects students' confidence or their ability to make career-related decisions. Research shows that one's career decision self-efficacy (CDSE), or having confidence in themselves, is a key factor when determining whether or not students have what it takes to make good career-related decisions (Allen & Bradley, 2014). Studies show that students found with a higher degree of CDSE have more confidence and believe they can take on the tasks associated with making career-related decisions better than students that have a lower degree of CDSE (Betz, 2004).

The purpose of this mixed-methods study was to gather data from current users of the ASVAB CEP to better understand what effects the ASVAB CEP may have on 10th, 11th and 12th grade high school students' confidence with making career-related decisions. The following questions were used as a basis for this study:

1. What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program?

2. What additional career-related activities may be affecting student participants' confidence in making career decisions?
3. What are educator's perceptions of the effects the ASVAB CEP has on students who participate in the ASVAB CEP?

Data for the research to answer the preceding research questions consisted of results from administering the Career Decision Self-Efficacy-Short Form (CDSE-SF), administration of surveys to both student and educator participants, and lastly, facilitation of multiple student focus groups which was comprised of students that participated in the ASVAB CEP during the previous school year. This chapter includes the demographics of the schools selected for this study, a summary of the quantitative and qualitative data collected and an analysis of the same data as it relates to the research questions in this study.

Demographics

The Minneapolis ASVAB CEP office is responsible for overseeing the administration of the ASVAB CEP in 509 private and public high schools located in both Wisconsin and Minnesota. Table 2 reflects the racial and ethnic backgrounds for (1) each of the schools included in the research study and (2) the sample of students in this study. Demographic data was gathered using the Minnesota Department of Education (2019) website and the Department of Public Instruction (DPI) Wise Dash resource (WI DPI, n.d.b). The sample of research participants from each school appears to be representative of their school's total population. School A, an urban school, had 24% fewer White and 26% more Black or African American students than the average Minnesota high school. School C, a suburban school, closely resembled the diversity found in the average high school in the state of Minnesota with only a few percentage points difference for each race or ethnic origin listed. School C was also the

largest of the three schools in the study with over 2600 students. Lastly, although School B's research sample resembled the school's overall population, School B has 23% more White students than the average Wisconsin high school and had minimal diversity in its overall school population.

Table 2

School Demographics in Schools and Research Sample (Race-Ethnicity)

	*School A (Urban)		** School B (Rural)		*School C (Suburb)	
	<u>Total</u>	<u>Sample</u>	<u>Total</u>	<u>Sample</u>	<u>Total</u>	<u>Sample</u>
Number of Students 9-12 Grade	70	(n=20)	220	(n=19)	2605	(n=27)
Race/Ethnicity						
Hispanic or Latino	13%	26%	2%	8%	13%	6%
American Indian or Alaska	1%	5%	1%	0%	1%	0%
Native Asian	6%	0%	2%	0%	12%	6%
Black or African-American	37%	21%	0.5%	0%	10%	6%
White	41%	53%	90%	92%	60%	69%
Two or more Races	1%	26%	1%	0%	4%	13%

Note. *Minnesota School. **Wisconsin School.

For a student to be eligible to participate in the ASVAB CEP, he or she had to be in the 10th, 11th or 12th grade. Table 3 represents demographics provided by all research participants including those who took the ASVAB last year as well as those that completed it during the current school year. The ages of the participants varied from 15-yr old students to 18-yr old students. The majority of participants were 16 to 17-yr old and in the 10th or 11th grades (Table 3).

Table 3

Demographics of Students in Study (Gender, Age, Grade Level)

		School A	School B	School C	%	
Gender	Male	9	10	14	50%	
	Female	11	9	13	50%	
Age	15yrs	4	0	3	11%	
	16yrs	12	9	12	50%	
	17yrs	4	6	10	30%	
	18yrs	0	4	2	9%	
		10 th	16	5	9	45%
Grade Level		11 th	4	8	16	42%
		12 th	0	6	2	12%

Research Question 1

The data was collected to answer research question 1: *What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program?* The first source was the outcome of administering the Career Decision Self-Efficacy-Short Form (CDSE-SF) to Group 1 students *before* participating in the ASVAB CEP (pre-test) and the results of administering the CDSE-SF to the same students *after* they participated in the program (post-test). The second source was the student survey administered to Group 2 students. In the survey, there was multiple questions that specifically asked students about their perceptions of their confidence about making career-related decisions.

Analysis of group 1. Group 1 students was comprised of students that were scheduled to participate in the ASVAB CEP during the time of this study. Of the 46 students that successfully completed the CDSE-SF pre-test, 34 or 74%, returned to complete the post-test (Table 4). There

were more females (53%) than males (47%) and 88% of the students were either 16 or 17-yr of age. Lastly, all students in Group 1 were either 10th or 11th grade students.

Table 4

Group 1 Student Participants that Completed Both Pre- and Post-Test (n=34)

		School A	School B	School C	%
Gender	Male	4	6	6	47%
	Female	6	5	7	53%
	Total	10	11	13	
Age	15yrs	1	0	3	11%
	16yrs	7	6	8	62%
	17yrs	2	5	2	26%
	18yrs	0	0	0	0%
	Total	10	11	13	
Grade Level	10 th	10	5	7	64.7%
	11 th	0	6	6	35.2%
	12 th	0	0	0	0%
	Total	10	11	13	

Group 1 students were asked to complete the CDSE-SF prior to participation in the program (pre-test) and again upon completion (post-test). The CDSE-SF provided sub-scale scores for each of the 5 career competencies: 1) accurate self-appraisal; 2) gathering occupational information; 3) goal selection; 4) making plans for the future; and 5) problem solving (Betz & Taylor, 1983). In addition, the instrument provided a total CDSE score which is a cumulative score of the responses from the 25 questions asked in the sub-scales, divided by the total number of questions. Averages for both sub-scale and total scores should range from *no confidence at all* (1) to *complete confidence* (5) (Betz, Hammond & Multan, 2005). Table 5

depicts the means for Group 1 by school. The lowest mean in the pre-test was located in three sub-scales: *Goal Selection*, *Planning*, and *Problem-Solving*, specifically in School A at 3.0. The highest mean found in the pre-test was in the sub-scale, *Gathering Occupational Information* and specifically in School C at 3.7. With the post-test, the lowest mean was found in the *Planning* sub-scale specifically in School B at 3.2 while the highest mean was found in the *Gathering Occupational Information* sub-scale specifically in School C at 4.1. Lastly, there was no change between the pre- and post-test means for School B in the *Gathering Occupational Information* and *Planning* competencies.

Table 5

Means for Career Decision Self-Efficacy – Group 1

Career Competency	School A (n=10) Means		School B (n=11) Means		School C (n=13) Means	
	<u>Pre-test</u>	<u>Post-test</u>	<u>Pre-test</u>	<u>Post-test</u>	<u>Pre-test</u>	<u>Post-test</u>
Self-Appraisal	3.2	3.7	3.4	3.6	3.5	3.7
Gathering Occupational Information	3.4	3.7	3.7	3.7	3.7	4.1
Goal Selection	3.0	3.6	3.5	3.6	3.4	3.6
Planning	3.0	3.5	3.2	3.2	3.3	3.6
Problem Solving	3.0	3.4	3.2	3.3	3.2	3.6
Total Score	3.1	3.6	3.4	3.5	3.4	3.7

Note. Total subscale scores for the full scale are calculated by summing the response values of the 25 items and then dividing by 25. The total sum scores should be between 25 and 125.

Average scores for all scales should be between 1 & 5 (Betz & Taylor, 2012).

To determine if there was a statistically significant difference between the pre- and post-test means a paired sample, one-tailed *t*-test was calculated with a *p* value of less than .05 ($p < .05$). The results indicated statistical significance for all 5 CDSE-SF career competencies and the total CDSE score. Table 6 provides the results of the paired sample *t* test conducted on the means of the CDSE-SF subscales and total CDSE score for Group 1.

Table 6

Paired Sample t-test Results for Group 1 CDSE-SF Means (Pre- and Post-Test)

Sub-Scale / Total Score		M	n	SD	Std. Error Mean	<i>t</i> value	<i>df</i>	<i>p</i>
Self-Appraisal	Pre-test	3.38	34	0.653	.112	-2.542	33	0.016
	Post-test	3.65	34	0.591	.101			
Gathering Occupational Information	Pre-test	3.60	34	0.451	.077	-2.263	33	0.030
	Post-test	3.82	34	0.555	.095			
Goal Selection	Pre-test	3.28	34	0.741	.127	-2.513	33	0.017
	Post-test	3.57	34	0.661	.113			
Planning for the Future	Pre-test	3.17	34	0.569	.098	-3.180	33	0.003
	Post-test	3.46	34	0.594	.102			
Problem Solving	Pre-test	3.14	34	0.610	.105	-2.926	33	0.006
	Post-test	3.45	34	0.616	.106			
Total Score	Pre-test	3.31	34	0.465	.080	-3.672	33	0.001
	Post-test	3.59	34	0.465	.080			

Analysis of group 2. Group 2 students were comprised of students that participated in the ASVAB CEP during the previous school year (Table 7). The demographics of Group 2 students were similar to Group 1 students except the majority of students were either 17 or 18-yrs of age and they were either 11th or 12th grade students. Group 2 students were older and a higher-grade level than their Group 1 counterparts.

Table 7

Group 2 Participants

		School A	School B	School C	%
Gender	Male	0	3	6	45%
	Female	4	3	4	55%
	Total	4	6	10	
Age	15yrs	0	0	0	0%
	16yrs	2	0	2	20%
	17yrs	2	2	6	50%
	18yrs	0	4	2	30%
	Total	4	6	10	
	Grade Level	10th	0	0	0
	11th	4	0	6	50%
	12th	0	6	4	50%
	Total	4	6	10	

CDSE-SF results. In support of answering research question 1, Group 2 students consented to being administered the Career Decisions Self-Efficacy-Short Form (CDSE-SF) and completing the student survey. Table 8 provides the CDSE-SF means for Group 2 students that participated in the ASVAB CEP during the previous school year. Unlike Group 1 results, the lowest mean in Group 2 was found in the *Planning* sub-scale specifically in both Schools B and C at 3.0. Like Group 1, Group 2's highest mean was found in the *Gathering Occupational Information* sub-scale except it was located in School A at 4.0, not School C as in Group 1 (Table 8).

Table 8

Means for Career Decision Self-Efficacy Total and Subscale Scores for Group 2

Competency	School A (n=4) Mean	School B (n=6) Mean	School C (n=10) Mean
Self-Appraisal	3.7	3.4	3.5
Gathering Occupational Information	4.0	3.3	3.2
Goal Selection	3.5	3.3	3.3
Planning	3.9	3.0	3.0
Problem Solving	3.5	3.3	3.3
Total Score	3.7	3.3	3.2

Note. The career decision self-efficacy scale (Betz et al., 1996): no confidence =1, very little confidence= 2, moderate confidence = 3, much confidence = 4, complete confidence = 5.

The mean scores for all sub-scale and total scores were very similar to one another. On the CDSE Scale, on average, Group 2 students' mean scores reflected that the students either had *moderate confidence (3)* to *much confidence (4)* with the 5 career competencies and the total score. To learn if the differences between the two groups were statistically significant an independent *t* test was conducted using a $p < .05$ to determine significance. With the exception of the *Gathering Occupational Information* competency, there was no statistical significance found between the means of Group 1 and Group 2 (Table 9).

Table 9

Independent t-test on Groups 1 and 2 CDSE-SF Mean Scores

Competencies	Group	n	Mean	SD	Std. Error Mean	t value	df	p																																																																		
Self-Appraisal	Group 1	34	3.65	.59096	.10135	0.781	52	0.43																																																																		
	Group 2	20	3.50	.78539	.17562				Gathering Occupational Information	Group 1	34	3.83	.55516	.09521	2.298	52	0.05*	Group 2	20	3.38	.88472	.19783	Goal Selection	Group 1	34	3.57	.66082	.11333	1.265	52	0.212	Group 2	20	3.31	.83974	.18777	Planning	Group 1	34	3.46	.59436	.10193	1.235	52	0.278	Group 2	20	3.21	.92332	.20646	Problem Solving	Group 1	34	3.45	.61557	.10557	0.692	52	0.492	Group 2	20	3.32	.78244	.17496	Total Score (CDSE)	Group 1	34	3.59	.46511	.07977	1.595	52	0.168	Group 2
Gathering Occupational Information	Group 1	34	3.83	.55516	.09521	2.298	52	0.05*																																																																		
	Group 2	20	3.38	.88472	.19783				Goal Selection	Group 1	34	3.57	.66082	.11333	1.265	52	0.212	Group 2	20	3.31	.83974	.18777	Planning	Group 1	34	3.46	.59436	.10193	1.235	52	0.278	Group 2	20	3.21	.92332	.20646	Problem Solving	Group 1	34	3.45	.61557	.10557	0.692	52	0.492	Group 2	20	3.32	.78244	.17496	Total Score (CDSE)	Group 1	34	3.59	.46511	.07977	1.595	52	0.168	Group 2	20	3.33	.75470	.16876										
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	Group 2	20	3.31	.83974	.18777				Planning	Group 1	34	3.46	.59436	.10193	1.235	52	0.278	Group 2	20	3.21	.92332	.20646	Problem Solving	Group 1	34	3.45	.61557	.10557	0.692	52	0.492	Group 2	20	3.32	.78244	.17496	Total Score (CDSE)	Group 1	34	3.59	.46511	.07977	1.595	52	0.168	Group 2	20	3.33	.75470	.16876																								
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Total Score (CDSE)	Group 1	34	3.59	.46511	.07977	1.595	52	0.168																																																																		
	Group 2	20	3.33	.75470	.16876																																																																					

Note. *Statistically significant.

Student survey results. For the purpose of answering research question 1, Group 2 students were asked to respond to the student survey which specifically addressed student's perceptions about their confidence with making career-related decisions. Table 10 reflects how the majority of the respondents believed that the ASVAB CEP did have an impact on their confidence with making career-related decisions. According to their responses, respondents gave indication that the outcomes of having participated in the ASVAB CEP were beneficial. For instance, the majority have indicated that they had a great experience exploring post-secondary options; the majority perceive themselves as being better prepared to make career-related decisions; and the majority believed so strongly in the effects the program had on them 100% of the respondents (n=19) indicated they would recommend it to all of their peers (Table 10).

Table 10

Results of Student Survey Questions 1, 2, 3, 5, 6 & 7

Question	# of Respondents (n)	Strongly disagree %	Disagree %	Agree %	Strongly agree %
Q1. I am more confident in making career-related decisions after participating in ASVAB CEP	20	0%	20%	65%	15%
Q2. I am confident in saying that the ASVAB Career Exploration Program assisted me with exploring my post-secondary options after high school.	20	0%	15%	70%	15%
Q3. Over the past year, I used the ASVAB Career Exploration Program resources to acquire information for my career planning.	19	5%	63%	21%	11%
Q5. I would recommend to all my peers to participate in the ASVAB Career Exploration Program.	19	0%	0%	74%	26%
Q6. – I believe having participated in the ASVAB Career Exploration Program resulted in me making informed career-related decisions.	19	0%	26%	63%	11%
Q7. I believe having participated in the ASVAB CEP; I am better prepared to meet my future career aspirations.	19	0%	21%	74%	5%

The ASVAB Career Exploration Program is a comprehensive careers program, therefore, this researcher wanted to better understand which portion of the program resonated the most with the students. Table 11 depicts the responses to question 4 of the survey which presented many of

the features the ASVAB CEP has to offer. Results indicated that the majority of students favored *Details about each occupation* the most and the *Interest Inventory* the least.

Table 11

(Q4) I Found the Following Information Most Useful as a Result of Participating in the ASVAB CEP

N=20	Interest Inventory (%)	OCCU-Find (%)	Portfolio to consolidate Career-related information (%)	Details about each occupation of interest (%)	Details about colleges and other post-secondary choices (%)	Details about the military (%)	Details about the labor market (%)	Other: (%)
	(0%)	(3%)	(17%)	(34%)	(23%)	(14%)	(3%)	(6%) *

Note. *Other included 2 comments: (1) "Finding out what matches my skills and interests, there were a lot of different options" (2) "Almost everything"

Research Question 2

The data collected to answer research question 2 came from both quantitative and qualitative data. Research question 2 read: *What additional career-related activities may be affecting student participants' confidence in making career decisions?* The data was collected through multiple focus groups and the student survey, respectively. Both research approaches were equally important for this study.

Focus group results. The researcher chose to conduct focus group interviews in each of the selected high schools as a means to gather richer detail and students' perceptions regarding career-related decision making. Information that one cannot obtain from individual interviews, observations or through use of survey methodology may be captured during a semi-structured or structured focus group (Creswell & Guetterman, 2019). As a result of the focus groups, the researcher identified, coded and analyzed professionally transcribed conversations that were

representative of all three focus group discussions. The final outcome of the analysis resulted into 4 themes: (1) family (2) course options and relevance (3) outside influencers and experiences and (4) the ASVAB CEP as a useful tool. This is illustrated in the thematic reduction map found in Appendix G. Results are provided here and any names used are pseudonyms to maintain total anonymity of the participants.

Family. The researcher began by prompting the discussion with the question, “*Who do you believe has been your biggest supporter through your career planning journey over the past year?*” Overall, family, primarily Mom and Dad, dominated the responses given by all students in each of the schools. Whether it was assistance they received by the parent(s) with doing homework or what their parent(s) did for a living, the parents stood out as the biggest supporter in the majority of the students’ decision-making process. Marsha for instance, a senior student in her school, shared, “I would say my parents were the biggest supporters. My Dad is in the military...I grew up with it, so I knew what it was about.” She went on to tell us that although she told her parents, “*No, I’m not going into the Navy,*” Marsha actually made the decision to join the United States Navy. She wanted to give her parents credit for their support, however, Marsha also wanted us to know that the decision was hers and not her parent’s. She owned it.

Most of the students in Marsha’s group concurred with her that their parents made large contributions to their career decision-making process. Other students shared how their siblings and extended family were their biggest supporters. Mary for instance, a junior in her high school, said, “I think most of it [support] comes from my older sister because she went to college for like a year, and then decided that she didn’t like it that much. And then, she dropped out of it, and then a few years later, she went back for something completely different.” She went on to explain that as a result of her sister’s personal experiences, Mary didn’t feel the same pressure

from her parents like her sister did when she was her age. Mary claimed her parents seemed to listen more and actually respected and understood where she was coming from. Her sister's opinion and experiences played a major role in Mary's career-related decision-making process. Another student Jane, a senior about to graduate from high school said, "My grandparents did a lot for me." Jane was one of two students that felt their grandmother and/or grandfather were their biggest supporters implying that grandparents are taking on a larger role in their grandchild's planning. Steve, a senior soon to graduate, indicated his parents were big supporters, however, it was his brother he turned to the most. He said, "My biggest supporter has been my Mom and Dad and mostly my brother because he's the sibling I talk to most often." Sue a junior in her school, said, "My mom and cousin were most influential for me."

Outside influences and experiences. It was evident that family, e.g. mom, dad, grandparents, siblings and even cousins, were big supporters for the student in making their career-related decisions. However, when the researcher prompted the students with the question, "*Who or what do you believe has been most influential making career-related decisions?*", students began to share their experiences that seemed to have an impact on them making career-related decisions. Mike for instance, believes he was most inspired by observing his brother's military graduation. He said, "Mine [most influential event] probably would have been seeing my brother graduate from Marine boot camp. I just thought that was something." He went on to say, "being around it all, I thought that's what I wanted to do with my life." It influenced Mike enough that he too, like his brother, enlisted in the Marines. Another student named Joe, who is also a senior, felt similar to what Mike did with his experience at his brother's military graduation. Joe described his experience when he come across an old friend he hadn't seen for years and is now a police officer. He said, "...seeing a long-lost friend I haven't seen in years

being on the police force.” He excitedly expressed, “Oh wow that’s cool!” Through Joe’s enthusiasm, it was evident that this one experience seeing his old friend as a successful police officer had a positive effect on him so much that Joe is now considering law enforcement as a potential career. Marsha, the young lady who enlisted in the Navy, shared how her experience talking to a military counselor after she made the decision to join the navy had a big impact on her making the decision on what to do in the navy. She expressed how she was limiting herself to specific career fields when she was choosing her vocation while enlisting in the navy. That all changed when she spoke to a military counselor. Marsha said, “The counselor was telling me about all these jobs that I could do and all that I qualified for. And I qualified for a few of engineering, a bunch of intelligence [jobs] and I picked a few that sounded interesting to me, and as he described them, I was like, *‘I never thought of that before’*. So, I was like, *‘I’m going to try it.’*” It was clear that Marsha’s military counselor gave her insight on vocational options she never thought of before this moment. Lastly, another student named Lisa, said it was a trip to the actual university that made a difference for her. She explained how she was going through the process of choosing a college and having a difficult time with making a decision. She said that all changed once she took a trip to visit the one school, she was thinking about attending. After she arrived on campus and took the tour offered by the university, she knew right then that this was the school for her. This one experience helped her with making a final decision about her choice of a post-secondary option and has been looking forward to going off to college ever since.

Course options and relevance. To hear more about what the students’ schools are doing to assist them with the experiences necessary to make good decisions, the researcher prompted students with the question, “*If there was one thing your school could do differently with supporting your career planning needs, what would it be?*”

Sandy, a senior student said, “I think that we should have more classes to help us with being on our own, for balancing checkbooks and stuff like ... I mean we go to these assemblies, [offered by the school] but we forget it right after we go there.” Like Sandy, other students felt the need for more practical, hands on programs would be supportive of getting better prepared for making career-related decisions. For instance, Eric, a soon to graduate senior, implied that more practical classes could be taught. He said, “Basic life skills. A class that might go over ... very basic stuff, like how to do my taxes, or even when I have a job, certain other skills in regards to that, I guess.” Eric went on to say how it would be nice to see classes that are more relevant to real world applications. He said, “I bet you could [make classes more real like], with a lot of different classes...Some things that come to mind, for example, I'm more focused on the sciences...like what you would use in the real world, if say, physics, a little bit focused or moving towards engineering...focus on different kinds of critical thinking skills, of sorts.” Mike, another student shared how he felt how his high school should show more support for all options beyond high school and for all students. He said, “They [high school] could push certain things more for kids...like they don't push joining the military a lot. I mean they do some stuff for college too, but I don't think they push that kind of stuff for everyone.” One student, Mark, suggested that their school could have better money management practices to ensure they can fund the classes that gives students the hands on learning they need and learn best at. Mark said, “I think our school mismanages their money. Lots of times teachers are buying colored pencils and things like that and our school bought like a bunch of new doorknobs and stupid stuff this year.” Mark went on to say, “The last few years I've seen with the automotive shop and then the wood shop has been getting less and less hands-on and more paper stuff. I don't agree with that 'cause I'm more of a

hands-on learner.” Along with Mark, other students agreed that practical, hands on learning were slowly diminishing in their schools.

Up to this point in the discussions, students shared what their schools could be doing to assist them with making career-related decisions. There were, however, some students that felt compelled to share what their schools were doing right for them. For instance, Eric shared how his school brought in guest speakers to share information about different careers and how some could be inspiring. Eric said, “A speech, by somebody from a business college, which I loved...he [guest speaker] was giving a speech, basically on everything there is about getting a job: writing a cover letter, a resume, what to do with interviews, and how to dress up for them, even when you have the job.” Martha, a sophomore in her high school, was pleased share how her high school encouraged students to consider the Post-Secondary Education Option (PSEO) program in her school. She explained how her friend experienced education outside her school through the PSEO program and how it had an influence on her decision to be a part of the same thing next year. She said, “Well, I don’t have a plan for after high school, but for my senior year, I’m going to PSEO...” In one of the groups, Sue, Cary and Hannah shared how their school offered daily advisory periods and an annual field trip for the juniors and seniors. Sue talked about how in addition to the field trip overseas, her school assisted her with getting a part-time job which helped her so much with some of the career-related decisions she had to make. She sounded grateful for her school to make these options and other activities available for herself and her peers. Sue and Cary shared how some days in their classes, no matter what the subject, all their teachers talked about are careers and their future beyond high school. Students continued to share the different options their schools provided their students. Misty for example, shared how her school offered many elective classes which gave her opportunities to explore different

career options. As a result of taking some business classes and how much she enjoyed learning to speak German, she was currently considering a career in international business or politics.

Benefits of ASVAB for all students. Lastly, the researcher prompted students to specifically talk about their experiences with the ASVAB CEP since participating in the program. The researcher referenced how it had been approximately 1 year since students participated in the program and then asked, “*Did you find this resource useful? Did you go back to it after your ASVAB Career Seminar?*” Several of the students were able to recall something about the program. Misty for instance said, “I loved it. I loved the website because it tied in what I scored well on [ASVAB results], plus the survey I took to figure out our interests, and combining the two to say what you'd be skilled at, but also probably enjoy. That was really nice for me, because it had so many options! A lot more than any other test I've ever taken.” Misty carried on by saying, “And I thought it was just really nice, because I had no idea what I wanted to do. So, having it narrowed down to options that I didn't even know existed, it was... I liked it a lot.” It was evident that Misty enjoyed how the program seemed to tailor her choices based on her interest and ASVAB results. This gave indication that the ASVAB CEP had a positive effect on her. Marsha stated, “I'd recommend everyone to take the test. Even if they know what they want to do because it would reaffirm that's what they should be doing, or it will give you more ideas [options].” Misty agreed with Marsha but also said, “I think it's also important for people to know it's not only for a military score. Because I didn't have interest in the military, and I still am very happy that I took the test, because it helped me in other ways besides that, and I don't know if...I feel like not a lot of people know about the ASVAB, or what it really is. I think people should be taking it because it's good.” Other students agreed with Misty but there was

one student that claimed she didn't get much time with the program after the initial visit and there were three students that claimed they never got their results from their school.

The rich personal details shared in these groups allowed this researcher to bring out themes and sub-themes that brought all three groups into one. A map of the thematic reduction is provided in Appendix G. Although demographically and geographically distant from one another, all three groups provided information very similar to each other. It was clear that in addition to the ASVAB Career Exploration Program being a useful tool for most students, their families, outside influences and career-related experiences, their high schools and other options available were key and continued to be important to each of them with gaining the confidence necessary to make career-related decisions.

Student survey results. Like the data collected from the three focus groups, the student survey played an important role in answering Research Question 2 regarding career-related activities in addition to ASVAB CEP. In question 8 (Q8) on the survey, students were asked about other career-related programs, including the ASVAB CEP and the frequency of returning to these programs over the past year. For programs that were applicable to the students, they could indicate whether they went back to use the program Never, One-time, or Multiple-times. The program most often visited at least one-time was the ASVAB CEP at 58%, followed by the ACT with Writing at 39%. Only 24% of ACT Aspire and Career Cruising (Xello) users returned to these programs one-time while, 59% of the respondents never returned to the Minnesota CAREERwise or Minnesota GPS programs for career planning over the past school year (Table 12).

Table 12

Results from Question 8: “I Used the Following Programs to Assist Me With My Career

Planning Over the Past Year”

Programs available to High School Students	(n)	Never	One-time	Multiple-times	Not Applicable
ACT Aspire	17	47%	24%	25%	6%
ACT WorkKeys	17	47%	35%	12%	6%
ACT with Writing	18	39%	39%	17%	6%
ASVAB Career Exploration Program	19	11%	58%	26%	5%
Minnesota Career Information System (MCIS)	17	35%	35%	12%	18%
Career Cruising (Xello)	17	53%	24%	18%	6%
MN CAREERwise	17	59%	29%	0%	12%
MN GPS	17	59%	29%	0%	12%
Academic Career Planning (ACP)	17	41%	24%	29%	6%

Research Question 3

To answer research question 3 which read, *what are educators’ perceptions of the effects the ASVAB CEP has on students who participate in the ASVAB CEP?* Data was collected directly from the educators in each of the randomly selected schools via a survey. The purpose of the survey was to get a better understanding of the educator’s perceptions of the effects the ASVAB CEP had on their students. Of the 180 surveys sent out, 50 surveys returned, however, four of the surveys had less than 10% of the survey completed and were excluded from the study. There was a total of 46 useable surveys which resulted in a 26% response rate (Table 13).

Table 13

Educator Demographics (n=46)

	School A	School B	School C	Total
Gender				
Male	8	5	7	20
Female	3	1	16	20
Non-Binary	3	0	0	3
No Response				3
			Total:	46
Years of Service with District				
1-5yrs	5	2	13	20
6-10yrs	2	2	4	8
11-15yrs	5	0	2	7
15+	0	1	4	5
No Response				6
			Total:	46
*Subject(s) Taught/Position				
Math	5	1	4	10
Science	5	0	1	6
History	5	1	4	10
Social Science	2	1	0	3
English/Literature	2	0	0	2
Career & Tech Educ.	1	1	3	5
Family/Consumer/Bus.	2	0	1	3
Physical Educ./Coaching	0	0	0	0
Administration/Principal	0	0	0	0
School Counselor	4	0	3	7
Other	0	3	10	13

*Educators indicated what they currently or previously taught at one-time.

The first item on the survey educators were asked to respond to was “As an educator, I am actively involved with our students’ career planning process.” The majority of educators (89.13%) either agreed or strongly agreed with this statement. The remaining 10.87%, either disagreed or strongly disagreed with the statement.

To evaluate whether an educator observed the effects the ASVAB CEP had on a student, the researcher thought it would be important to see how much the educators actually knew about the program and its different components. Survey Question 2 (Q2) stated, “I am fully aware of what the ASVAB Career Exploration Program resources offers our students.” Among respondents, 71.74% (n=33) of the educators were familiar with the ASVAB test while only 15.22% (n=7) were familiar with the classroom activities (Figure 1).

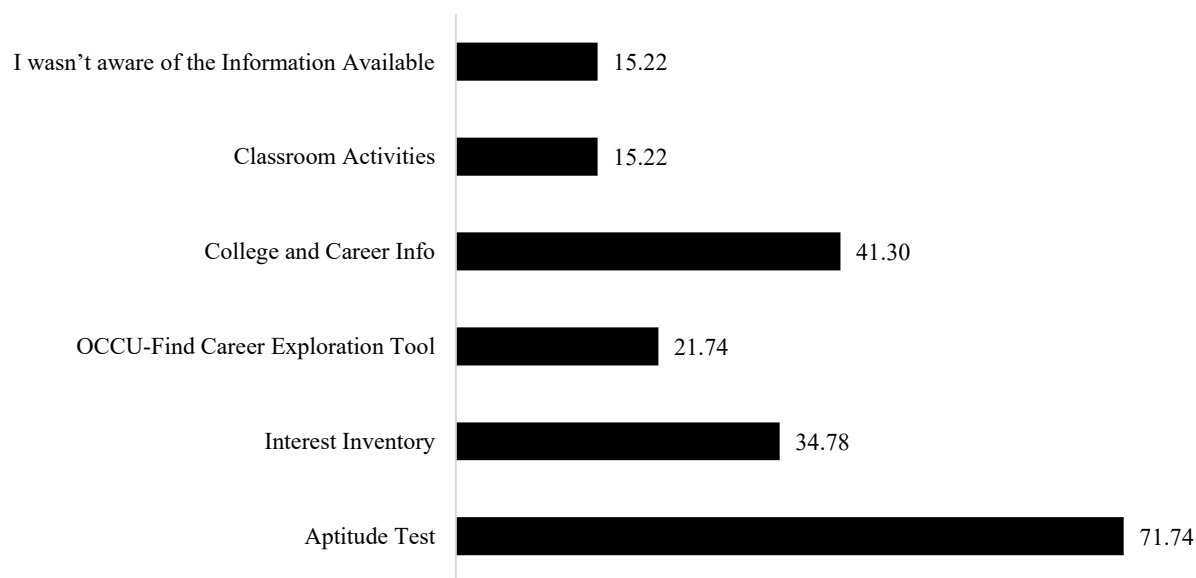


Figure 1. Educators’ familiarity with ASVAB CEP components. This figure displays the % of educators that were familiar with the various components of the program.

A key feature of the ASVAB CEP is its web resources. Students are directed to the web-resources during the ASVAB CEP Career Seminar, but, in addition to career-related resources

for students, there are career-related activities and resources available for all educators to use in the classroom. The responses from those that chose to respond to Question 3 (Q3), indicate that only a few educators actually knew about the resources available to them. The majority, 61.76% (n=21), of the respondents indicated they were not aware of the information available to them. Only 29.41% (n=10) of the educators indicated they were aware of one or more of any of the components and 8.82% (n=3) selected “other” however no comments were given (Figure 2).

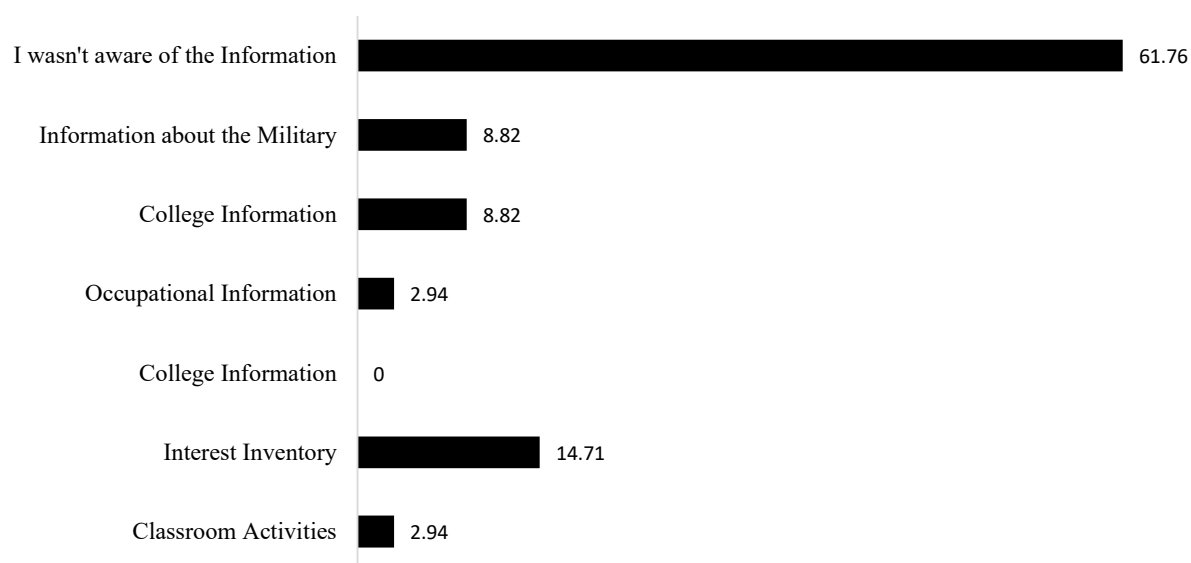


Figure 2. Educator’s awareness of ASVAB CEP resources. This displays the % of educators that were aware of the different resource the ASVAB CEP provides their students and educators.

When asked to indicate whether they used ASVAB Career Exploration Program material to facilitate career-related activities with their students, the majority, 70.95%, disagreed with this statement; while the remaining 29.05% claim to have used the ASVAB material in the classroom. Educators were asked to rate how well they perceived their high school in preparing students for post-secondary options. The rating scale was a 5-point Likert-type scale, with 1 meaning “*Not so much*” to 5 meaning “*Very much*”, as summarized in (Table 14). The results

indicated that the majority of educators (85.71%) in the high schools participating in the study believed they were preparing their students for *Attending a 4-yr college* more than any other post-secondary option. Their perception of which post-secondary option they are preparing their students for the least was the “*Enter the workforce*” option at 63.64% (n=11).

Table 14

Educators’ Perceptions of Preparation for Transition from High School

Post-Secondary Choice	n	Not so much				Very Much (5)
		(1)	(2)	(3)	(4)	
Enter the workforce.	11	63.64%	0.00%	0.00%	0.00%	36.36%
Attend a vocational /technical school/ college.	10	20.00%	10.00%	20.00%	10.00%	40.00%
Attend a 4-yr college or university.	7	14.29%	0.00%	0.00%	0.00%	85.71%
Join the U.S. Military.	5	60.00%	0.00%	0.00%	0.00%	40.00%
Enter an apprenticeship.	5	60.00%	20.00%	0.00%	0.00%	20.00%

Questions 6 and 7 on the educator’s survey both extended the opportunity for the educators to share information they perceived as important regarding the topic and wasn’t covered in the survey. Question 6 (Q6) asked for comments regarding the ASVAB Career Exploration Program and question 7 (Q7) asked for comments regarding their involvement with students with any career-related activities that would be beneficial. One educator made a comment which was in response to Q7 and indicated that they do college tours and discuss goals; but he/she expressed concerns that the student’s goals were not realistic and believed their students were not as prepared as they should be for after high school. Lastly, the educator

estimated that about half the students in their school would not make a desirable employee or student.

Chapter V: Discussion, Conclusions and Recommendations

As we continue to move into the 21st century, our nation's high schools are working diligently to see their graduates as prepared as possible for making a post-secondary choice or to go directly into the workforce. High schools are paying close attention to careers curriculum and developing comprehensive careers programs within their schools to get their students the career-related information they need to make good career-related decisions (Grubb, 2002). In addition to keeping up with academic standards, some states are requiring education systems to create or increase career development standards to better meet the expectations of post-secondary institutions and industry for a global economy (Stone & Lewis, 2012). In many high schools, they are embracing various comprehensive careers programs to assist them with their efforts. One program, called the Armed Services Vocational Aptitude Battery Career Exploration Program (ASVAB CEP), has been available to high schools at no cost, over the past 50 years seeing thousands of high schools and millions of students participate. It is unclear however, whether or not the ASVAB CEP has any effect on students' confidence for making commonly demanded career-related decisions.

The purpose of this mixed-methods study was to gain a better understanding of the effects the ASVAB CEP has an effect on 10th, 11th and 12th grade high school students' confidence in making career-related decisions. This study sought to answer three research questions which guided this mixed-methods study in its entirety:

1. What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program?
2. What additional career-related activities may be affecting student participants' confidence in making career decisions?

3. What are educator's perceptions of the effects the ASVAB CEP has on students who participate in the ASVAB CEP?

A mixed-methods research approach was used to answer the research questions in this study which was conducted in three high schools located in Northwest Wisconsin and Minnesota. The research consisted of a pre- and post-test design using the Career Decision Self-Efficacy-Short Form (CDSE-SF) for students participating in the ASVAB CEP during the research study (Group1). In addition, students that participated in the ASVAB CEP during the previous school year (Group 2) consented to complete the CDSE-SF, a survey and participate in a focus group. Lastly, a variety of educators in each of the research schools participated in the study by completing an anonymous survey.

This chapter provides a discussion of the findings of this study, conclusions, and recommendations for further research.

Discussion of Findings

The quantitative and qualitative data collected for this study provided the information necessary to gain a better understanding of the effects the ASVAB CEP had on students' confidence and provided insight for the three research questions.

Research question 1: What effect(s) does the ASVAB CEP have on a high school student's confidence with making career-related decisions after participating in the program? Data collected and analyzed revealed that an eligible student is likely to see an increase in their confidence or career decision self-efficacy as result of participating in the ASVAB CEP. The first indication of this finding was in the results of pre-and post-test results for Group 1 students and the second indication was the responses to the survey administered to Group 2 students. Both pre- and post-test measurements were made using the Career Decision

Self-Efficacy-Short Form (CDSE-SF), the instrument of choice to determine if there is a change in one's CDSE. The results indicated that Group 1 students' highest mean score was obtained on the *Gathering Occupational Information scale* ($M = 3.82$) while the lowest mean scores were obtained on the *Planning* ($M = 3.46$) and *Problem-Solving* ($M = 3.45$) scales. According to Taylor & Betz (2012) score interpretation of the mean scores, it is recommended that scales 3.5 or above (*moderate to high confidence*) be predictive of a willingness to approach or try the behavior in question, while scores between 2.5 to 3.5 be interpreted as *moderate confidence* suggesting that the individual (or group) may be comfortable exploring or may need some further guidance. Therefore, it is likely Group 1 could benefit from having additional assistance with the *Planning* and *Problem-Solving* competencies with hopes to increase their CDSE or gain confidence in attempting these skill sets while there should be little or no assistance required for Group 1 students to continue practicing *Gathering Occupational Information*.

Although there were differences in CDSE-SF mean scores between the pre- and post-test results, it wasn't until a paired sample *t* test was applied before realizing there was a statistically significant change in the students' CDSE scores. The paired sample *t* test results revealed that on average, the students CDSE scores increased in each of the 5 career competencies identified by the CDSE-SF and the total CDSE score. This indicated that students who participated in the ASVAB CEP saw an increase in their CDSE or confidence with making career-related decisions. These findings are consistent with other studies conducted where a career intervention was performed and an increase in one's confidence for making career-related decisions was determined immediately following the intervention. Cunningham and Smothers (2014) for instance, demonstrated how administering an interest inventory coupled with a facilitated advisory session to one group of students had a positive effect on the students CDSE compared

to students who were administered the interest inventory only. In addition, these results are consistent with Baker's (2002) study where the results of his career indecision scale (CDS) administered to students following participation in the ASVAB CEP indicated a reduction in career indecision.

The results of the survey administered to students in Group 2 indicated that the majority of students perceived themselves as having gained more confidence in making career-related decisions as a result of participating in the ASVAB CEP. This is consistent with the results obtained from Group 1 students and their CDSE-SF results. Questions 1, 2, and 3 on the survey were specific in asking the students about their personal beliefs and confidence in making career-related decisions over the past year since participating in the ASVAB CEP. The majority of students either agreed or strongly agreed in favor of the ASVAB CEP giving them more confidence exploring post-secondary and career options. However, the majority of students indicated that they did not go back to the ASVAB CEP resources over the past year. Students' responses to survey questions 5, 6, and 7 revealed that the majority of students believed that the program affected them in the following ways: (1) students believed they are making better informed decisions, (2) students believed they are better prepared to meet their future career aspirations and (3) students valued the program outcomes so much that 100% of the students would recommend all their peers participate in the ASVAB CEP.

Due to the ASVAB CEP being a comprehensive program, there was the possibility that students could perceive one component of the program having a greater impact on their confidence over another component in the program. Question 4 on the survey asked the students to identify the information most useful to them. Of the 8 options to choose from students indicated that they preferred learning details about each occupation of interest the most and the

interest inventory the least. This may suggest that students find it more important to learn as much as they can on details about occupations than taking the time to participate in the *Find Your Interest* inventory

Research question 2: What additional career-related activities may be affecting student participants' confidence in making career decisions? The data collected and analyzed to answer Research Question 2 was from Group 2 students through administering the CDSE-SF, student survey, and focus groups. The first data collected from Group 2 students was CDSE-SF results. The purpose of administering the CDSE-SF to Group 2 students was to learn how their CDSE compared to Group 1 who participated in the ASVAB CEP during the current school year. The CDSE-SF results indicated that the highest mean score for Group 2 students was obtained on the *Self-Appraisal scale* ($M = 3.50$) while the lowest mean scores, were obtained on the *Planning scale* ($M = 3.21$) and *Problem-Solving scale* ($M = 3.32$). The *Self-Appraisal scale* indicated Group 2 students had *moderate to high confidence*, meaning students may have a willingness to approach or try the behavior in question, whereas the *Planning scale* and *Problem-Solving scale* for Group 2 students indicated having *moderate confidence*. This suggests that although the students may be comfortable exploring these skill sets, students may need further guidance. Interestingly, Group 1 and Group 2 students CDSE sub-scale scores were consistent with one another on their lowest scores, e.g. *Planning* and *Problem-Solving Scales*, but their highest CDSE sub-scale scores differed, e.g. Group 1 was on the *Gathering Occupational Information scale* ($M = 3.82$) and Group 2 was on the *Self-Appraisal scale* ($M = 3.5$). To determine if the results between the two sets of data were statistically significant, an independent sample *t* test was used. The *t* test results indicated that the CDSE-SF results between Group 1 and Group 2 were not statistically significant except for the *Gathering Occupational Information* career

competency ($t(52) = 2.298, p < .05$). This is consistent with the student survey responses from Group 2 for question 4 (Q4) where students indicated that the portion of the program students favored most was *learning details about each occupation of interest*. The remaining CDSE results between the two groups, however, imply that career related activities that occurred during the year following Group 2's participation in the ASVAB CEP didn't have much of an impact on the students' overall CDSE. Through the focus groups, it was learned that students were actively making plans for their post-high school years and they perceived themselves as being impacted by different events, people in their lives and participating in school related activities. However, as their CDSE results reveal in this study, the activities had minimal effect, if any, on the students overall CDSE. The results imply that students receive a lot of information about career options, yet future career interventions or curriculum that emphasizes essential skills for planning one's future and problem-solving skills could be added to benefit students and potentially have a positive impact on their overall CDSE.

In addition to comparing CDSE results, Group 2 students were asked about their use of career related programs commonly administered in high schools across Minnesota and Wisconsin. Students indicated that following initial participation in a career related program, they rarely returned to the program for further research. The majority of students indicated that they never returned to the programs that were applicable to them for a second look or only returned one-time to the program over the past school year. These findings imply that although students have access to career resources made available to them, it doesn't mean they will be using them. This also gives indication that unless the career related activity is structured and led by someone to facilitate an activity, students are less likely to take full advantage of what the program(s) have to offer.

Lastly, the focus group outcomes revealed that participation in the ASVAB CEP was beneficial for students and many of them expressed taking full advantage of what the program had to offer. However, through the focus group discussions it was revealed that it wasn't really one program or another that influenced these students the most regarding their confidence in making good career-related decisions. Rather results revealed that there were several potential influencers or events that occurred in these student's lives that may have had an impact on their confidence for making career-related decisions. Following the thematic reduction, four major themes resonated with all three focus groups. The themes were: (1) families, (2) outside influencers and experiences, (3) course options and relevance, and (4) benefits of ASVAB CEP (Appendix E). First, the focus groups revealed that their parents continue to be a big influence on their career decision-making process. This is consistent with literature that supports the belief that parents have an important role when it comes to seeing their child make career-related decisions. Kracke (2002) for instance, says over-time, child-centered parenting is important for adolescents to reach a specific level of career maturity including making a career choice. It was clear that students accepted and valued their parents influence but students also shared that they valued their grandparents, siblings and other close extended family members such as their aunts and cousins who assisted them with their career-decision making process. This is consistent with the Social Cognitive Career Theory (SCCT) that a "variety of person, environmental and behavioral variables influence the career choice process" (Roger & Creed, 2011, p. 163).

The focus groups also revealed that outside influencers and experiences have had an impact on students' confidence in making career-related decisions. For instance, students shared how they benefitted from having part-time jobs, observing others' having success in their

careers, taking field trips abroad, and how taking a personal tour on a college campus were all experiences that impacted them in positive ways, leading them to think more about specific careers. This is consistent with Bandura's self-efficacy sources which includes vicarious experiences, meaning someone can gain confidence in themselves through observing others and are able to see themselves performing the same task and being successful at it (McKim & Velez, 2016).

It was also revealed that students recognized the need for certain courses as well as the need for relevant, real-world experiences to assist them with their career decision-making. Students shared how their schools provided valuable elective classes such as business, foreign language and technical education related classes that were relevant and giving them the practical experiences that they believed as being essential.

Lastly, students found programs offered by their schools such as school-to-work opportunities, daily advisories, post-secondary-education-options and bringing in guest speakers to share specific career-related information as being helpful. This is consistent with the Social Cognitive Career Theory which supports the idea that different career-related activity has a direct impact on students' confidence with making career-related decisions.

It was also revealed that some of the students perceived their schools falling short in ways that could jeopardize their experiences. For instance, students thought it would have been helpful to them if their schools would have offered more classes that provided real-world and practical experiences. Building skills such as doing their taxes, living on their own, managing credit cards and identifying the actual skills necessary in certain professions were suggested. Students revealed concern that some of the hands-on and practical classes are in place but are slowly diminishing or disappearing due to lack of funding or support from the school. Students

presented the importance of learning through means other than just more academics. This is consistent with researchers Stone and Lewis (2012) who suggested that one way to improve students' learning in the classroom was to teach the academics in a way that resembled how the same skills were applied in an occupation. They also emphasized the importance of identifying what skills are relevant for the workplace and encouraged educators to incorporate these skills in the classroom to assist with a successful transition into a post-secondary option or entering directly into today's workforce. Students in the current study who expressed their concerns for their learning environment is also consistent with the Social Cognitive Career Theory, which suggests that a student's perceptions and objectives of their learning environment can have a direct impact on their career decision making process (Tang, Pan, & Newmeyer, 2008). For example, if a student is interested in the trades and is surrounded by more academic classes being offered than career-oriented skills training, these students may perceive this as a barrier instead of a supporting measure on the school's part.

Lastly, students indicated that they perceived the ASVAB CEP as a valuable resource over the past year in support of making their career-related decisions. Students revealed that the program provided insight about themselves and the world of work, aligned their interest and skills with occupations, and gave them detailed information about all the different occupations. This is consistent with what ASVAB CEP claims to do for students by participating in the program (ASVAB CEP, 2019; Baker, 2002; Wall 1994). It was also revealed that some students believed that the ASVAB CEP gave them confirmation for decisions they have already made for themselves, which was important to the students to learn whether or not they were on track with their future plans.

Research question 3: What are educator's perceptions of the effects the ASVAB CEP has on students who participate in the ASVAB CEP? The intent of research question 3 was to address the educator's perspective on their students' participation in the ASVAB CEP. Overall, the study revealed that the majority of educators were familiar with the ASVAB aptitude test, however, there were only a few educators that were aware of the other components that make-up the complete program. Only a small number of educators were aware that the program offered college and career information and that one of the components of the program consisted of an interest inventory. Although 10.83% (n=46) found themselves not necessarily involved with their students' career planning process, nearly 90% perceived themselves as an active part of their students' career planning. The educators' perceived involvement with their student's career planning is consistent with literature that supports the concept that teachers play an important role in their students' career development. Gushue and Whitson (2006) for instance, demonstrated in an urban setting with African-American students that teachers who provide feedback and give students perspective on career-related topics can have a positive impact on the students' CDSE and outcome expectations.

When the educators in this study were asked to rate which post-secondary option beyond high school their school is preparing students for, the majority (85%) indicated they believed their school is preparing their students best for the students to attend a 4-yr college or university. Only a small percentage believed they were preparing their students for entering directly into the workforce, joining the military, attending a vocational/technical school, or entering an apprenticeship. This may imply that educators don't view the ASVAB CEP as a resource that assists students with meeting pre-college preparations, therefore, there has been minimal interest in the educators learning exactly what the ASVAB CEP is really all about.

Conclusions

There are four conclusions that can be made as a result of this study. First, it can be concluded that this study has demonstrated that students who participated in the ASVAB CEP saw an increase in their CDSE immediately following participation in the program. Differences between the pre-and post-test were found to be statistically significant with a high degree of confidence. This is consistent with research that shared how career interventions can enhance one's career self-efficacy, as in this case, career decision self-efficacy (Chiesa et. al, 2016). Second, it can be concluded that students who participated in the ASVAB CEP during the previous school year took limited advantage of the program's resources following the initial intervention with the program. The majority of the students indicated they only revisited the resources one-time in the last year. As the students' survey results indicated in this study, students not returning to a career resource following the initial intervention was not unique to the ASVAB CEP. The majority of students rarely, if at all, returned to any of the career related program resources they had access to for the past year. This suggests that students view career interventions as a one-time event rather than a resource that gives them continued support for further career planning activities. While there are immediate benefits from most career interventions, it is clear that students are not getting the message that career interventions are meant to be an on-going resource for gaining career-related information to assist them with making good, career-related decisions.

Second, the study gave indication that student successes or confidence with making career-related decisions wasn't any one program or event. Rather, it was a conglomerate of experiences that contributed to their perceptions of the confidence necessary to make career-related decisions. Students revealed that accepting support from family, observing successes of

others, taking classes that they saw as being relevant to their future, participating in programs offered through their school, having career-related conversation with counselors, teachers and peers, having a part-time job, and taking advantage of career-related activities and programs that their high school offered outside the classroom, have influenced their career-decision making. This is consistent with the Social Cognitive Career Theory which suggests that there are many variables that can affect one's perceptions of how something or someone can be a support or barrier for students establishing a plan to meet specific career objectives (Inda-Caro et al., 2016). In this study, the various variables were identified but were not further analyzed.

It can be concluded that schools are building their students' confidence in the *Self-Appraisal* and *Gathering Occupational Information* career competencies, however, data from this study suggests that students need assistance with using career information acquired from career interventions to make career-related decisions and to plan their futures. First, there were no statistically significant differences between Group 1 and Group 2 students' CDSE results except Group 1 who excelled with their confidence in the *Gathering Occupational Information* career competencies compared to Group 2. Group 2 students had greater confidence levels associated with their *Self-Appraisal* career competencies in comparison to Group 1 students. Second, when students were asked about returning to the ASVAB CEP results and other career interventions they participated in, the majority of students indicated that they returned to the resources only one-time or not at all over the past year. Therefore, the study suggests that schools are providing the resources necessary to assist students with making career-related decisions, however, schools are not following through with students to ensure they are applying the information acquired. The study suggests that schools need to: 1) place more emphasis on providing further guidance for students to acquire confidence with their *Planning, Problem-*

Solving and Goal Selection skills and 2) provide students with a better understanding of their career program results and demonstrate how the information learned may be applied to future career planning. For instance, if a student learns they have a high aptitude for working with mechanical things, rather than suggesting to the student to conduct more research on occupations requiring mechanical skills, encourage the student to enroll in a work-based learning environment or possibly in a CTE class where mechanical skills are prominent. Both would provide firsthand knowledge on mechanical skills but also allow opportunities for the student to practice using mechanical skills to solve problems. If the student discovers that mechanical skills are of interest, the student could plan to enroll in additional CTE classes to expand their knowledge and experience. This could then lead to the student researching career choices that require mechanical skills.

Finally, we can conclude that the majority of educators are aware of the ASVAB CEP being offered in their schools and are mostly familiar with the ASVAB aptitude assessment. However, they are not very familiar with all aspects of the program and what benefits the program offers students or them as educators. Educators' perceptions that their schools prepare students to pursue a 4-yr degree as a first choice, with the military, vocational/technical school, or entry into the workforce and apprenticeships as second or third choice could contribute to them being unfamiliar with the benefits of ASVAB for students other than those seeking a military pathway. In addition, educators may not feel comfortable discussing all post-secondary options outside a 4-yr degree with students because it was a 4-yr education that they themselves experienced. In order to have meaningful conversations with students related to career decisions, all educators should become familiar with the ASVAB program and the variety of career options and related education pathways available to all students.

Limitations of the Study

The research conducted in this study had limitations, which are summarized below:

- The sample of participants were limited to the Minnesota and Northwest Wisconsin public and private school districts, which may be unique to these two states or the midwestern region of the United States.
- The schools randomly selected were limited to schools currently scheduled to participate in the ASVAB CEP for the second half of the school year. Approximately 60% of all schools scheduled to participate do so during the first half of the school year.
- During the time of this study all three research schools were making up for time lost during school closures over the past winter. This may have limited the number of students wishing to participate.
- Students may be given a biased opinion from others, e.g. peer(s), parent(s), or teacher(s) about the ASVAB program so they choose not to participate or don't take participation in the program seriously.
- Students interested in the military as a post-secondary option may have invested more effort due to the ASVAB test being a high-stakes test for them versus someone signing up for career exploration purposes only.

Recommendations

It is imperative that our education systems make a commitment to ensure our students are given the information necessary to make good career-related decisions. Anytime our schools can afford students the opportunity to learn more about themselves, the world-of-work and discuss

their futures beyond the norm of secondary curriculum in our high schools, we should be doing it.

The first recommendation as a result of this study is to provide opportunities for increasing ASVAB Career Exploration Program (CEP) awareness to all stakeholders in each of the schools that participate each year. Stakeholders are comprised of the school board, administrators, school counselors, teachers, parents, but most importantly the students. Stakeholders should be afforded the opportunity to learn as much about the program as possible to ensure the program meets their specific need(s) to gain the full effects of what the program has to offer. To provide awareness, the ASVAB CEP Manager in the region could provide a short overview presentation during a school board meeting prior to administration of the program and shortly after students participate if desired. The School Board meetings typically include the Superintendent of schools and administrators such as the Principal and Assistant Principals in each school within a district. It's not uncommon for administration, faculty and parents being present from all grade-level schools at a board meeting which assists the efforts of achieving maximum program awareness. The ASVAB CEP Manager could ensure the Administration and School Counselors are aware of the program by educating them during the time the school and ASVAB CEP Manager are working out the logistics of the program for their school. Teachers could be provided literature during a staff meeting or provided a short presentation during a teachers' in-service close to the date of the program being administered in their school. The presentation would include (1) an introduction to program resources (2) explanation on how both students and staff will benefit, and (3) time for questions and answers. At a minimum, program literature that explains the benefits of the program for both staff and students could be placed in work distribution or sent via email, one to two weeks prior to administration. Staff should be

encouraged to talk to their students about the program before and after participation in the program. Teachers demonstrating awareness of the program is consistent with the Social Cognitive Career Theory which suggests every effort should be made to show they support the activity rather than the possibility of being perceived by students as a potential barrier (Inda-Caro et al., 2016). Parents would be provided literature about the program via email, social media, beginning of the year orientation, or parent/teacher conferences and encouraged to discuss the program and outcome expectations with their student(s). Lastly, parents could be provided updates on the program and reminded to discuss the program with their student before and after administration of the program. Parents should be directed to the ASVAB CEP website where they can learn more about the program, specifically, to learn more about their role as a parent and their student's career-related decision-making process. Finally, students should be provided program information at least one week prior to the program being administered which would allow time for students to obtain clarification regarding the program. Students must understand the objectives of the program and have clear outcome expectations. Student awareness of the program is not only essential, but it is consistent with modern theory which supports that students need to know and understand the objectives of what is to be learned for meaningful learning to take place (Inda-Caro et al., 2016). Finally, students should be directed to the ASVAB CEP website for additional details about the program.

The second recommendation would be to ensure that all career-related interventions such as the ASVAB CEP, be provided to students in a timely and professional manner. School's that participate in the ASVAB CEP have their student's ASVAB test results and access to the ASVAB CEP resources in two weeks or less (ASVAB Career Exploration Program, n.d.b). Upon the school receiving their students' ASVAB test results, schools are invited to have a

professionally facilitated ASVAB Career Seminar for their students. This study found that the majority of Group 2 students were provided the ASVAB Career Seminar shortly after they took the ASVAB assessment, however, there were students in this group that claimed they were not afforded the opportunity to participate in a career seminar activity. Schools not offering the career seminar to students is not uncommon. It is consistent with reports from the National ASVAB CEP Annual Review (2018) which indicates that only 61.7% of the students that participated in the ASVAB CEP during the 2017/2018 school year actually logged into the ASVAB CEP website. This means many students were not afforded the opportunity to take full advantage of the program's resources and these students will less likely return to the ASVAB career resources as a result, even if they know they are available. This emphasizes the importance of implementing follow-up activities with students after career interventions because without additional guidance for students, the overall effects will be minimal. Unfortunately, if students have limited experiences with career resources in general, it may leave students feeling overwhelmed and discouraged because they are not certain of its relevance or simply not sure how to apply it to their own career decision making circumstances (Sampson, McClain, Musch, & Reardon, 2012). Not having a formal follow-up for all career-related intervention denies the student the opportunity to gain the full effect of the program or gain the confidence they need for making career-related decisions. Although the activities that follow taking the ASVAB test can be successfully accomplished by students that are given minimal directions, it may be too much information for students to absorb without being properly guided (Sampson et al., 2012). As this study emphasized, one's experiences are key for building one's confidence with making career-related decisions (Betz, 2000; Bandura, 1977). Having a formal follow-up required for all career-

related activities may mean the difference in a student gaining the confidence with taking on a necessary task to make a career-related decision versus avoiding the task altogether.

The third recommendation is to find educators that are interested in getting directly involved with delivery of the ASVAB CEP and other career-related activities in their schools. In this study, over 90% of the educators (mostly teachers) surveyed perceived and saw themselves as being involved with their students' career planning process but very few knew about the career-related information and tools available to them. Although the primary point of contact for the ASVAB CEP and other career interventions in most high schools is the school counselor, teachers could assume some of this load by having a defined role as a career advisor or coach. Educators, primarily teachers, could be trained and qualified to facilitate ASVAB Career Seminars and provide additional career-related activities in their classrooms throughout the school year. School counselors are credentialed to address all developmental needs of students, however, on average across the U.S., there are 455 students for every one school counselor (American School Counseling Association, 2018). School counselors could share their expertise and guide the teaching staff to become career coaches or advisors. A school could also offer and fund teachers to earn certification as a School Career Development Advisor through the National Career Development Association (2019) which is 100 to 120 hours of training in career development. Going through this process, teachers would acquire the skills and knowledge necessary to assist students in a K-12 learning environment with their career development. This would give teachers the confidence to provide career-related advice to their students and give them the credibility to satisfy any concerns of parents and administrators who may not see a teacher with the credentials necessary. Getting teachers more involved will assist the overall school counseling program, it would provide greater career awareness among teachers, and

results in putting relevant career-related information into the hands of students to help them make career-related decisions. If teachers were given the proper training and authority for facilitating ASVAB Career Seminars as well as all other career-related activities, teachers would gain the knowledge and confidence necessary to speak comfortably with students regarding their ASVAB results and all other career-related topics. In addition, teachers could use the ASVAB CEP classroom activities or other program outcomes as a part of their course curriculum. This is consistent with Wisconsin's Academic and Career Planning (ACP) vision in the following ways: (1) it would enhance the students' career planning process, (2) assist with applying careers in more classes, (3) provide more career development content within certain courses and (4) see to it that career development is a whole school approach versus the school counselor only. Finally, if students see that people they admire, e.g., their teachers, value the career planning process, students will more likely see the value in engaging in the activities and take planning their futures more seriously.

The fourth recommendation would be for schools to ensure they offer opportunities for all students to acquire career-related experiences that will assist them with gaining the confidence they need to make good career-related decisions. In this study, it was demonstrated how the ASVAB CEP experience increased students' confidence in making career-related decisions, however, students also expressed how significant having a part-time job, participation in Post-Secondary Education Options (PSEO), taking Career and Technical Education (CTE) classes, and making college campus visits assisted them with making career-related decisions. Academic successes are essential but being able to practice what was learned in a real-world environment is just as vital and key for all students to gain the confidence and belief system necessary for making good career-related decisions. Students were clear that the opportunity to

accomplish real-world and relevant tasks was important to them for gaining the experience they needed to assist them with making current and future career-related decisions. Work-based learning opportunities, Post-Secondary Enrollment Options, Junior Reserve Officer Training, and modern, fully funded CTE programs can provide these opportunities. These programs are paving the way for students to gain the confidence necessary to approach and successfully accomplish the tasks associated with making good career-related decisions.

Areas to Consider for Further Study

Based on the findings from this study the following topics are recommended for further research:

- Take a closer look at the individual items that make up the students' CDSE career competency and total CDSE scores. There is a total of 25 statements students must respond to get the 5 career competencies and total CDSE score, 5 statements per competency. By looking at the statements and students' responses for each of the career competencies separately, one might learn what specific career area(s) the ASVAB CEP may have the greatest impact. For example, the ASVAB CEP may have a great effect on one's confidence for *selecting an occupation from a list of potential occupations* but may have little or no effect on ones' confidence for *successfully managing the job interview process*. This would allow the educator to determine exactly where the ASVAB CEP is most effective with improving their students' confidence for making career-related decisions. As stated by Reddan (2015) "research is now being focused on the evaluation of counselling interventions designed to increase career decision-making self-efficacy" (p.292). Likewise, this is also consistent with Betz's (2004) indicating that knowing one's CDSE can assist

educators with creating accurate and meaningful guidance but also for creating future career interventions.

- Replicate this study except with groups that have different experiences: one group of students participate in a professionally facilitated ASVAB Career Seminar and a second group receive their results only. The outcomes could tell users of the program whether or not providing a professionally facilitated follow up with students is significant or not. If not, it would save time and resources but if it is significant, the schools may want to reconsider having all students participate in a professionally facilitated career intervention of any kind versus handing over the students their results and expecting them to get the most out of it on their own.
- Have other regions in the United States conduct similar studies for generalization purposes. In addition, these studies could include further research with additional variables, e.g., gender, race, grade levels, etc., to expand the understanding of students' confidence for making career-related decisions.

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Appendix A: ASVAB Summary Result Sheet

https://www.asvabprogram.com/pdf/ASR_Poster.pdf

Student 10th Gr Male Test Date: Oct 18, 2016 Old Dominion H.S. Hometown DC		<h1 style="margin: 0;">ASVAB</h1> <h2 style="margin: 0; font-weight: normal;">SUMMARY RESULTS</h2>				
ASVAB Results	Percentile Scores	10th Grade Females	10th Grade Males	10th Grade Students	10th Grade Standard Score Bands	10th Grade Standard Score
Career Exploration Scores					20 30 40 50 60 70 80	
Verbal Skills	95	97	96		-----x-----	65
Math Skills	17	22	19		-----x-----	42
Science and Technical Skills	48	81	64		-----x-----	53
ASVAB Tests					20 30 40 50 60 70 80	
General Science	81	91	86		-----x-----	61
Arithmetic Reasoning	30	43	37		-----x-----	47
Word Knowledge	95	98	96		-----x-----	66
Paragraph Comprehension	91	92	91		-----x-----	62
Mathematics Knowledge	12	14	13		-----x-----	37
Electronics Information	10	13	11		-----x-----	38
Auto and Shop Information	21	53	37		-----x-----	45
Mechanical Comprehension	76	95	85		-----x-----	59
Assembling Objects	30	43	37		-----x-----	47
Military Entrance Score (AFQT) 57					20 30 40 50 60 70 80	

EXPLANATION OF YOUR ASVAB PERCENTILE SCORES

Your ASVAB results are reported as percentile scores in the three highlighted columns to the left of the graph. Percentile scores show how you compare to other students - males and females, and for all students - in your grade. For example, a percentile score of 65 for an 11th grade female would mean she scored the same or better than 65 out of every 100 females in the 11th grade.

For purposes of career planning, knowing your relative standing in these comparison groups is important. Being male or female does not limit your career or educational choices. There are noticeable differences in how men and women score in some areas. Viewing your scores in light of your relative standing both to men and women may encourage you to explore areas that you might otherwise overlook.

You can use the Career Exploration Scores to evaluate your knowledge and skills in three general areas (Verbal, Math, and Science and Technical Skills). You can use the ASVAB Test Scores to gather information on specific skill areas. Together, these scores provide a snapshot of your current knowledge and skills. This information will help you develop and review your career goals and plans.

EXPLANATION OF YOUR ASVAB STANDARD SCORES

Your ASVAB results are reported as standard scores in the above graph. Your score on each test is identified by the "X" in the corresponding bar graph. You should view these scores as estimates of your true skill level in that area. If you took the test again, you probably would receive a somewhat different score. Many things, such as how you were feeling during testing, contribute to this difference. This difference is shown with gray score bands in the graph of your results. Your standard scores are based on the ASVAB tests and composites based on your grade level.

The score bands provide a way to identify some of your strengths. Overlapping score bands mean your true skill level is similar in both areas, so the real difference between specific scores might not be meaningful. If the score bands do not overlap, you probably are stronger in the area that has the higher score band.

The ASVAB is an aptitude test. It is neither an absolute measure of your skills and abilities nor a perfect predictor of your success or failure. A high score does not guarantee success, and a low score does not guarantee failure, in a future educational program or occupation. For example, if you have never worked with shop equipment or cars, you may not be familiar with the terms and concepts

assessed by the Auto and Shop Information test. Taking a course or obtaining a part-time job in this area would increase your knowledge and improve your score if you were to take it again.

USING ASVAB RESULTS IN CAREER EXPLORATION

Your career and educational plans may change over time as you gain more experience and learn more about your interests. *Exploring Careers: The ASVAB Career Exploration Guide* can help you learn more about yourself and the world of work, to identify and explore potential goals, and develop an effective strategy to realize your goals. The *Guide* will help you identify occupations in line with your interests and skills. As you explore potentially satisfying careers, you will develop your career exploration and planning skills.

Meanwhile, your ASVAB results can help you in making well-informed choices about future high school courses.

We encourage you to discuss your ASVAB results with a teacher, counselor, parent, family member or other interested adult. These individuals can help you to view your ASVAB results in light of other important information, such as your interests, school grades, motivation, and personal goals.

USE OF INFORMATION

Personal identity information (name, social security number, street address, and telephone number) and test scores will not be released to any agency outside of the Department of Defense (DoD), the Armed Forces, the Coast Guard, and your school. Your school or local school system can determine any further release of information. The DoD will use your scores for recruiting and research purposes for up to two years. After that the information will be used by the DoD for research purposes only.

MILITARY ENTRANCE SCORES

The Military Entrance Score (also called AFQT, which stands for the Armed Forces Qualification Test) is the score used to determine your qualifications for entry into any branch of the United States Armed Forces or the Coast Guard. The Military Entrance Score predicts in a general way how well you might do in training and on the job in military occupations. Your score reflects your standing compared to American men and women 18 to 23 years of age.

Use Access Code: 222235471
 (for online Occu-Find and FYI)
Access code expires: Jul 1, 2018

Explore career possibilities by using your Access Code at
www.asvabprogram.com

SEE YOUR COUNSELOR FOR FURTHER INFORMATION

Appendix B: Student Survey

Dear Student,

Dear high school student,

This survey is a part of a research study approved by your school district and conducted by Mark Foster as a part of his dissertation research at University of Wisconsin-Stout. The purpose of this study is to gather your thoughts about your participation in the ASVAB Career Exploration Program and other career-related activities you were a part of since you participated in the ASVAB Career Exploration Program during the 2017/2018 school year.

Your participation in this survey is entirely voluntary and if at any time, you feel you no longer wish to participate, you may discontinue at any time without any adverse consequences to you. However, should you choose to participate and later wish to withdraw from the study, there is no way to identify your anonymous responses and withdraw them. This is an anonymous survey and will take you approximately 10 minutes or less to finish. You will be supervised while completing the instruments, and there is minimal risk involved with you completing the electronic survey used for this study.

The information you provide will be valuable to your school for future students and their career planning process, yourself and your students' futures beyond high school.

This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study, please contact the Investigator or Advisor. If you have any questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

Investigator:

Mark Foster

715-338-8530

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IRB Administrator:

Elizabeth Buchanan Office of Research and Sponsored Programs

152 Vocational Rehabilitation Bldg. UW-Stout Menomonie, WI 54751

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Thank you for your time.

By clicking on "Begin Survey", you consent to participate in this study and complete the survey.

BEGIN SURVEY

Student Survey

1. I am more confident in making career-related decisions as a result of participating in the ASVAB Career Exploration Program.

1- Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

2. I am confident in saying that the ASVAB Career Exploration Program assisted me with exploring my post-secondary options after high school.

1- Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

3. Over the past year, I used the ASVAB Career Exploration Program resources to acquire information for my career planning.

1- Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

4. I found the following information most useful from participating in the ASVAB Career Exploration Program.

- a. Interest Inventory – RIASEC Interest Codes
- b. OCCU-Find occupation search tool
- c. Portfolio to consolidated my career-related information
- d. Details about each occupation of interest
- e. Details about colleges and other postsecondary choices
- f. Details about the labor market
- g. Details about the military
- h. Other: (Specify) _____

5. I would recommend to all my peers to participate in the ASVAB Career Exploration Program.

1-Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

6. I believe having participated in the ASVAB Career Exploration Program resulted in me making informed career-related decisions.

1- Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

7. I believe having participated in the ASVAB CEP, I am better prepared to meet my future career aspirations.

1- Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

8. I used the following programs to assist me with my career planning over the past year.

- | | |
|---|---------------------------------|
| a. ACT Aspire | (never one-time multiple times) |
| b. ACT WorkKeys | (never one-time multiple times) |
| c. ACT with Writing | (never one-time multiple times) |
| d. ASVAB Career Exploration Program | (never one-time multiple times) |
| e. Minnesota Career Information System (MCIS) | (never one-time multiple times) |
| f. Career Locker | (never one-time multiple times) |

- g. MN CAREERwise (never one-time multiple times)
- h. MN GPS (never one-time multiple times)
- i. Other: _____

9. Demographics:

- a. Grade level:
 - 10
 - 11
 - 12
- b. Gender:
 - Male
 - Female
 - Non-Binary
- c. Race:
 - American Indian or Alaska Native
 - Asian
 - Black or African American
 - Hispanic or Latino
 - Native Hawaiian or Other Pacific Islander
 - White
 - Other

End of Survey

BEGIN SURVEY

Appendix C: Educator Survey

Dear _____ high school educator,

Thank you for taking the next few minutes to complete this survey.

This survey is a part of a research study approved by the _____ school district and conducted by Mark Foster as part of his dissertation research at the University of Wisconsin-Stout. The purpose of the study is to better understand the effects the ASVAB Career Exploration Program has on a students' confidence levels for making career-related decisions and an educator's perceptions.

Your participation in this survey is entirely voluntary and if at any time, you feel you no longer wish to participate, you may discontinue at any time without any adverse consequences to you. However, should you choose to participate and later wish to withdraw from the study, there is no way to identify your anonymous responses and withdraw them. This is an anonymous survey and will take you approximately 10 minutes or less to finish.

The information you provide will be valuable to your school for future students and their career planning process, yourself and your students' futures beyond high school.

This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study, please contact the Investigator or Advisor. If you have any questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

Investigator:

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IRB Administrator:

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Thank you for your time.

By clicking on "Begin Survey" you consent to participate in this study and complete the survey.

Educator Survey

1. As an educator, I am actively involved with our student's career planning process in our school.

1-Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

2. I am fully aware of what the ASVAB Career Exploration Program offers our students. (Please select those you were aware of)

- a. ASVAB – Aptitude test
- b. Find Your Interest (FYI) – Interest Inventory
- c. OCCU-Find – Career exploration tool
- d. College and Career Information
- e. Classroom activities
- f. None – I wasn't aware of the information available to me
- g. Comment(s): _____

3. I have been to the ASVAB Career Exploration Program website to learn more about the resources available to me as an educator. (Please check those that apply)

- a. Classroom activities/lesson plans
- b. Interest Inventory
- c. Occupational data
- d. College information
- e. Military information
- f. I wasn't aware of the information available to me
- g. Other: _____

4. Over the past year, I used ASVAB Career Exploration Program material to facilitate career-related activities with my students.

1-Strongly agree, 2- Agree, 3-Disagree, 4-Strongly disagree

5. My high school prepares our students for the transition from high school to:

- a. Workforce (Not so much) 1 2 3 4 5 (Very much)
- b. Technical College (Not so much) 1 2 3 4 5 (Very much)
- c. 4-yr University or College (Not so much) 1 2 3 4 5 (Very much)
- d. Military (Not so much) 1 2 3 4 5 (Very much)
- e. Apprenticeships (Not so much) 1 2 3 4 5 (Very much)
- f. Other: _____

6. Other comments regarding the ASVAB Career Exploration Program in your school:

7. Other comments regarding your involvement with your students' involvement with other career-related activities that would be beneficial:

8. Demographics: (Please select those that apply to you)

Gender:

Male

Female

Non-Binary

Years with School District:

1-5

6-10

11-15

15+

Subjects Taught:

Math

Science

History

Social Science

English/Literature

Career and Technical Education (CTE)

Family Consumer Education

Physical Education

Other: _____

Appendix D: Focus Group Script

Research question: What additional career-related activities may be affecting student participants' confidence in making career decisions?

Script for Focus group:

Opening remarks: “Thank you for participating in my research. I wish to reiterate that your participation in this study is strictly voluntary and if at any time, you feel you no longer wish to participate, you may discontinue at any time without any adverse consequences to you. Your parents/guardians were sent a letter of consent for you to participate in this study and our discussion will take no more than 30 minutes of your time. This focus group is a part of my doctoral dissertation which was approved by the University of Wisconsin – Stout and your school district. Does anyone have any questions regarding the study or why you are here today?”

“To begin, our discussion, let’s begin with talking about our biggest supporter...”

Focus group questions:

1. Who do you believe has been your biggest supporter through your career planning journey over the past year? (Mom, Dad, school counselor, sibling(s), teacher, etc.)
2. Who or what do you believe has been most influential with you making your career-related decisions? (college visit, family, school, careers class, specific program, etc.)
3. If there was one thing your school could do differently with supporting your career planning needs, what would it be?
4. What do you believe best prepared you for what is coming next for you following your high school career?
5. Of all the events and opportunities, you had since you participated in the ASVAB Career Exploration Program, which event or opportunity would say was your favorite and most beneficial to you?
6. You were given access to the ASVAB Career Exploration Program for about two years after participating in the program. How often did you go back to the ASVAB resources to assist you with your career planning?

Closing remarks: “Again, thank you for participating in my research. If you have any questions about anything we accomplished here today, please don’t hesitate to contact me or your school’s principal. Thank you for your time and good luck with the rest of your career planning!”

Appendix E: Thematic Reduction Map

