

Motivation through Relevance: How Career Models Motivate Student Career Goals

by

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ABSTRACT

This study addresses the problem of high school graduates with learning disabilities who are unprepared for higher education and the workplace because of limited exposure to career professionals and perceived barriers. The purpose of this study is to examine how a career exploration model, entitled CaMPs (Career Model Professionals) influences students' career decision-making self-efficacy. CaMPs incorporates exposure to career role models, as well as career research and self-reflection. CaMPs provides students with learning disabilities first-hand accounts of successful career professionals, to assist them in setting academic and career goals that are aligned to their personal strengths. This mixed methods study develops and evaluates a career based innovation for high school students and reviews the relationship between the innovation and students' self-efficacy. Students completed a self-efficacy survey (Career Decision Self-Efficacy - Short Form: CDSE) before and after the implementation of the CaMPs program. A t-test comparing pre- and post-survey scores indicated that there was a significant increase in self-efficacy after completion of the program. Qualitative data revealed changes in students' career interests and new considerations to their career preparation process after participating in the CaMPs innovation. This study will be useful in the development of career programs for high school students, particularly those with learning disabilities, to assist them in choosing and preparing for their future careers.

DEDICATION

I dedicate this work to the love of my life who is my wife Isela and to my parents David and Loy and my families, who mean the world to me. I do not say I love you nearly as much as my life shows. And more than anything in this world, I dedicate this to God and his son Jesus.

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
CHAPTER	
1 INTRODUCTION.....	1
Personal Context.....	6
Purpose of Study	10
Research Questions.....	11
2 REVIEW OF SUPPPORTING LITERATURE.....	12
Theoretical Framework.....	12
Career Decision-Making Self-Efficacy.....	14
Social Cognitive Career Theory.....	15
Holland’s Theory of Career Choice.....	18
Summary	20
3 METHOD	21
Research Design	21
Setting	21

CHAPTER	Page
Participants.....	22
Materials.....	22
Presentation Worksheets.....	24
Student Journals.....	25
Pre- and Post-Interviews.....	25
Procedure.....	26
Data Analysis.....	31
Interview Analysis.....	31
Journals Analysis.....	32
Coding.....	32
4 ANALYSIS AND RESULTS.....	38
Research Question 1.....	38
Research Question 2.....	46
Research Question 3.....	50
Research Question 4.....	55
Concept Map.....	61

CHAPTER	Page
5 DISCUSSION	63
Summary of Findings.....	63
Complementarity of the Qualitative and Quantitative Data.....	63
Strength of Study.....	70
Limitations and Validity	71
Implications for Practice	72
Future Research.....	73
REFERENCES	75
APPENDIX	
A INTERVIEW QUESTIONS.....	81
B PRESENTATION WORKSHEET.....	83
C CAREER DECISION SELF-EFFICACY – SHORT FORM	85
D CODEBOOK FOR INTERVIEWS	87
E PARENTAL LETTER OF PERMISSION	91
F PARENT RECRUTMENT SCRIPT	94
G STUDENT RECRUITMENT SCRIPT	96
H ASSENT FORM	98
I SCHOOL PERMISSION LETTER	100

LIST OF TABLES

Table	Page
1. Purpose and Examples of Data Collection Tools decision-making self-efficacy..	26
2. Occupations with Highest Number of Entry Level Positions and Highest Median Annual Wage in 2014.....	29
3. Schedule of Data Collection	35
4. O’Net Interest Profile	46
5. Career Interests	46
6. Pre- and Post-Survey Descriptive Data.....	56

LIST OF FIGURES

Figure	Page
1. RIASEC Model	19
2. Pre- and Post-Career Decision Self-Efficacy Survey: Totals	56
3. Pre- and Post-Career Decision Self-Efficacy Survey: Self-Appraisal Scores	58
4. Pre- and Post-Career Decision Self-Efficacy Survey: Occupational Information Scores.....	59
5. Pre- and Post-Career Decision Self-Efficacy Survey: Goal Selection Scores	59
6. Pre- and Post-Career Decision Self-Efficacy Survey: Planning Scores	60
7. Pre- and Post-Career Decision Self-Efficacy Survey: Problem Solving Scores	61
8. Concept Map	62

CHAPTER 1

INTRODUCTION

It is necessary for schools to continually adapt and change to teach students the skills needed to be competitive in today's workplace, as well as in the future. At times, schools have relied on yesterday's success and have not kept pace with economic and societal changes. The result, is that students graduating from high school are unprepared to compete in the modern workforce (Hoyt & Sorensen, 2001). Nationally it is estimated that one in six, or 6.7 million of the 38.9 million youth between 16-24 years old, are "opportunity youth, which means that they are not in school or employed" (Balfanz, Bridgeland, Bruce & Fox, 2012, p.2). Orlans (2015), in his study of how education is failing in the United States, points out that schools are still using the same model of instruction that has been used for over a century while simultaneously attempting to prepare students for future careers that do not yet exist. The Massachusetts Business Alliance for Education (MBAE) (2008) found that the current workforce in the United States may be the most educated, yet least skilled in the world as evidenced by how businesses are choosing to move to other countries in order to find skilled labor and for less cost. Riesen, Morgan, Schultz, and Kupferman's (2014) study of the highest-impact barriers in the transition process of students to work was "lack of employment skills, long-term supports, and students' and parents' unrealistic expectations for outcomes" (p. 33).

Today students are burdened by an increasingly severe and growing number of "obstacles in pursuing their educational goals and career aspirations" (Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003). Heckhausen, Chang, Greenberger, & Chen,

(2013) view students who lack the training and education required for the nation's expanding career options as a generation at risk for being overlooked and marginalized in society. Moreover, current research not only confirms the problem of graduates who are unprepared for the workplace, but also suggests that students who do not graduate come from underserved communities (MBAE, 2008). The "opportunity gap" Darling-Hammond (2010) points out, is often overlooked in discussions of how to close the education gap. Those with limited resources and little exposure to professionals with highly desirable careers are consequently plagued by a multitude of barriers. The barriers typically associated within this group are poor socio-economic status (SES), ethnicity and disabilities. Wolanin & Steele from the Institute for Higher Education Policy (2004) have observed that students with disabilities, minorities, and the poor face similar issues of inequality and marginalization. Although the graduation rate for many high schools has shown signs of improvement, there are still large discrepancies in several states for students from lower socio-economic backgrounds and diverse ethnicities (especially for Hispanic and African American and Native American students), as well as for students with disabilities. (Balfanz, et al., 2012, p. 2). As more barriers are revealed, it is critical that innovation addresses student access to education in its solution. The foundation of American society depends on a public that can read and think critically, and are prepared to overcome adversity and make sound decisions.

According to Berger and Archer (2016), a student's socio-economic status (SES) and motivation can predict their academic attainment. Their study compared students from high and low SES schools. Students with high SES status had higher academic

achievement scores than students with low SES status. They concluded that students of low SES status were less likely to succeed academically, which in turn, led to disruptive classroom behavior and eventually, lower paying jobs. Berger and Archer (2016) found that “students at the low SES school expected to occupy trades and lower-status professional jobs, whilst students at the high SES school expected higher-status professional occupations” (p. 188). Darling-Hammond’s (2010) study further supports the impact money makes on student performance, citing “student poverty levels and minority status predicted much of the variation across districts in the proportions of students not meeting minimum standards on the state tests” (p.118). Students in low SES areas may not be exposed to many economically and professionally successful adults; for example, in the school where the current study was conducted only nine percent of the adults in the community have a college education (Public Schools, n.d.) which perpetuates the cycle of poverty.

Racial and ethnic discrimination is another barrier that may diminish students’ academic and career ambitions (Constantine, Erikson, Banks, & Timberlake, 1998). In the United States, Hispanics are the fastest growing population, yet they are underprivileged in terms of improvement of occupational skills and opportunity (Arbona, 1990). Jobs with low wages and limited opportunities for advancement are typically associated with ethnic minorities and this pattern creates perceived barriers for students regarding the number of career opportunities that are available (Constantine, et al., 1998). Experiences of racism, colonialism, oppression, and identity conflict can become additional barriers to academic advancement and career expectations (McWhirter,

Hackett, & Bandalos, 1998). Constantine and colleagues (1998) found that critical factors in the vocational development of minority youth include their experience with figures such as teachers, parents, and racial and ethnic role models who represent their occupational interests. Racial and ethnic discrimination may be a strong barrier to career advancement at the school in the current study where the student minority enrollment is 87% and faculty minority population is approximately 13%.

Academic disabilities represent additional barriers to academic and career success. Research shows that students with learning disabilities constitute over half of the total population of individuals identified with disabilities (Wolanin & Steele, 2004). Baird, Scott, Dearing, & Hamill, (2009) found that students with learning disabilities (LD) were more likely to have low academic self-efficacy than were students without LD which, according to Hampton and Mason (2003), is because students with LD are less likely to have as many successful experiences on which to build. Low self-efficacy and limited positive experiences reduce students' willingness to make future attempts to perform (Hampton & Mason, 2003). Students with high levels of self-efficacy show an increased level of participation, whereas students with low levels tend towards avoidance of academic situations. (Creed, Patton & Watson, 2002)

In addition to academic barriers, students with learning disabilities (LD) may also experience social barriers such as being excluded from participating with their peers (Hampton & Mason, 2003). The barriers students repeatedly face have, in many respects, led them be conditioned to have low expectations, fewer aspirations and less opportunities (Constantine, et al., 1998).

Role models are a source of motivation and inspiration for educational and occupational goal setting behaviors (Morgenroth et al., 2015). Yet, there are few role models to demonstrate the way to a successful career for students in low SES communities, and those who come from a minority background and have learning disabilities (Morgenroth, Ryan, & Peters, 2015). The need for high schools to provide better models of real world career-related experiences in general has prompted the United States Department of Education to introduce a grant program of 300 million dollars for high schools, businesses, higher education institutions and community organizations that partner to support career-related experiences (U.S. Department of Education, n.d.).

To allow students greater opportunity to pursue their vocational career aspirations in high school, new vocational programs have been developed to minimize barriers typically faced by high school graduates. Grubb (1996) discussed the new vocational programs up for adoption in schools, which include career academies, cluster schools and magnet schools. Career academies operating as schools-within-schools is a model in which students are taught by a group of three to four teachers for two to three years in core subject classes with one vocational class. Another model is a cluster school where tenth grade students choose a two or three year track or major that combines with a vocational class and their regular academic course work. The magnet school is a model where most of the curriculum is focused on a particular vocation (e.g., business, fashion, etc.).

A model program, Pathways in Technology Early College High School (P-TECH) which was developed in Brooklyn, New York. P-Tech partners with IBM is a model

program for career-related experiences where students learn problem-solving skills modeled in real world industry to improve their motivation for career training. At high school graduation, students are awarded a high school diploma, as well as an associate's degree. This model's success has prompted its adoption in 40 other schools in the last four years (Pathways, n.d.).

Personal Context

Berliner and Glass (2014) use the analogy of changing car parts to SES educational privilege, where the newer car parts equate to the wealth of experiences students from high SES have to supplement their education and build their self-efficacy, while students from lower SES, have fewer experiences and are more likely to struggle. The priorities and expectations of these groups is the difference between enrichment and survival. The goal of my profession, like my innovation, is to inform students with lower outcome expectations to available career pathways and opportunities and to expose them to a variety of higher income professions. My position is to lead students to realize how education may be used to help open doors to social change and socio-economic mobility.

I have been a high school special education teacher in Arizona for over ten years. I am very empathetic to the students I teach because I, too, was a student in a special education program. I understand how difficult it can be to find the appropriate career goal and complete the necessary prerequisites to accomplish that goal. Similarly, the students I teach now lack career guidance and struggle to focus on any single goal. Many of the students in this study have limited first-hand knowledge of the world; most have never been outside their own neighborhoods. The majority of their world and career

experiences are amalgams of their observations gleaned from television, movies and music. According to Garcia, Restubog, Toledano, Tolentino and Rafferty (2012), “competent career decision-making involves (a) accurate self-appraisal, (b) gathering occupational information, (c) selecting goals, (d) planning for the future, and (e) solving problems.” Most of the students in this study have demonstrated limited knowledge and minimal commitment to these competencies. Instead of considering the appropriateness of specific careers as they align to their talents, students often follow the path of family or friends who may have a different set of interests and abilities.

Special education services are provided for students with disabilities such as specific learning disabilities, autism spectrum disorder, emotional disabilities, intellectual disabilities, and/or speech and hearing impairment. The students I work with have specific learning disabilities in areas such as basic reading skills, reading comprehension, reading fluency, math calculation, math reasoning and written expression. All special education students must have an individual educational plan (IEP) as mandated by federal law, specifically the reauthorized *Individuals with Disabilities Education Act* (IDEA: 2004). In addition, this law requires schools to develop a transition program for all special education students who are 16 years of age and older. These transition services are written into the students’ IEP and must be updated every year.

The Office of Special Education and Rehabilitative Services (OSERS) defines transition services as a coordinated set of activities for a child with a disability that:

- is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate

- the child's movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment); continuing and adult education, adult services, independent living, or community participation;
- is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and
 - includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, if appropriate, acquisition of daily living skills and functional vocational evaluation. [34 CFR 300.43 (a)] [20 U.S.C. 1401(34)] (U.S. Department of Education, 2004).

In the course of developing students' transition plans at the school in this study, the case manager, who is usually the special education teacher, interviews each student about his or her educational and career paths. The answers students have provided during their transition planning interviews have been an issue of concern. The career goals students identify for themselves are often not appropriate to their academic history. Consequently, when students' struggle academically, the result is a greater dependency on their teachers and parents, rather than one of initiating tasks independently (Arnold, 1997). The school seems to be doing little to provide these students with appropriate experiences to support the career decision-making process.

Crites (1973) theorized that an individual's chronological age is not a true indicator of their vocational maturity. He believed that the higher the individual's maturity level, the higher the probability that the individual would be successful in

obtaining a fulfilling career choice. To assess the level of an individual's vocational maturity, he developed the Career Maturity Inventory (Crites, & Savickas, 2011). Crites theorized that there are five dimensions involving maturity in making career choices, 1) Orientation to Vocational Choice, 2) Information and Planning, 3) Consistency of Vocational Preference, 4) Crystallization of Traits and 5) Wisdom of Vocational Preference, all of which apply to vocational maturity during different stages of an individual's life (1973). His study concluded that "a comprehensive model of career development in early adulthood needs to be formulated, in order to better understand and study the problem of youth in entering the world-of-work" (Crites, 1976, p.106).

The state of Arizona has instituted laws (R7-2-302.05) that mandate that "schools shall complete for every student in grades 9-12 an Arizona Education and Career Action Plan" (Arizona Department of Education, 2013). An ECAP is designed to help students to identify skills and interests which will guide them in a successful transition from high school to the workforce. There is an ECAP is a checklist, which students and their guidance counselors complete, that details their program of study for high school and a timeline of suggested actions to take in planning for transition. Although the ECAP is intended to guide students' career interests and their coursework, its name is relatively unknown by most students and has minimal visibility.

In compliance with the Arizona state law regarding ECAP (Arizona Department of Education, 2013), the district in this study has made attempts to expose students to educational and career training opportunities, however, they have not been comprehensive enough. For example, the school hosts "College Push" on a weekly basis

to expose students to college programs in Arizona. Representatives come from various colleges and universities in Arizona to visit the school campus and describe their programs. However, many of the students with LD do not plan to attend college. The district has also instituted the Next STEP program. Next STEP offers the opportunity for students enrolled in special education programs to extend their services for another year beyond high school by demonstrating a need for assistance when transitioning into employment. The program works in partnership with places of business where students intern for free to learn skills (e.g., using a time card, wearing a uniform, following instructions, complete training) required in the work place. After one year at Next STEP, students receive their high school diploma and are often hired at their initial placements. While Next STEP provides work experience, it is designed for students who show a need for transition assistance. It does not assess career decision-making self-efficacy and goal setting. However, if Next Step had the capacity to accept all students in the special education program it would fit well with this study's innovation as both attempt to improve vocational planning for special education students.

Purpose of Study

The purpose of this study is to examine how a career exploration model, which I have entitled CaMPs (Career Model Professionals) influences students' career decision-making self-efficacy. CaMPs incorporates exposure to career role models, as well as career research and self-reflection. The intention of CaMPs is to inspire students with first-hand accounts of successful career role models, to set academic and career goals that align to their own personal strengths.

Research Questions

The following research questions guide this study.

1. How do eleventh and twelfth grade high school students with learning disabilities from a Title I school describe their career interests before and after participation in the CaMPs program?
2. How do eleventh and twelfth grade high school students with learning disabilities from a Title I school describe barriers to achieving their career goals before and after their participation in the CaMPs program?
3. How do eleventh and twelfth grade high school students with learning disabilities from a Title I school describe their career preparation process after participation in the CaMPs program?
4. To what extent does career decision-making self-efficacy change for eleventh and twelfth grade high school students with learning disabilities from a Title I school after their participation in the CaMPs program?

CHAPTER 2

REVIEW OF SUPPORTING LITERATURE

Theoretical Framework

Bandura defines self-efficacy as an individual's belief in his or her ability to produce given attainments (Bandura, 1977). His theory of self-efficacy has four sources of efficacy information. The first is performance accomplishments, which are enactive mastery experiences. Adults and adolescents learn and develop a perception of their self-efficacy after repeated successful (or unsuccessful) performances and their perception grows stronger with each accomplished goal, which in turn, may increase their willingness to accept more difficult challenges (Bandura, 1977). Second, is vicarious learning, which is accomplished through modeling. According to Bandura much of "human behavior is developed through modeling" (1977, p. 197) and from observing models one learns the "rule" for how to form and develop new behaviors. The third source is more intrinsic consisting of the the individual's physiological and affective states, which are manifestations of emotional arousal (e.g., anxiety and stress). Fourth, is verbal persuasion, which is the encouragement students may receive along the way from parents, peers and teachers.

The application of self-efficacy differs from individual to individual. Bandura (1977) contends that an individual's level of attainment and self-efficacy can increase when attention and effort are given to a specific area. In this respect, motivation stems from self-efficacy and the student may have an aversion towards one area over the other. Accordingly, individuals with low self-efficacy will tend to avoid a difficult situation,

while students with more self-efficacy will display greater determination and persistence. However, once individuals understand how to build their self-efficacy they may be more successful at manipulating their environment to attain social and personal goals. Betz and Taylor (2012) expound on Bandura's theory, contending that understanding the nature of self-efficacy can help one to predict behavior. For example, when an individual practices task avoidance behaviors their self-efficacy expectations lower and their level of anxiety increases, but if self-efficacy expectations increase, anxiety decreases (Taylor & Betz, 1983). Together these claims suggest that students with disabilities and low self-efficacy will tend to avoid the challenges associated with many careers (Hampton & Mason, 2003), thus limiting their career choices. Betz and Taylor's (2012) extended research on the predictability between self-efficacy and behavior. As students build their self-efficacy and confidence levels they will try more things, visit more places and meet more people which are products of approach behavior. In contrast, low self-efficacy predicts limitations on experiences, acquaintances and interests which are products of avoidance behavior. Choi, Park, Yang, Lee and Lee (2011) concur with Betz and Taylor by describing how self-efficacy can lead students to develop and explore new interests.

Improving student self-efficacy is accomplished by exposing students to more people and more experiences that will guide them down pathways of successful accomplishments. In a recent study, Flores, Ojeda, Huang, Gee, and Lee (2006) concluded that career decision-making self-efficacy was significantly related to high school students' educational goals. Choi, et.al, (2011) found that support and barriers affect how self-efficacy impacts student's interests, goals and performance. They

encouraged students in their study to seize opportunities to observe members of their community who have demonstrated effective problem-solving skills to promote positive educational and career decisions. Students observe people every day who exhibit models of behavior that they identify with and imitate. Experiences are collected in a student's history of outcomes from which they build their expectations. Kim, Lee, Ha, Lee and Lee (2015) also confirmed that outcome expectations are created by encouragement from others (e.g., a congratulation or a condemnation), natural consequences (e.g., touching fire burns), learned by experiencing those activities. In addition, they found that goals are created "by a critical mechanism through which people exercise personal agency or self-empowerment" (Kim, et.al. 2015). Providing students with greater opportunities to explore and expand on their experiences is pivotal to helping students learn confidence and self-efficacy in their career interests. (Atkinson & Murrell, 1988; Pryor & Bright, 2009)

Career Decision-Making Self-Efficacy

Career decision making self-efficacy is built on Bandura's definition of self-efficacy, with the specification of career decision-making attributes. Career decision-making self-efficacy involves the multiple combinations of an individual's vocational identity and involvement in career exploration activities (Gushue, Clarke, Pantzer, & Scanlan, 2006) which is increasingly important to students in high school. Atkinson and Murrell (1988) posit that career exploration is an irreplaceable component for making a career decision. They define career exploration as "the process of generating and assimilating career information relating to self and the world of work."

Crites also understood how the need for more research in collecting occupational information has been heavily neglected. Career exploration is an endeavor that is not a one-time occurrence, but a process that begins in childhood and extends into early adulthood (Crites, 1976). Crites makes the case that vocational education is largely overlooked in middle and high school. His Theory of Career Maturity organizes career decision-making chronologically in the span of one's lifetime. It is separated into five stages: Orientation to Vocational Choice, Information and Planning, Consistency of Vocational Preference, Crystallization of Traits and Wisdom of Vocational Preference. These stages advance with a students' vocational awareness, planning and decision-making process, preference assessment, accommodating growth and development and appropriateness of choice. This theory was the basis for the instrument created by Taylor and Betz, the Career Decision Self-Efficacy Scale, CDSE-SE (2012) used in this study to measure career decision self-efficacy. Crites' attention to vocational identity and career exploration spawned the development of different instruments and inventories to collect vocational information such as the CDSE (Betz & Taylor, 2012) . There are a great number of variables to consider in information gathering and the career decision-making process. Atkinson (1988) also cautions that if students are not given enough occupational information or opportunity for career exploration the result will be a "decision not to decide".

Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT) was derived from Bandura's Social Cognitive Theory, which is a framework for understanding self-efficacy through the

interaction of interests, abilities and goals. Lent & Brown (1996) suggest that SCCT be used to understand the process of thought that supports important variables in other career informative models such as, how users develop their vocational interests using Holland's theory. SCCT focuses on the development of academic and career interests by explaining how variables such as self-efficacy and expected outcomes interact with interests in career decision-making. Research has shown that a significant relationship exists between self-efficacy expectations and "career choices, performance and persistence" (Betz, 2004). This relationship indicates that students' career choices are based on the level of their self-efficacy. Increasing students' self-efficacy can also increase their level of persistence. SCCT describes the process by which students attain a "level of persistence and performance in their educational and career pursuits" (Lent & Brown, 1996, p. 312). Likewise, as their self-efficacy increases even students with disabilities will ultimately show an increased academic achievement as they persist and explore in their educational environment.

SCCT posits that outcome expectations are predicated on an individual's perceived ability to perform at a level that would produce the desired outcome. For example, students inquire about a career interest. Next, they learn what tasks are associated with it. In the end, the students' level of self-efficacy (belief they possess the required capabilities) will dictate if they approach or avoid the desired outcome. Thus, self-efficacy and perceived barriers function together to shape and transform interests, choices and performance in career and academic development (Lent, Brown, & Hackett, 1994; 2002).

SCCT is important to the design of this study because of the insight it lends towards increasing self-efficacy. When students feel supported, safe and at ease, which is associated with family members or peers, they feel more confident to engage in career exploration activities (Betz, 2004). Fouad & Smith (1996) highlight how outcome expectations may be effective in navigating barriers associated with groups who have been marginalized due to their race, ethnicity, sexual orientation, religious beliefs or socio-economic status. SCCT has many applications for expanding research to build student self-efficacy and career interests. SCCT is valuable to this study to guide understanding of how to describe and increase students' career decision-making self-efficacy.

In a study, that examined role models' influence on the career self-efficacy of Hispanic women, Rivera et.al.(2007) found that students who were better prepared academically "had more exposure to a wider range of careers" (p.57) The results used Social Cognitive Theory to understand factors that influence career considerations and self-efficacy. The findings suggest that using innovations to assess efficacy is beneficial in "broadening the range of careers they will consider." (p.58) Additionally, Hackett, Espisito & O'Halloran's (1989) results indicated that role model influences were significantly related to career importance, level of educational aspirations, and occupational choices. The study further indicated that the lack of professional and occupational role models was a significant barrier to career development. Conversely, the availability of role models was shown to be a positive influence. Hackett et.al. (1989) concluded that choice of career interests and self-efficacy

are influenced by role model exposure. Another Social Cognitive Theory based study by Nauta, Epperson & Kahn, (1998) found that self-efficacy and role models influence students' career aspirations. Additional findings indicated that role model influence also increased self-efficacy expectations in academics.

Holland's theory of career choice.

John Holland 's (1996) Theory of Career Choice proposed that people will gravitate towards work that is characteristic of their personality type and their ideal work environment. The comparable characteristics that exist between Holland personality types and other career decision-making instruments suggest that information gathered by his theory may be used to predict similarities regarding career choice and an individual's Holland type (Miller & Miller, 2005).

The Holland career typology describes six different ideal environments which correspond to six personality types: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). Characteristics of an individual are assumed to resemble one of the six types and each type does best in a matching environment. For example, Realistic type describes someone who has concrete and less abstract interests. They prefer tangible and hands-on activities. Investigative describes a person who enjoys research and science. Artistic traits demonstrate a proclivity for performance, creating, designing or writing. Social describes the traits of someone who likes to coach, direct, volunteer, teach, or help others. Entrepreneur is someone with traits such as selling, managing, operating or buying items in business-like environments. Conventional is synonymous with traits such as auditing, computing, and operating. The hexagon model

is a diagram which clarifies the Holland Theory by its placement of each personality type. For example, Realistic is adjacent to Conventional, and more closely related to it, but opposite Social since characteristics that define Realistic are antithetical to Social characteristics. Likewise, Conventional is opposite of Artistic and Enterprising is opposite of Investigative.

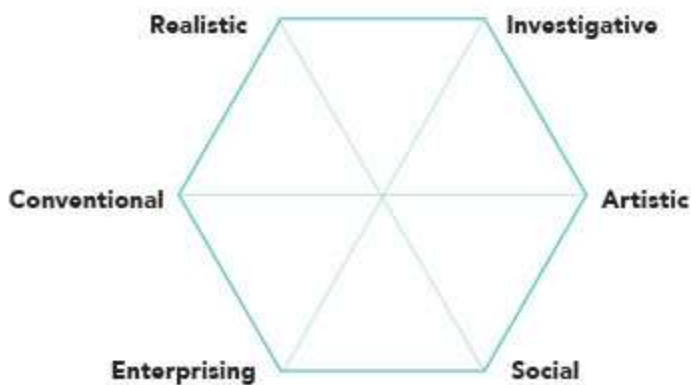


Figure 1. RIASEC Model. Retrieved from Career Keys, Holland's Theory of Career Choice and You, <https://www.careerkey.org/choose-a-career/hollands-theory-of-career-choice.html#.VvBFi-Iwjcs>

Most people are a combination of types. The two or three categories a person most identifies with are designated by letters that make up their Holland code such as, Realistic-Investigative (RI), or Artistic-Social (AS). The codes may suggest possible occupational categories or career interests based on the best match between an individual's personality type and work environment. Holland codes inform students' uncertainty with a combination of self-evaluative and occupational information that is valuable to sound career-decision making.

Holland's theory is a model where students' match their perceived personal characteristics to occupational characteristics best suited to their strengths and weaknesses (Crites, 1973). Social Cognitive Career Theory (SCCT), developed by Lent, Brown and Hackett (1996), forms a bridge between Holland's Theory and Crites' Theory of Career Maturity.

Summary

Three theories were employed in this study; Self-Efficacy Theory (Bandura, 1977), Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994; 2002), and Holland's Theory of Career Choice (Holland, 1996) as frameworks to understand the problem of students who lack career preparation and are at risk of being marginalized in society (Heckhausen et al., 2013). Bandura's theory introduces the role self-efficacy plays in student engagement. Lent, Brown and Hackett developed Social Cognitive Career Theory which is an extension of Bandura's Social Cognitive Theory and combines career exploration with self-efficacy. Holland's Theory supports students' in the career exploration process by suggesting occupational characteristics with personal strengths and weaknesses. This study explores the barriers of low SES, ethnicity and learning disabilities which are typically associated with career decision-making self-efficacy. This innovation attempts to fill the need for better models of real world career-related experiences for high school students. The nation's unprepared and under-skilled workforce (MBAE, 2008) and the disparity between the well-to-do and underserved communities (Berger & Archer, 2016) highlights the need for change and innovation in preparing students for college and careers.

CHAPTER 3

METHOD

The following section describes the setting, participants, materials, procedure and data collection instruments used for data analysis.

Research Design

A mixed method sequential design was used in this study, where both quantitative and qualitative data was collected. Quantitative data was collected in the form of student responses to a pre- and post- 25 item survey (CDSE-SF). Qualitative data was collected through student interviews, journal reflections, and presentation worksheets. An inductive emerging themes approach was taken to identify themes.

Setting

This study was conducted at a Title I high school in a large Southwestern U. S. city. The school has approximately 1700 students who typically come from a low socio-economic level, with 87% of students on free and reduced lunch and 4 % who are considered homeless. The school population is 73% Hispanic, 12 % White, 8% Black, and 7 % other. Eight percent of the students in the high school receive special education services for learning disabilities. Students in the special education program are provided accommodations and specialized instruction as it is outlined in their IEP and therefore, each student's course schedule includes at least one hour of service in a co-taught general education classroom and/or one hour of a strategies class in the special education classroom.

Participants

Twelve high school students who were receiving special education services for a learning disability in one or all of the areas of basic reading skills, reading comprehension, reading fluency, math calculation, math reasoning and written expression, were invited to participate in the study. This study started with twelve and finished with nine due to three students transferring to attend another school. All nine students in the sample attended every presentation, activity, interview and survey conducted in this study. There was a varied representation of students for this small sample size. There were six students who were juniors and three that were seniors. The Personal Skills Development class is offered primarily to juniors and seniors because the skills taught in this special education class are most applicable for students who are beginning the career, college and trade school decision-making process. Participants included one black female, two black males, two Hispanic males, two Hispanic females, one white male, and one white female. One freshman and one sophomore student were assigned to this literacy strategies class, but they only participated in the class activities, but not the study.

Materials

The first survey was the Career Decision Self-Efficacy Scale CDSE short form (CDSE-SF) created by Betz and Taylor (1993). It was administered to all students in the study and used to make predictions and to measure the concept of self-efficacy for students.. The CDSE was developed and used with first year college students and later with high school students to measure self-efficacy expectations in relation to career

decision-making tasks. The CDSE has five subscales: Goal Selection, Information Gathering, and Problem Solving, Planning and Self-appraisal. which measure the five career choice competencies of Crites' Theory of Career Maturity (1973). The original CDSE began with 50 items, 10 items per subscale. "The original scale and subscales were highly reliable; values of internal consistency reliability ranged from .86 to .89 for the subscales and were .97 for the total score" (Betz, Klein & Taylor, 1996, p.48) and the validity coefficients for the CDSE-SF "[were shown to be] statistically significant and of moderate size" (p.48). To adapt the instrument for field studies measuring career pre- and post- innovations it was shortened to 25 items by eliminating five of the 10 items for each subscale (CDSE-SF: Betz & Taylor, 2012). While the shorter form "structure had not been completely supported by factor analyses, it was deemed of both theoretical and applied (i.e., counseling) utility" (Betz, Klein & Taylor, 1996, p. 48). The CDSE –Short Form asks respondents to rate their confidence on a five- point Likert scale ranging from "no confidence at all" to "complete confidence." Sample items include "How much confidence do you have that you could: choose a career that will fit your preferred lifestyle (Goal Selection); find information in the library about occupations that you are interested in (Information Gathering); change occupations if you are not satisfied with the one you enter (Problem Solving); make a plan of your goals for the next five years (Planning); and accurately assess your abilities (Self-Appraisal)" (Creed, Patton & Watson, 2002).

The second survey was the Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC) Markers Scales developed by Liao, Armstrong and Rounds

(2008). The RIASEC is a free online survey that offers the user his or her profile using RIASEC markers found at <http://personality-testing.info/tests/RIASEC/>. It is a 48-item survey, that asks users to rate, “How much you would enjoy performing each on a scale of (1) dislike (2) slightly dislike (3) neither like not dislike (4) slightly enjoy and (5) enjoy”. The test results will yield a Holland career code. At the conclusion of the survey the user is directed to the database of occupations sorted by Holland Code and maintained by The United States Department of Labor Employment and Training Administration: <http://www.onetonline.org/explore/interests/Investigative/Artistic/Social/>. Students in this study used the website to independently explore and research their Holland codes and the careers associated with them.

Presentation worksheets. Presentation worksheets were completed by students for each of the six presenters. Presentation worksheets were numbered 1 - 9, each labeled with an expected presentation topic: 1) presenters’ recollections of their high school experience and goals at that time, 2) academic standing in high school and how that influenced their decision-making process after high school, 3) post-secondary education (college or vocational school) and the role that experience had on their decision- making, 4) age of majority responsibilities, obligations (i.e., financial, career and social, and balancing debt and income), 5) two life-changing decisions and what factors were considered, 6) career path to the present, 7) how they found their job, what interested them about the job, the interview process, the time in service to get through the learning curve, 8) the day-to-day routine, and 9) The future of their position. Students used the worksheets to guide their reflections in their journal writing.

Student journals. Journals were given to students to record their thoughts regarding the CaMPs innovation. A study by Heckhausen, et al., (2012), supports the purpose of journaling by showing that thinking about and focusing on career goals was beneficial to students' educational endeavors. Student journals provided qualitative data showing what students reflected on and learned, which then showed the progression of how and what factors influenced motivation, self-efficacy, and interests. In addition, to the presenters, surveys and activities in the CaMPs innovation, students independently researched internet sites which provided a source for further journal reflections..

Pre- and post- interviews. Pre- and post- interviews were semi-structured. The interview questions included such topics as people who students knew with interesting careers, careers that were of most interest and how the student became interested in their chosen career. (See Appendix A for a complete list of interview questions.) Additional follow-up questions were asked when deemed necessary by the researcher. Questions focused on areas such as experiences where they felt most confident, the people in their lives they most admired, careers they were most interested in and why, and what insecurities they feel in the challenges that await them after high school. Table 1 one describes the purpose for the data collection tools and provides examples being used.

Table 1

Purpose and Examples of Data Collection Tools

Data Collection Tool	Purpose	Examples
Pre-Interview	Learn about student goals, motivation and self-efficacy	What do you want to do for a living after high school? What is your plan for getting there?
Post – Interview	Learn about students goals, motivation and self-efficacy	What do you want to do for a living after high school? What is your plan for getting there?
Presentation Worksheet	Learn about new interests	What is something you learned from this presenter that you did not know? Is this something you would be interested in? Do you know how to start?
Pre-CDSE-SF survey	Measure student career decision making self-efficacy prior to the CaMPs innovation	Use the internet to find information about occupations that interest you.
Post-CDSE-SF survey	Measure student career decision making self-efficacy prior to the CaMPs innovation	Find out the employment trends for an occupation in the next decade.
Journals	Students reflect on presentations	What steps do you see yourself taking that are similar to the presenter's?

Procedure

This proposed innovation took place over a period of 12 weeks. During the first month of school the researcher scheduled and recruited presenters. Requests for parental consent for each child's participation was made at Back to School night in early

September. Student assent was requested during regular class times after parental consent was obtained. Once consent and assent were obtained, pre-innovation interviews were conducted. Nine students participated in an interview with the researcher. The researcher conducted all interviews, each lasted for approximately 20 minutes. The interviews were recorded and transcribed. Once transcription was complete, the actual recordings were destroyed.

Once the interviews were completed, nine students were administered the Career Decision Making Self-Efficacy Survey Short Form (Betz & Taylor, 1993) (see Appendix C), which measures self-efficacy expectations in relation to career decision-making tasks. The survey text was entered into an online The Flesch Grade Level Readability calculator <http://www.readabilityformulas.com/flesch-grade-level-readability-formula.php> (n.d.) to obtain an average of readability formulas showing the survey reading level at fifth grade. To accommodate students' reading and comprehension disabilities, students were read the surveys. Words and concepts online were clarified by the researcher, as students requested. Due to cost, this survey was administered to twelve students. The results of the survey were shared with students for reflection and self-evaluative purposes. During class, all students logged onto the RIASEC Markers Scales and Items website (<http://jgrounds.weebly.com/riasec-markers-scalesitems.html>) to complete a free career interest survey and began exploring their career interests. After students completed the survey, they were assigned journals.

During the fourth week of school CaMPs presentations began. Career model professionals were chosen based on the Bureau of Labor Statistics, Office of

Occupational Statistics and Employment Projections (2015) which lists occupations with the highest number of entry level positions and the highest median annual wage in 2014 according to typical entry level educational attainment. Each career model was selected to represent one of each occupation for the six levels of education typically attained by people filling those positions; less than a high school diploma, high school diploma, post-secondary training, associate degree, bachelor degree, master's degree and doctoral degree while at the same time matching personality types from the Holland model. The presenters spoke for approximately 40 minutes during the students' Personal Skills Development class in order of the 11 questions provided to them beforehand. In days prior to the actual presentations, students were given time to research the specific career of the presenter by searching websites such as Insidejobs.com/careers, and careerinfonet.org. In addition to the 11 questions provided, students were asked to create at least one question of their own for the presenter. One presenter from each Holland type was selected to present to the students. Table 2 displays an example of how the similar characteristics of Holland types combine with the occupational fields to make additional connections with student interests.

Table 2

Occupations with Highest Number of Entry Level Positions and Highest Median Annual Wage in 2014

Education level	Career fields	Holland personality type
High school diploma	Customer service representative	Enterprising
	Transportation, storage and distribution manager	Enterprising
	Artist	Artistic
Post-secondary non degree award	Nursing assistant	Social
	Mechanic	Realistic
Associate's degree	Preschool teacher	Enterprising
	Air traffic controller	Conventional Social
Bachelor's degree	Registered nurse	Enterprising
	chief executive	Social
Master's degree	Education administrator	Social
	Nurse anesthetists	Social
Doctoral degree	Lawyer	Enterprising
	Medical scientist	Investigative

In September the Career Model Presentations commenced. All students in class, including the nine in the study, were exposed to the presentations which followed a standard format indicated by the presentation worksheets (see Appendix B) which students used to record their findings. In the event that students were absent, each presentation was digitally recorded and archived in the career center for all students to view within a week. However, no students were absent. Next, the presenters addressed their academic standing in high school and how that influenced their decision-making process after high school. Then, the presenters discussed their post-secondary education

(college or vocational school) and the role that experience had on their decision making. The presenters also discussed age of majority responsibilities and obligations (i.e., financial, career and social, and balancing debt and income). Additionally, the presenters discussed two life-changing decisions (e.g., marriage, children, career, etc.) and what factors were considered. Next, the presenters talked about the career path they followed to their present position. Then, they discussed how they found their job, what interested them about the job, the interview process, and challenges they remembered from the first year or two of their career. Finally they concluded by describing their day-to-day routine and the future of their position. After each presentation, there was a period of time for students to pose their questions to the presenters and record their observations and inquiries. The first of six presentations was a pharmacist, followed by dental hygienist, electrician, veterinarian, baggage handler and the video game designer.

During each presentation students completed a presentation worksheet (see Appendix B). In their next journal entry students wrote about their impressions of the presentation. For each journal entry students were allowed fifteen minutes of their class time to write their reflections. The journal reflections were analyzed for themes. The prompts, which were different for each entry, asked students to reflect on themes that may be useful to clarify or modify their own goals, career expectations and interests. They were given the liberty to expand on prior knowledge to help in this process by reflecting on past presentations, interviews, or experiences outside of school (e.g., people and places they have visited).

Data Analysis

Qualitative data was collected through pre- and post- student interviews, student journals, and presentation worksheets. For qualitative data collection, semi-structured interviews were used as one method of data collection because the answers to the questions have unknown variables that would not otherwise be explored with quantitative instruments with closed-ended items (Clark & Creswell, 2015). Interviews were conducted and journal entries were made at school and during the class time. The CDSE-SF (Betz & Taylor, 1993) was a second source used to collect descriptive data (mean, median, and standard deviation) and an instrument used for examining student self-efficacy before and after the innovation. Identifying a baseline provided by the pre-surveys and pre-interviews exposed the importance of how students perceive their own identity as it relates to their future development (Stringer & Kerpelman, 2012). A thematic analysis approach using constant comparison was used to uncover themes and patterns to reveal how students described their career interests before and after the innovation as well as barriers to achieving their career goals.

Interview Analysis. Processing the interviews started with listening to the recordings of interviews and transcribing each word and verbal gesture by the interviewee. No written notes were taken during the interviews so focus could be given to the interviewee's answers in order to have the best opportunity for a follow-up question. Transcribing took approximately one hour for every ten minutes of recording. Once all interviews were transcribed copies were made and given to each student interviewed to read and ensure accuracy. None of the students made any corrections. At this time the

transcripts were reorganized by separating student answers from questions and placing them into a spreadsheet. Coding began after the interviews were conducted and transcribed.

Journal Analysis. The first journal entry was made August 10th and the last entry made December 5th. Twenty-three journal prompts were pre constructed to coincide with CaMPs presentations and activities included in this innovation. Nine journals were collected in preparation for analysis. The coding process was initiated by reading through and numbering the pages of each journal. The entries were then transferred to a spreadsheet. Annotations of apparent themes and patterns were made and initial ideas for codes were developed for each journal entry on the spreadsheet.

Coding. Data analysis began at the completion of the innovation in November following Saldana's (2013) recommendation of one read-through, then initial coding analyzed via analytic memo writing to identify, connect and label developing categories. Data from both journals and interviews were viewed and analyzed together to assist in their interpretation. Each cycle of analysis began with reading through all of the data. Annotations were made from the interviews, journals and field notes and initial observations were added in the research journal. Qualitative data was analyzed in view of research questions one, two and three. Given the large number of codes, axial coding was used as a part of the constant comparative method to discover sub themes and collapse similar codes into single themes. Connections were made in memo writing and by reorganizing data into what Saldana (2013) describes as "axis" categories. These categories evolved and joined others to form a central theme as explained by thematic

analysis.. The initial coding started with provisional coding, aligned to the research questions. A preliminary list of codes was pre-constructed containing themes common to both the research and interview questions. On the second reading, decisions on major themes were made and transcribed onto a spreadsheet. By cutting and pasting onto a second spreadsheet made the coding process of a large amount of data more efficient. The first column of the spreadsheet was used for assigning codes, the second column for student answers, and the third column for annotations on coding decisions. The first cycle of coding resulted in 128 codes. After grouping codes, another reading of the interviews was completed to confirm the accuracy of the coding decisions. The codes were written alone on a separate spreadsheet to spot any redundancy in descriptions or meaning. In an effort to recognize patterns more easily, major themes were separated by different color highlights. Initial codes were grouped by theme. As a result of further decision-making, some groups of codes were consolidated into one code, e.g., collapsing codes self-efficacy, self-improvement, self-determination, self-motivation, self-identifying, self-importance, self-help, self-centered, self-reliance, and self-realization into self or uncertainty for statements made by students; “I don’t know” and “I’m not sure”. This process of examination was repeated for all of the codes until the number of codes was narrowed.

Emerging themes from student interviews and journals were aligned to answer research questions and form an interpretation of students’ perspectives. Students’ mention of future plans or desires to achieve (e.g., “Get a job” or “Go to college”) were categorized as aspirations and coded ASP. Aspirations described an outcome to planning

which was interpreted similarly as an interest. Interests were coded INTR which described an activity, place or object such as drawing and theater plays. Career interests, coded CA_INTR were distinguished by naming a person or the duty performed e.g., “I would like working at Circle K” or “Probably be a veterinarian”. Students provided support for their interests through their self-evaluative descriptions coded EVAL_SELF and supports they received from others coded SUP_REC e.g., “My dad because he’s the one that shows me”. Many of the supports students received were from family, however those coded Career Model Family, CAR_MOD.FAM were descriptions of work that family members performed (e.g., “My Uncle Troy, he’s a nurse at college”.) These codes align to answer the first research question centered on interests. Similarly, codes expressing challenges, CHAL, money, MNY and uncertainty, UNCRT, aligned to the second research question centered on barriers. Lastly, students’ discussion on their perceived steps in preparation for a career were identified and coded accordingly. STPS was code for steps which described students’ awareness of prerequisites to work. Career model steps, CAR_MOD_STPS described jobs and work that leads to a career position. Preparation, coded PREP, described how students believed was how to prepare for a career e.g., “You need your resume”. The codebook for the interview transcriptions is presented in Appendix D.

Table 3 describes the schedule of data collection, the sources from which they were obtained and the research question they address.

Table 3

Schedule of Data Collection

Sequence	Action	Source	Research Question
August to September	<ul style="list-style-type: none"> • Recruitment of all participants for the project • Call / phone screen presenters • Pre- Interview 	<ul style="list-style-type: none"> • Student assent and parent informed consent forms • Presenter recruitment script • Self-developed interview questions 	1, 2, 2b.
	•RIASEC Markers Scales	•Obtained by website	
	•Students begin journals	•15 minute written student reflections in composition books	
	•Students research career interests independently	•Obtained by website	
	Pre-Survey 8 target students CDMSES-SF (Betz & Taylor, 1993)	• Purchased online	
September to November	Students research career interests independently to prepare questions for each presentation. 1 of 6 Weekly Career Professional Presentations	Self-guided internet searches	1, 2, 2a, 2b.
	Students complete Presentation Worksheets following each presentation	Recruited from community	
		Self-developed presentation worksheets	

Student journals	15 minute written student reflections in composition books
Students research career interests independently to prepare questions for each presentation	Self-guided internet searches
2 of 6 Weekly Career Professional Presentations	Recruited from community
Students complete Presentation Worksheets following each presentation	Self-developed presentation worksheets
Student journals	15 minute written student reflections in composition books
Students research career interests independently to prepare questions for each presentation	Self-guided internet searches
3 of 6 Weekly Career Professional Presentations	Recruited from community
Students complete Presentation Worksheets following each presentation	Self-developed presentation worksheets
Student journals	15 minute written student reflections in composition books
Students research career interests independently to prepare questions for each presentation	Self-guided internet searches
4 of 6 Weekly Career Professional Presentations	Recruited from community
Students complete Presentation Worksheets following each presentation	Self-developed presentation worksheets

	Student journals	15 minute written student reflections in composition books	
	Students research career interests independently to prepare questions for each presentation	Self-guided internet searches	
	5 of 6 Weekly Career Professional Presentations	Recruited from community	
	Students complete Presentation Worksheets following each presentation	Self-developed presentation worksheets	
	Student journals	15 minute written student reflections in composition books	
	Students research career interests independently to prepare questions for each presentation	Self-guided internet searches	
	6 of 6 Weekly Career Professional Presentations	Recruited from community	
	Students complete Presentation Worksheets following each presentation	Self-developed presentation worksheets	
	Student journals	15 minute written student reflections in composition books	
December	Post - Interview	Self-developed student interview	1, 2, 2a, 2b.
	Students Goals	Self-developed Goal data sheet	
	Post-Survey 9 target students CDMSES-SF? (Betz & Taylor, 1993)	Purchased online	
	Student journals	15 minute written student reflections in composition books	

CHAPTER 4

DATA ANALYSIS AND RESULTS

The analysis of this study is a combination of quantitative and qualitative data. Each research question was discussed and analyzed using a triangulation of supporting quantitative and qualitative data. Quantitative data was collected through the Career Decision Self-Efficacy Short – Form survey (Betts & Taylor, 2012). Qualitative data was collected through student interviews and journal writings. All student names provided in this study are pseudonyms. The names used are famous baseball pitchers which have nothing in common to the students' true names to protect their identities.

Research Question 1: *How do eleventh and twelfth grade high school students with learning disabilities from a Title I school describe their career interests before and after participation in the CaMPs program?*

In the pre-CaMPs program, most career interests mentioned were family members or someone in their life. Family career models were prominent themes when students discussed or identified people they observed in a career (e.g., “My uncle. He’s a cop”, “My dad’s sister, she’s a border patrol” or “My cousin is a nurse”). One exception was Christy, whose mother is a writer. She initially stated that she wanted to be a music teacher. Responses indicated that prior to the innovation, students relied on role models from their family when they considered possible careers, as well as for purposes of support. Although most students rely on family in their current situation, this study attempts to provide additional models for students to discover and choose their career interests.

Beginning with the introduction of CaMPs presenters, students had the opportunity to build their repertoire of models and experiences. In the pre-interview, Sandy was confident she wanted to be a nurse, like her aunt. In the pre-interview, Cynthia was asked to describe a person with a career. She responded, “I don’t know anybody”. Rollie described a therapist’s career “Just like a therapist, I guess like counseling like families”. Students demonstrated an awareness that there were “millions of other people trying” to compete for similar careers in the pre-innovation.

Students described their career interests primarily as they related to support of family. First, career interests were described in the context of *providing* support. Students described how family would provide financial support and skill training as they pursued their careers. In the pre-interview, Nolan expressed his focus of giving support by how he “helps out family when he can”. Pedro claimed to “do some other jobs to help my family”. However, students also described how their career interests were valuable because they could help and support others. Bob, who in the pre-interview, described how he could provide support from a position of control as a “producer who helped make that happen”. Rollie, in the pre-interview, described how an anthropologist helps uncover “things like that can be buried”). Pedro discussed in both the pre and post innovation, how his career was useful for helping others by fixing air conditioning systems.

Students included how they personally observed or experienced instances where support was given on tasks such as remodeling a house, laying tile, painting and learning to use tools. Pre-interview discussions described how career interests were aligned in terms of giving support, “My mom works for us so that we can have what she gives us”

and “She’s a hard worker, even though she’s a housewife” as though a housewife is a circumstance rather than a desired career. Nolan, who earlier mentioned his desire to give support, expressed confidence in his career choice because he was also receiving support from his dad, who was going to teach him. By describing how their career interests are useful and supportive to others, students were encouraged to develop more sustainable interests.

Experience demonstrated its value in helping students discover their interests. Before the CaMPs process, students described their career interests as deriving from multiple sources with no reasonable experience to support their decisions. In the pre-interview, Sandy was confident she wanted to be a nurse, like her aunt, but had no experience in the field. Bob wrote that he would play in the National Basketball Association despite not having ever played on the high school basketball team. He reasoned that, ever since he was two, he has been playing basketball and that was enough reasoning to choose the NBA for his career. Alternatively, Cynthia did not know of any careers in her pre-interview.

Many career interests were identified because they associated them with fun which describes their reasoning for their career decision-making process. In the pre-interview, Rollie mentioned an anthropologist, not because of any particular travels or exposure, but because it seemed fun and interesting. Fun was a theme described as part of students’ career interests. When students discussed their career interests, they rated them by stating, “It seems pretty fun”, “It seems fun and easy”, “I absolutely loved it. It was fun” and “Because it’s really fun”. Students used the criteria of fun in support their career

interests. Fun is indicative of how students feel about their interests and motivation, but lacks support in experience.

The qualitative data exhibited students' thinking about career benefits before the innovation was markedly different from their thinking after. Before the innovation students talked about their career interests in the context of job benefits such as, being able to travel, take time off work or get paid double. In the post-intervention, students mentioned stability and promotion. These responses are noteworthy to learn how the CaMPs process informs students' career interests.

Not all students changed their career interests. Some students began the study being able to support their interests with solid reasoning. Pedro said he wanted to work in HVAC in both the pre- and post-interviews because he believed it was a dependable job in Arizona. Similarly, Nolan wanted to be an electrician in the pre-interview, stating that he felt the job was easy and was confident his father would help him. In the post-interview, he stayed with his original decision of being an electrician because he liked the experience of working on the job with his dad. Qualitative data showed that although many students were brief in their descriptions, they had added to their repertoire of career information. In the post-innovation, reflections demonstrated students' confidence in securing a career by reasoning that, "there are many different jobs in this world" such as, working with computers, answering phones, drawing blood, working with animals, coaching, writing, video editing, working with electricity, cleaning teeth, and caring for children. Now, through a combination of family support, the capacity to use their resources, and experiences, students' descriptions demonstrated confidence in their

ability to achieve their goals. Students' who changed their career interests, chose a career interest that they "wanted to do" instead of what they felt, they "had to do". They did so after having a related experience and after making the distinction between a career chosen out of obligation and one selected for its desirability.

Once students had the opportunity to view and listen to firsthand accounts of different CaMPs presentations, they discussed new career interests in their journals and post-interviews. Seven of the nine students participating had chosen a different career interest prior to the innovation. Christy stated that although she loved the theater, she was "switching over to being a writer." Instead of playing in the NBA, Bob submitted to being a coach, a trainer or working in a warehouse. In Rollie's post-interview, she described providing therapy for people in jail. Nolan held on to his original choice of being an electrician because he liked the experience of working on the job with his dad. In her post-interview, Sandy described her new experiences in a related job and decided that nursing was no longer a career interest because she did not like helping other adults with toileting and that she was now undecided. Sandy supported her reason by changing her career interest with an experience that taught her to assess the skills, duties and routines involved in her career interest. Bob realized as a part of preparation, "Learn more things and you will know what you like". Sandy and Bob illustrate how students became more knowledgeable in the post-innovation by describing their interests after firsthand experiences and speaking with CaMPs presenters. Students described how their career interests changed after the CaMPs process with details of family support and reassurance of added experiences. See Table 5 for a complete list of career interest

changes students made.

In the post-innovation reflections, students' career interests were discussed with a sustained awareness of family (e.g., "you're away from your family a lot" and "I have family in Mississippi"). Understanding how students chose their role models was informative about what careers they found interesting. None of the students mentioned doing a job that would take them away from family. Cynthia, who initially stated that she did not know of any careers discussed her cousin's career in the post innovation. Randy's mother was the center of his post-interview discussions where he described his interest in becoming a stock clerk at Wal-Mart or Fry's. His confidence was supported by similar jobs his mother had him do at home. Randy also mentioned an interest in going to school at Universal Technical Institute because his mother told him that he was good at fixing things. Details in the post-innovation were also more descriptive when students talked about their firsthand experiences (e.g., "My dad has been teaching me how to spray paint, glaze, stain" and "My mother is a professional writer... she would write all the time; she wrote down notes, she wrote little short stories, she wrote poems and I swear I got that from her"). Although family career models were a great resource, students may benefit from a broader scope of career options.]

Post-innovation interviews revealed an increase in student references to non-family member career role models. For example, Cynthia, discussed how she became interested in nursing while watching a nurse draw her blood. Likewise, Randy described his interest of being a stock clerk after projecting himself in the role of someone he observed "working at Circle K. I'll just stack up more chips and cookies". The CaMPs

innovation provided students an additional decision-making variable. Students described career paths of presenters (e.g., “Something interesting about her pathway to becoming a pharmacist is the way she started out thinking she wanted to do one thing but turned out a pharmacist” and how “interesting to hear about his path and decision to become a vet”). Randy learned about career expectations through firsthand testimony, “He said it’s about putting their bags on the plane”. Nolan found the similarities reassuring, “I also have family that do electric, that have been there for a long time.” Students’ descriptions in the post-innovation illustrate pathways for the development of student self-efficacy through support and reassurance of their career making decisions. Roger also supported his career interest by identifying with a CaMPs presentation, “I think that’s a great career because I’m interested in it too” and Sandy reasoned a different career interest because her first choice was “not something that I’m passionate about”. Students’ explanation for their changing career interests was supportive of the CaMPs innovation goals. Student reflections described how their career interests were supported through the CaMPs innovation.

Online research was an important part of the CaMPs program to help students discover their interests using their O’Net Interest Profile / Holland code (Rounds, 2016). Table 5 shows how students scored and their resulting interest codes. The strongest interest code is the first letter. However, the profile is a blend of the three. Students scored high in Artistic, Social, Enterprising and Conventional. Artistic was an interest code for students with interests in careers such as being a rapper, a song writer, a theater director and a writer. Other students were interested in playing basketball, being an

animator and being a therapist. Social was a high score for students with outgoing personalities and those who mentioned a desire to join activities, clubs and sports. High enterprising scores are representative of traits such as selling, managing, operating or buying items in business-like environments. Enterprising careers are typically ones where they are organizing, leading and high energy. The students whose scores were high in Enterprising liked working with tools and cited their interests in areas where they saw a need in the area where they live. Their interests were targeted at satisfying curiosities e.g., playing football to “see what kind of drills that the Arizona Cardinals are doing”, being an editor to “see how other people edit” and being an actor to “see their studio”. Conventional describes those individuals who are very detail -oriented and concerned with following rules and procedures for careers in areas such as accounting or science.. The student scoring high in Conventional had chosen a career interest where following schematics is essential. Table 4 illustrates how students scored on the interest profile to create their Holland code. The numbers in bold show the area where score values were greatest.

Table 4

O'Net Interest Profile

Students	Code	Realistic	Artistic	Investigative	Social	Enterprising	Conventional
1.	SAE		18		21	16	
2.	CRS	25			24		31
3.	SEA		22		27	25	
4.	AER	20	36			23	
5.	ASI		37	28	31		
6.	ESA		19		21	22	
7.	ARS	10	13		7		
8.	ASE		38		2	2	
9.	ERS	34			30	37	

n=9

Table 5 illustrates students career interests before and after the CaMPs innovation.

Table 5

Career Interests

Students	Pre career Interest	Post Career Interest
1.	Nurse	Undecided
2.	Electrician	Electrician
3.	Nurse	Nurse
4.	NBA Player	Warehouse worker
5.	Animator	Therapist
6.	Video Game Designer	Vet Tech
7.	Rapper	Wal-Mart Stock Clerk
8.	Theater Director	Writer
9.	Electrician	HVAC

n=9

Since there was no pre-interview question on the use of online research for career selection, qualitative data was collected for only post-innovation interviews. Students described this aspect of the innovation by their descriptions of what they learned, “An electrician gets paid more.” and “you can do a lot of stuff by using it, “you can do a lot of

stuff by using it and it can help you find any information you need”. However, comments also included statements such as, “I have not learned much on ONet” and “The only thing that really interests me is the arts, and they don’t really have a lot of that on there.” Students concluded that they did not always get the results they anticipated and that there were many careers to choose from (e.g., “There are many different jobs in this world, some you might never even heard about”). These comments may be interpreted as a part of the study where students began to engage in greater self-evaluation.

Research Question 2: How do eleventh and twelfth grade high school students with learning disabilities from a Title I school describe barriers to achieving their career goals before and after their participation in the CaMPs program?

Barriers in this study are defined as areas of uncertainty and challenges. The qualitative data from student interviews and journals showed that barriers to student career self-efficacy were identified as feelings of lack of confidence, uncertainty, and fear. Other barriers mentioned were having independence and freedoms taken away, which may be understood as their desire to grow up and be on their own. Money was mentioned as a type of barrier by only one student, Bob, who wrote about his desire to give back to his community if he had money. The code with the label money, was used more frequently to describe what it could do, such as, having the capability to end world hunger or ruin lives. In addition, money was predominantly discussed in terms of pay, as students researched careers online.

In the pre-interview students expressed concern with a lack of specific knowledge relating to career development. Some reported that they didn’t know the proper career

labels, didn't know what careers to pursue and/or didn't know how to apply for further education and training. Stating, "I'm confused about which one I want", "I don't know what it's called, something to help learn construction and stuff", "I'm unsure of what I really want" or "I'm not sure what else".

Students discussed how they were challenged by feelings of having limited intelligence or lack of knowledge. In the pre-interview, students admitted to feeling inadequate about their intelligence, unsure about what they want or not knowing what to expect. Their disclosures infer that they don't know what they don't know and don't understand what barriers may be keeping them from achieving.. One student said, "I think the difficult thing is going to be, I think math and English" or "We're reading Shakespeare right now and it's pretty hard to understand". One student was very explicit, stating that one of the challenges students recognized as obstructing their progress was feeling "left behind and end up not going to college", she had "a mental disability and you can't do a lot of things that normal people can." However, despite their disabilities, only one student named her disability as the reason that could keep her from being competitive with other non-disabled peers. These types of barriers are resolved with added experience and learning which CaMPs attempts to provide. CaMPs provided students with the opportunity and exposure to scenarios of successful role models who have dealt with challenges and uncertainty. Qualitative data collected after the innovation showed that students improved in their ability to deal with uncertainty and challenges. In the post-interviews, challenges and uncertainties were discussed in terms of a solution to their problems.

Psychological factors were mentioned as another challenge. Randy, who has goals of singing and performing, admitted that he is frightened of being in front of an audience. However, he is attempting to overcome this barrier by seeing a therapist. Christy feels her greatest barrier is her confidence. She says that she would choose to publish her poetry or stories if she had the confidence. Other barriers included attentional problems. For example, Roger stated, “People distracting me. Like keep asking me to do stuff with them when I’m trying to concentrate on things I have to do.” Roger indicated that he wants to accomplish his goals, but he “can’t do that without the distractions” of TV, video games and hanging out with friends. Other students also admitted to having low self-esteem. As students increase in self-efficacy they may develop their knowledge of outcomes and strategies to navigate their perceived barriers.

Students comments indicating that they didn’t know how to do something or didn’t know where to go were labeled as uncertainty. However, students did report that they found support from family and resources such as teachers, therapists and social workers. Students described strategies such as, thinking outside the box, considering more than one option and being open- minded during times of adversity. Furthermore, student reflections described the encouragement from CaMPs presenters who told them to find out about things they don’t know, work hard, try hard and realize their achievements.

Research Question 3: *How do eleventh and twelfth grade high school students with learning disabilities from a Title I school describe their career preparation process after participation in the CaMPs program?*

In the pre- and post-interviews students consistently agreed that there was a need for continuing educational opportunities. A college education was a prominent theme, but it was not discussed with an objective in mind. In the pre-interviews, students did not make the connections from a school subject or college major to a specific type of career. Students described college as a destination after high school because they do not have an alternative plan. In addition to the previously described programs on campus encouraging college enrollment, the innovation extended the career preparation process with online research. Although students wrote that they felt the online activities were boring, their attitudes seemed to change as they described their surprise with the new information they found from the online surveys and the interest profiler. After their online activities and interaction with the CaMPs presenters, students wrote about their research findings regarding their career interests which included the requirements for higher education. Descriptions of career preparation such as assessing pay, changed after they had done research online. By adding to their knowledge of careers, resources and strategies to extend their inquiry, students began to describe the link between preparation and realizing their career interests.

Qualitative data illustrates how the language students used to describe their preparation had a more assertive tone after the innovation. Students' language indicated confidence and a strong self-image, although only time will tell if their confidence levels

were realistic. Nolan, whose dad is an electrician said, the work was “easy”. Christy says that her employers are “definitely going to accept me” and Rollie states, “I will be taking the career that I want to take”. All of these are examples that are indicative of the feelings they experienced when approaching the career preparation process. The CaMPs program added assurances and a forum for students to process their career interests. In addition to new vocabulary to describe their preparation process, their mention of stability demonstrated another element to their planning approach. Students also described steps toward career readiness in their discussions on collecting career information, experience, CaMPs, education, and defining success. Words students used to describe their job interests such as “stuff” and “or something” showed the extent of students’ knowledge of their career interests. Other examples include, “that stuff interests me a lot” or comments which described the work that people do such as “I help them with like funeral cost” or “like sitting behind a desk, working for insurance networks or something”.

In the pre-innovation, students described preparation by collecting career information though “experience in case you want to make that your career” and then, “when it comes to a career you want more.” Students described the use of tools such as checklists. In the post-innovation, preparation was described by “a career you got to like practice for it” and “after that just apply for a job in that career.” Interview discussions revealed the students’ competency in using their resources to gather information about their career interest such as, searching online, talking to their counselor, case manager, social worker or “anyone else” to get advice regarding their career interest. Students

spoke about the career outlook they found online, (e.g., “They said that they were ‘not the only person trying to do that one career. There’s like millions of other people trying’”).

Interviews showed how students gathered information through personal experience. Christy said she researched different areas and publishing offices, Sandy found a job in Home Care “that’s like similar to the nursing field”. Bob said he would “reach out to someone that did” the job, and Rollie found out about her career interest by watching a documentary in school. Discussion from the post-interviews offered similar results for how students described preparation, “just keep practicing till I’m ready”, “start practicing”, and “do volunteer work”. Preparation topics described by students included research, experience, and interviewing people.

CaMPs introduced students to additional models and information that could help them to build new criteria (e.g., Randy says that he would be good as a baggage handler because he is good at loading up boxes. Pedro states that he favored the electrician’s career because there were fewer degrees required, better pay and because he is good with tools.) Student descriptions of knowledge they acquired from CaMPs supports the explanation that students considered different criteria in selecting goals and career preparation.. Students identified their own interests by selecting which of the CaMPs presenters appealed to them most (e.g., “The one that is better is electrician, because I’m really good with tools”, “I was thinking that I would like to do that too”, and the thing “I have in common with him was, we both knew what we liked and had an idea of our career in high school”). Roger described how he and the presenter both worked “really hard.”

Students' reflected on the career pathways of CaMPs presenters, "He knew what he wanted to do as he grew up" and veterinarians work a lot of hours, make a lot of money and get stressed. Bob made the observation of how a CaMPs speaker referred to himself as a "black kid" who "worked his way from the bottom." He also commented on the advice he received, "He told me to find out about the things I don't know, even if you don't need to know it." The presenters spoke of steps to take in preparation for a career and students referenced this concept in their journals and post-interviews after the CaMPs intervention, "I find it interesting", "He was smart about what he did" and "I like the way he got where he is today". Student confidence may be credited to information gathered from testimonials of CaMPs presenters.

Students discovered that career preparation involved asking questions and talking to people in the field to gather information and helps others to "find out about you." Bob concluded that after attending the CaMPs presentation on video game design, the more he learned about one interest, the more he learned how to apply his knowledge to other areas, which is the beginning of a cycle of exploration. The Students' inquiry and discovery supports student growth after participation in the CaMPs program.

Discussions about career preparation demonstrated that students had made the connection between getting an education and preparing for their careers. Students described the necessity of being "a good student" by listing student values, (e.g., does not miss school, does their work, turns work in and does not talk back to the teacher). Students noted that "once you graduate with the stuff that you need, you move on to university." The discussions about going to college indicated that students felt a need to

continue their education. However, despite their desire to go to college, students did not discuss college with any clear objectives in mind. They made no link from a school subject or college major to a specific type of career. College was mentioned as a prerequisite to a career saying they needed to know what courses to take to “be prepared” and “I know for a fact that I need at least four years of schooling on a university level.” Another student advised, “You need to, I guess, study” and “for a career, you get more chances if you have a degree.” Furthermore, some students stated that for a “career, pretty much, you have to go to college” and “For a career I will be going to college and I will be taking the career that I want to take.”

In addition to needing an education, students expressed the need for further experiences in order to prepare for a career. Students’ discussions exposed the criteria they used for career preparation such as getting “a job first, before I can get a career”, or “to actually land an interview” as well as finding “a guy that knows how to do the job”. Roger described how he volunteered at the food bank hoping that the experience would help him to get a job. Students commented on what the Ramp agent said, that in order to prepare for a career they “need training and need to work together.”

Students did not discuss success in terms of their educational achievement. Before the innovation, students described success in terms of their past experiences and family models. After the innovation, students defined success as goal accomplishment, as a means to support themselves, supporting their family and hard work. One student showed admiration for her sister because she “tries her best on everything”. Other students described finding success in following the rules and working hard. Alternatively, instead

of following rules, one student prioritized “having the freedom to do things for making things happen”. With the exception of wanting to play in the NBA, students did not project their abilities onto careers that were beyond reasonable expectations. For example, Roger believed that success was based on task completion because “in the end you are proud of yourself”. Bob defined success as having money, power and freedom to do what you want, and Pedro defined success by being able to afford a house, family and enough money to do what he wanted. To Sandy, success was work completed and “having reached your goal to go on to the next [step].” Christy believed that success requires being prepared to “work hard”. Her stepfather was a model of confidence and success because he was being patient with the people he worked with. Conversely, Bob stated that he did not like being told what to do, and defined success instead by what he could control.

Research Question 4. *To what extent does career decision-making self-efficacy change for eleventh and twelfth grade high school students with learning disabilities from a Title I school related to their participation in the CaMPs program?*

The purpose of the quantitative data collection was to support the interpretation of data shown on Table 1 and 2 through descriptive statistics. Table 6 shows the students’ scores on the Career Decision Self-Efficacy Survey: Short Form for each subscale

Table 6

Pre- and Post-Survey Descriptive Data

Variable	Pre-Mean	Post-Mean	Pre-SD	Post-SD
Self-Appraisal	3.66	4.00	.63	.60
Occupational Information	3.64	3.87	.67	.70
Goal Selection	3.60	3.93	.81	.73
Planning	3.24	3.67	.76	.62
Post Problem	3.31	3.58	.64	.89
Total	3.49	3.80	.64	.58

n = 9

Quantitative data confirms that students felt more self-efficacy in career decision-making after the CaMPs program. A paired-samples t-test was conducted to compare student self-efficacy before the CaMPs program and after the CaMPs program. There was a significant increase in the average student self-efficacy score before the introduction of the CaMPs program (M=3.49, SD=.64) and the average score after the completion of the CaMPs program (M=3.80, SD=.58), $t(8) = -2.83, p < .05$.

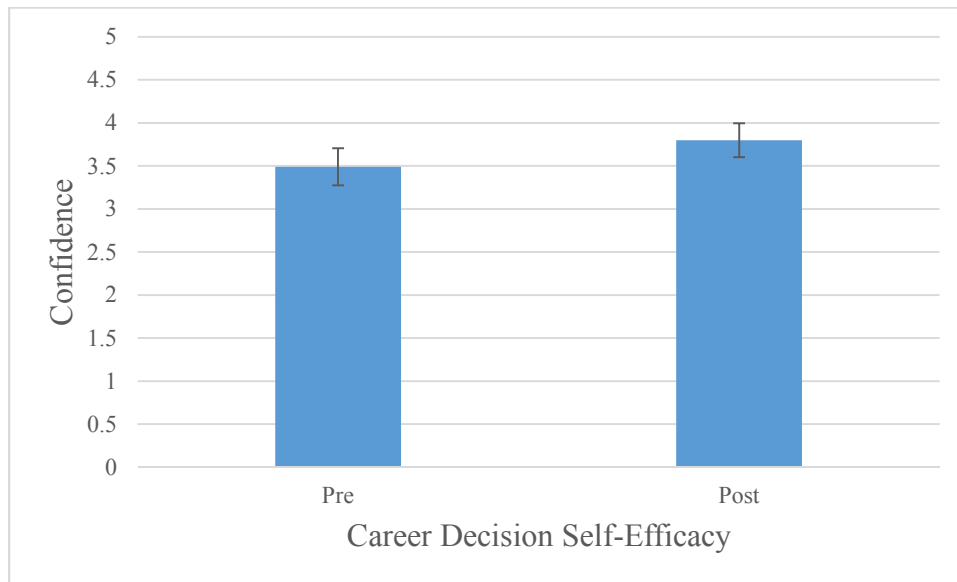


Figure 2. Pre- and Post Career Decision Self-Efficacy Survey: Totals

Qualitative data supports quantitative findings of increased self-efficacy after CaMPs program as shown in students' descriptions of new interests. First, students demonstrated improved self-efficacy in changing their career interests to match their experiences and abilities. Second, students expressed confidence in their beliefs that they, "can always do something else in another field" and in finding "a chance to make a difference." Third, students described where they found confidence. For example, self-efficacy was manifested in one student's desire to be independent by owning a business, "doing what you want" and "not being told what to do." Students described their feelings of being held back stating, "I want to be my own person, living on my own."

Paired sample t-tests were conducted to compare each subscale of the CDSE-SF before and after the innovation. None of these t-tests were significant. Student scores on the Self-Appraisal scale of the CDSE-SF before ($M=3.67$, $SD=.63$) and after the CaMPs program ($M=4.00$, $SD .60$), $t (-1.83)$, $p>.05$ were compared and the results were not significant indicating that student self-appraisal did not appear to be significantly impacted by the implementation of the innovation.

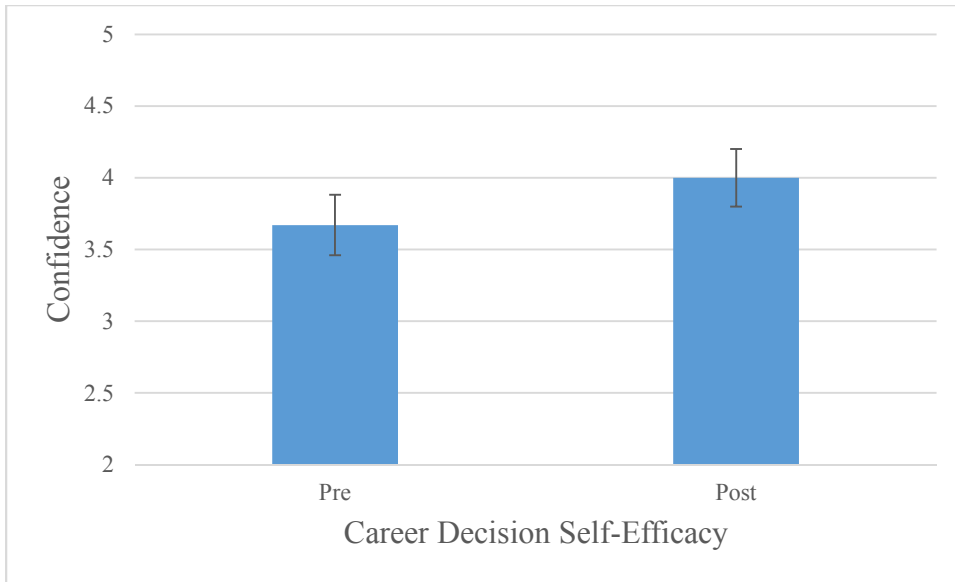


Figure 3. Pre- and Post Career Decision Self-Efficacy Survey: Self-Appraisal Scores

A paired samples t-test was also conducted to compare Occupational Information before and after the CaMPs program. There was no significance in student Occupational Information before ($M=3.87$, $SD=.70$) and after the CaMPs program ($M=3.64$, $SD .67$), t (.880), $p>.05$.

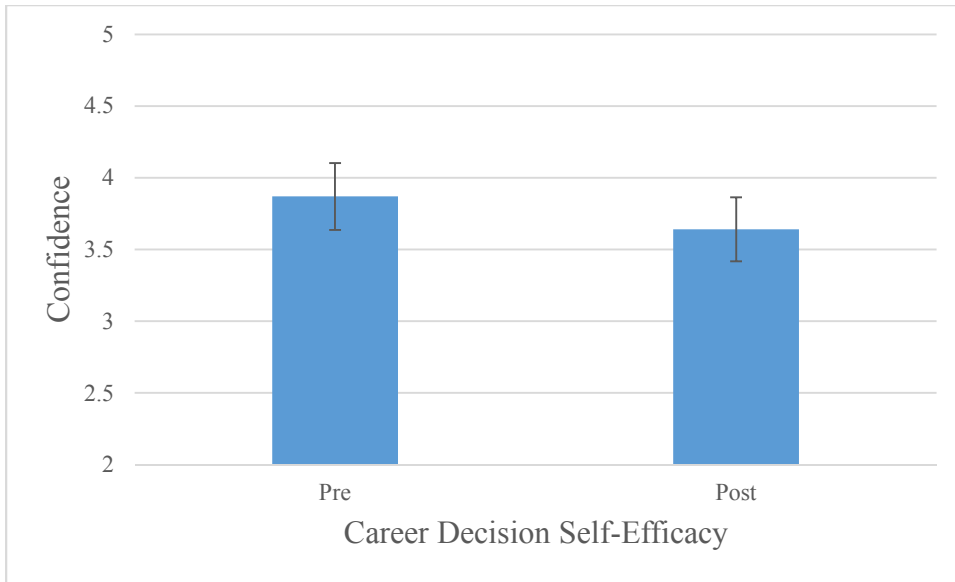


Figure 4. Pre- and Post Career Decision Self-Efficacy Survey: Occupational Information Scores

A paired samples t-test was also conducted to compare Goal Selection before and after the CaMPs program. The results revealed a marginal significance in student Goal Selection before ($M=3.60$, $SD=.81$) and after the CaMPs program ($M=3.93$, $SD .73$), $t(-2.13)$, $p=.06$.

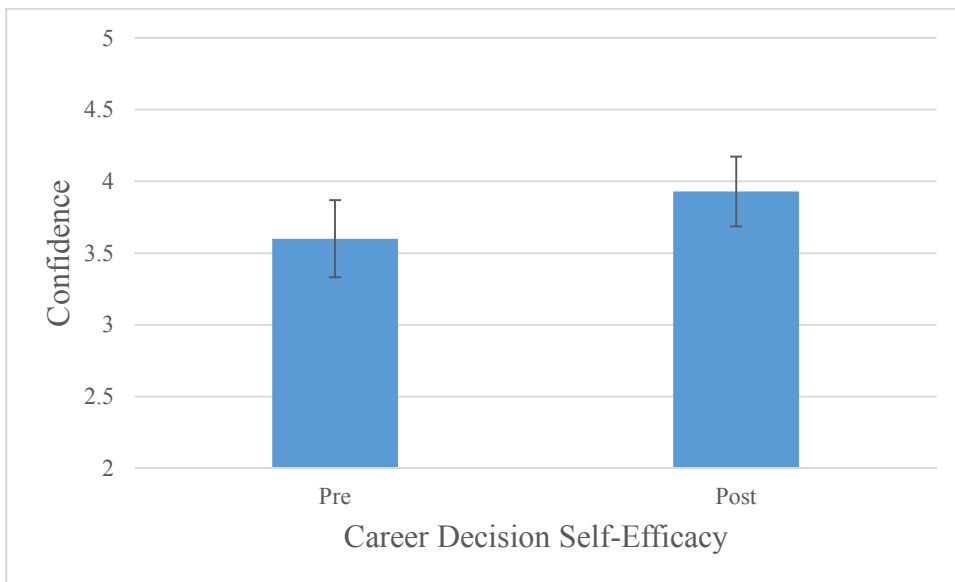


Figure 5. Pre- and Post Career Decision Self-Efficacy Survey: Goal Selection Scores

A paired samples t-test was conducted to compare Planning before and after the implementation of the CaMPs program. There was marginal significance in student planning before ($M=3.24$, $SD=.77$) and average for after the CaMPs program ($M=3.67$, $SD .61$), $t (-2.19)$, $p =.06$.

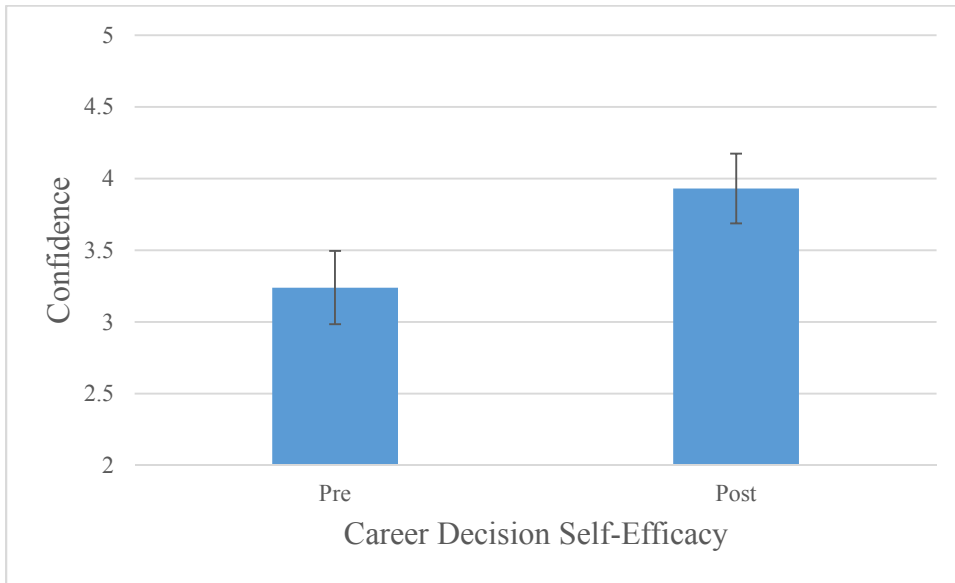


Figure 6. Pre- and Post Career Decision Self-Efficacy Survey: Planning Scores

Finally, a paired samples t-test was conducted to compare Problem Solving before and after the CaMPs program. There was no significance in student Problem Solving before ($M=3.31$, $SD=.64$) and after the CaMPs program ($M=3.58$, $SD .89$), $t (-1.89)$, $p>.05$.

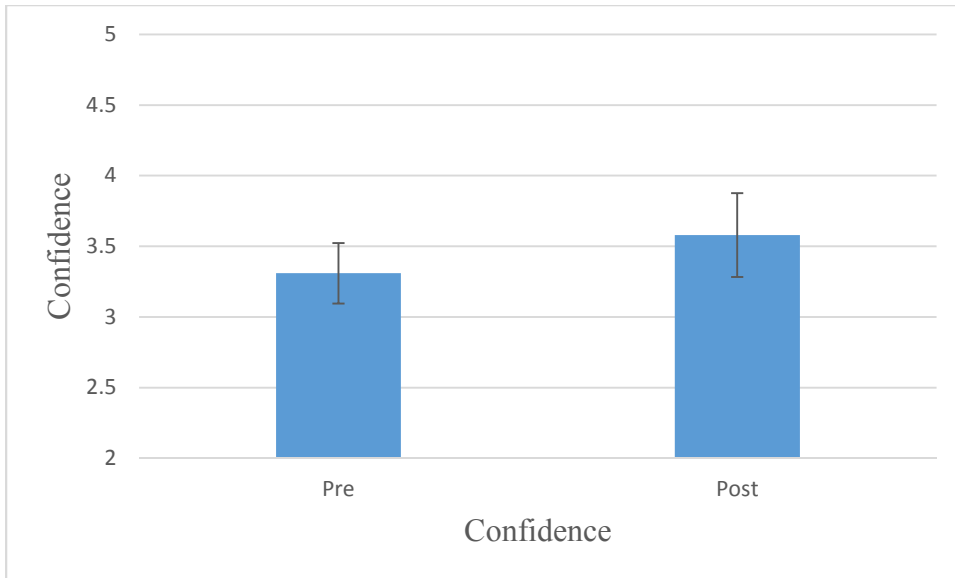


Figure 7. Pre- and Post Career Decision Self-Efficacy Survey: Problem Solving Scores

Concept Map

A concept map was constructed to visually demonstrate how the codes mapped over the research questions. Concept maps are visual tools used to graphically represent how concepts are organized. (Wilson, Mandich & Magalhaes, 2015)

The map was central to showing how the themes come together from the student journals to address each research question. Through the process of constant comparison some themes were added, modified or removed from the concept map. The map was instrumental in simplifying through illustration the aim of the themes and overall focus of this study. Grounded by Self-efficacy theory which postulates that models are a source “of efficacy information, which lead to the initial development of efficacy expectations and can be used to increase them” (Betz, 2004)., the map conceptualizes the decision-making process for this innovation. Starting on the left side of the map with efficacy, a student considers the people they know and places they visit to provide experiences and

models of what is to be learned. In considering a career interest, students make a determination that guides their expectations. As they described their interests through their interviews, journals and codes students asked themselves, “Do I have enough efficacy to be interested?” or they may have described barriers that presented challenges or uncertainty. If they’ve had the experiences and positive feelings of self-efficacy, they were able to describe the preparation and steps they know in beginning a career.

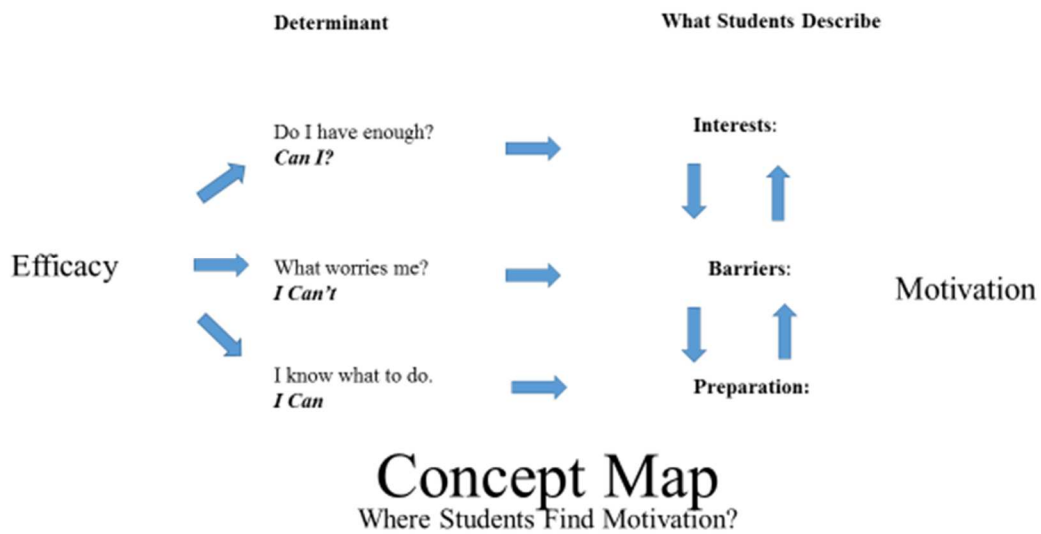


Figure 8. Concept Map

CHAPTER 5

DISCUSSION

This chapter discusses the integration of qualitative and quantitative findings, lessons learned through out the action research process, implications

Summary of Findings

The goal of this mixed methods study was to develop and evaluate a career based innovation for high school students and to review the relationship between the innovation and students' self efficacy beliefs. Studies indicate that students realize more productive outcomes when they engage in purposeful tasks. For example, the findings in this study are reflective of research from similar studies which showed that students worked through challenges when they believed education would create employment opportunities and more rewarding careers (Peterson & Delmas, 2001). Similarly, a study conducted by Harackwicz, Smith & Priniski (2002) showed that direct experience with an interest can raise the level of students' attention and engagement. This chapter discusses the integration of quantitative and qualitative findings, lessons learned through the action research process, implications for practice and research, and closing thoughts on the research study.

Complementarity of the Qualitative and Quantitative Data

In this study, quantitative results were supportive and complementary of the qualitative findings. The agreement of quantitative and qualitative results was shown with an increase in career decision self-efficacy found in the CDSE-SF survey results and the findings in the interviews and journals.

Analysis of pre- and post- CDSE-SF survey scores showed increased self-efficacy after the students' participation in the innovation.. The CaMPs innovation equipped students with a new confidence and tools to change their career interests and venture out to explore new interests. Students' decisions to change their career interests and add resources for career preparation were consistent with the increase of self-efficacy indicated by their answers on the CDSE-SF surveys.

Answers to survey questions described the extent of change in students' career decision self-efficacy. Answers to journal prompts and interview questions described students' interest, barriers and preparation before and after exposure to CaMPs presentations. Therefore, the surveys five sub categories will serve as the framework of organization for this discussion. The combined parts of the CaMPs program helped students to increase their self-efficacy. Students' journal comments and their interviews described the process they had covered on topics of Self-Appraisal, Occupational Information and Problem Solving. However, the most noticeable change was students' description of the change in routine beginning with exposure to inspiring presenters who modeled Planning and Goal Selection. The CDSE-SF survey scores for Goal Selection and Planning were both marginally significant which may also be explained through the tools and processes learned from the CaMPs innovation. In addition, students were taught to plan through online self-assessment tools, research of career interests, identification of barriers and, preparation for career decision-making. The increase in career decision-making self-efficacy is apparent by the new skills and information discussed by the

students after the CaMPs program. The following sections illustrate how students' described their career decision-making process by category.

Self-Appraisal survey questions measured students' confidence in finding a career that was complimentary to their own perceived abilities. The change in language students used post-innovation was also indicative of increased confidence. The language changed in connotation from using words such as, "try" in describing their participation and "guessing" to describe their uncertainty of outcomes. The new words students used after the innovation implied a change in their "perceived ability to perform" (Lent & Brown, 1996) with a more active vocabulary such as, "get", "participate" and "start" a career that is stable. Lent and Brown used SCCT to show that outcome expectations are grounded in the students' beliefs that they are able to perform at the level required to achieve the goals they set for themselves. (Lent & Brown, 1996). Both, quantitative and qualitative data functioned to support their increased self-efficacy in Self-Appraisal.

Occupational Information survey questions described students' confidence in locating and learning about new career resources. Students' confidence in finding resources prior to the innovation, was observed in their familiarization with online activities and their knowledge of personal resources such as the career center, guidance counselor, and school social worker. Students with disabilities and low self-efficacy will typically avoid the challenges associated with career decision-making (Hampton & Mason, 2003), thus limiting their career choices. The introduction of Occupational Information with new career model professionals and experiences offered students a different perspective regarding their barriers and past challenges. Although students were

provided new Occupational Information, their level of self-efficacy to locate resources for making career decisions appeared constant. As students gain experiences and attempt to practice skills associated with Occupational Information they should expand their career interests and increase their self-efficacy.

Goal Selection survey questions described student confidence in selecting and deciding on a course of action for making career decisions. Students began with vague descriptions of goals that were likely influenced by family models and not grounded in any experience or research. Holland Codes were introduced to pair with the CaMPs innovation for students to match their perceived personal characteristics to occupational characteristics (Crites, 1973). The Theory of Career Choice (1996) proposed that people will gravitate towards work that is characteristic of their personality type and their ideal work environment. At the end of the innovation, students changed their Goal Selection to career interests supported by research, testimony and experience they found in the CaMPs innovation. Although there was no indication of increased self-efficacy in goal selection from the survey, their descriptions of new career interests demonstrated confidence in skills related to Goal Selection.

Planning questions rated students' confidence in performing tasks leading up to a career such as interviewing and preparing resumes. The pre- and post-survey showed marginal significance in scores, indicating an increase in career decision-making self-efficacy for these tasks. Qualitative data indicated that students felt better equipped to perform planning activities with the experiences provided by the CaMPs program and online activities. Students' discussions after the innovation were more detailed about

expected duties performed in careers and about their own related experiences. The confidence students gained in Planning was indicated by their comments regarding learning how about career expectations contribute to their increased decision-making self-efficacy.

Problem Solving questions described students' confidence in making changes during the career decision-making process in spite of uncertainty. The challenge, observed Pryor and Bright (2015), is embracing uncertainty to inspire exploration and inquiry instead of self-doubt and despair. SCCT models how career interests are formed through the personal compromise that occurs between the interactions of one's self-efficacy and perceived barriers during the course of self-evaluation. (Lent, Brown, & Hackett, 1994; 2002). According to Bandura, students may avoid difficult situations where they feel low self-efficacy (1977). It may be that students avoided discussing these situations. Students in this study were only asked to describe *perceived* barriers. However, based on how students described barriers, challenges and uncertainties, they appeared to lack relevant experiences and were insufficiently equipped with the self-efficacy skills regarding Problem Solving. The five sub-categories of the CDSE-SF provide a framework to explain the convergence of data that shows student's career decision-making self-efficacy. However, additional themes also work to show the triangulation of supporting data.

Bandura's theory suggests that when students are provided vicarious learning models they form new ideas of behavior as evidenced by changing interests and redefining success. Prior to the innovation, students primarily referred to family members

as career models. After the CaMPs presentations began, students' discussions included the encouragement and strategies offered by the presenters. Students' active participation in searching and answering questions regarding their interests with live CaMPs presenters, demonstrated increased affective states. The rise in global career competition necessitates compelling students to begin the career decision-making process earlier than in past generations. Harackiewicz, Smith, & Priniski (2016) in a study on interests found that, "students who discover academic interests in high school and college are better prepared for satisfying careers". Introducing students to a greater variety of models related to their career interests in high school is imperative to their success.

CaMPs presentations helped to modify students' thinking about career decision-making. Prior to the CaMPs innovation, students described a career as something that required a college degree. Although, students' made the association of career preparation with education it was not a positive one. Students with learning disabilities have a history of struggles in education. To make matters worse, they described a career as a lifelong task that *has* to be done to earn money. Before the innovation, students avoided career interest tasks for reasons linked to education and skills that have been too difficult in the past. However, after the CaMPs innovation, students defined a career as a chosen task that they could enjoy and one that they would want to do. The hope of this innovation is that students will develop similar attitudes toward education.

Quantitative data in this study showed an overall increase in student decision-making self-efficacy over the course of the innovation. Blustein (1989) found that individuals who are goal oriented and possess career self-efficacy have a propensity

towards career exploration and self-assessment. Thus, as students learn to build their self-efficacy, they will be more successful in attaining their goals. Furthermore, in accordance with Bandura's self-efficacy theory, when students demonstrate greater self-efficacy, they form expectations and beliefs regarding the outcomes of their efforts. Students who are persistent in their efforts will improve their history of expected outcomes (Creed, Patton & Watson, 2002), and they can learn persistence by expanding on their experiences of working through challenges and barriers.

Qualitative data indicates that student confidence improved through their willingness to change their career interests with a rationale more commensurate to their abilities. For example, Bob began with a career interest of playing in the NBA. After the innovation Bob chose to become a warehouse worker because he felt confident in his ability to lift things. Randy initially thought that he wanted to be a rapper, but changed to a stock clerk whose duties he observed at Wal-Mart. Self-efficacy is developed through a variety of learning experiences according to Choi, and colleagues. (2011). In this study, the learning experiences varied from interviews, to computer based surveys, live presentations, journal writing, and online research. The successful increase in self-efficacy gained from these qualitative methods, in turn, led to the generation of interests, goals, and career preparation.

The increase of career decision-making self-efficacy shown in this study is not a one time occurrence. It is, as Crites (1976) suggests, a process of maturity that continues into adulthood as one experience informs another and decision-making self-efficacy is built in each new phase of career exploration and career maturity. Now, more than ever,

people are changing careers late in life which is a signal for working individuals to be prepared, self evaluate and contemplate possible barriers.

Strength of the Study

The first strength of this study was the enthusiasm from students to be involved in selecting the career models presenters. The second strength of this study was observed in the presenting models' enthusiasm to speak with high school students and to have the opportunity to serve their community. More than once, presenters afterward made an offer to return to present to future classes. Likewise, students picked up on the presenter's enthusiasm which was discussed and written as part of their journal reflections. The third strength of the study was the commonality some students found with the presenters, which was hoped for, but not explicitly designed. For example, Christy discussed that she and the veterinarian were both from Puerto Rico. The third strength of this study was the 100% participation. Every student was present during every presentation. Every student in this study completed the pre- and post-survey and all were available for the pre- and post-interview. The percent of participation contributes to the completeness of data and confidence in the results. The final strength of this study was the diversity of the student sample; one black female, two black males, two Hispanic males, two Hispanic females, one white male, one white female. There was also diversity among the CaMPs presenters; two white females, one white male, two Hispanic males and one black male. Although there was no obvious significance of the diverse sample because it was so small, one student did identify with the race of a presenter.

Limitations and Validity

One limitation of this study is, as Darling-Hammond noted, the innovation is dependent on the capacity of teachers to carry it out (2010). This innovation requires the administrator to research, find and schedule presenters from the community. It also is dependent on the permission by the school district to add it to the existing curriculum. A second limitation was that students were exposed to only six CaMPs presenters. Given a larger sample of CaMPs presenters, students would have had a greater repertoire of examples to use in determining their career interests. Qualitative data reveals that student responses were consistent with information learned from CaMPs presentations. However, the effects may also be due to the students' participation in the other class, and not just the CaMPs program. A third limitation was the twelve weeks in which the study was conducted. A trial run of the innovation would have been beneficial to work out the hidden logistical pieces. This innovation was new to the campus and there were several unknown variables in making it successful. Scheduling presenters required several attempts of many different businesses in the available time. There were also school activities and functions competing for locations, times and resources. A longer period of time may have also allowed students to identify additional barriers and create more impactful goals.

Validity was established by the agreement of results in which students were able to describe their career interests, barriers, and preparation with greater self-efficacy after the CaMPs innovation. In addition, their scores on CDSE-SF survey increased to further describe student career self-efficacy. The combination of these two outcomes is

supportive of increased student career decision-making self-efficacy. Catalytic validity, the degree to which the intended research process was successful in affecting change in the participants' view was demonstrated first when students were interviewed and surveyed prior to the start of the innovation. Next, their views on career decision-making were collected and analyzed after the CaMPs program. Post-survey scores and discussion showed a change in how they were considering new information in their career decision-making approach. Process validity was determined by the participants' understanding of the concepts in the way which they were intended by the researcher. It was determined by the qualitative data collected from interviews, journal reflections and observations. Furthermore, students were provided accommodations in reading to ensure comprehension of text and understanding during the course of this study. All students were present and participated in the same activities as a group and provided data in all phases of the study. The agreement in data was consistent and confirmed the fidelity of implementation.

Implications for Practice

This study has been of great interest by several parties on campus. First, a continuation of this study has been proposed for the curriculum of the special education class, Personal Skills Development. This class focuses on eleventh and twelfth grade special education students and teaches them career skills (e.g., resume building, interviewing, completing applications as well as determining career interests). This study fits well with the scope and sequence of the existing curriculum which may contribute to the support from teachers in the special education department who noted the rising

interest of students in the novelty of meeting with professionals in the community. Second, teachers commented on the benefits of the writing, reflection and research opportunities this study created for students. Third, the presenters enjoyed the opportunity to work within their community so much that they offered to revisit for future presentations. The implication for this practice may be expanding the number of presentations and the variety of career fields to create a greater appeal among students. Fourth, the school career center instructor also expressed a desire to expand on the presentations to create a video library of recorded CaMPs presentations to make them available for the benefit of all students.

Future Research

This action research study implemented the CDSE-SF online survey to high school students. Although it has been used for high school students in other studies, the survey was normed for college students. In the field of special education, there is more attention being given to preparing and accommodating students' transition from high school to college and work. Future research will create a survey designed for high school students. Surveys will be written at a reading level more appropriate for special education students at this level. Although the reading level of this survey was at a fifth grade level, it may still have been too difficult for this population whose reading level was between third and seventh grade.

Another area of future study would examine career decision-making self-efficacy in a larger sample size. Although, this study was conducted with nine students, to create more transferability, future research will explore career interests among a much larger

sample size of high school students over the course of a longer period of time. A larger sample of students would enable generalizability and broader implications of these results.

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APPENDIX A
INTERVIEW QUESTIONS

1. Tell me about the people you know with great careers.
2. What careers interest you most?
3. How did you become interested in those careers?
4. What is the difference between a career and a job?
5. How will you prepare differently for a career versus a job?
6. In what school subject do you feel most confident?
7. What careers are available in that field of study?
8. Who are the people in your life whom you most admire?
9. What qualities do you admire most about those people?
10. What does that person do for a career?
11. What challenges do you anticipate in searching for a career?
12. What worries you most when you think about the challenges that await you after high school?
13. What have you done to prepare for your transition after high school?
14. What can you do now to prepare for your transition after high school?
15. What skill will benefit you most in your transition after high school?
16. Who can be on your career development team?

APPENDIX B
PRESENTATION WORKSHEET

Name: _____

Date: _____

- 1.) Presenter's recollections of their high school experience and goals at that time.
- 2.) Academic success in high school and how that influenced their and decision making process after high school.
- 3.) Post-secondary education (college or vocation) and the role that experience had on their decision making.
- 4.) Age of majority responsibilities, obligations (i.e., financial, career and social, and balancing debt and income).
- 5.) Two life changing decisions and what factors were considered.
- 6.) Career path to the present.
- 7.) How they found their job, what interested them about the job, the interview process, the time in service to get through the learning curve.
- 8.) What is the day-to-day routine?
- 9.) What is the future of the position?

APPENDIX C
CAREER DECISION SELF-EFFICACY SURVEY

CDSE (write out and be sure you refer to this test by the same acronyms

Answer on a scale of 1 -5; 1 = No confidence & 5 = complete confidence.

1. Use the internet to find information about occupations that interest you.
2. Select one major from a list of potential majors you are considering.
3. Make a plan of your goals for the next five years.
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.
5. Accurately assess your abilities.
6. Select one occupation from a list of potential occupations you are considering.
7. Determine the steps you need to take to successfully complete your chosen major.
8. Persistently work at your major or career goal even when you get frustrated.
9. Determine what your ideal job would be.
10. Find out the employment trends for an occupation in the next decade.
11. Choose a career that will fit your preferred lifestyle.
12. Prepare a good resume.
13. Change majors if you did not like your first choice.
14. Decide what you value most in an occupation.
15. Find out about the average yearly earnings of people in an occupation.
16. Make a career decision and then not worry whether it was right or wrong.
17. Change occupations if you are not satisfied with the one you enter.
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.
19. Talk with a person already employed in a field you are interested in.
20. Choose a major or career that will fit your interests.
21. Identify employers, firms, and institutions relevant to your career possibilities.
22. Define the type of lifestyle you would like to live.
23. Find information about graduate or professional schools.
24. Successfully manage the job interview process.
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.

APPENDIX D
CODEBOOK FOR INTERVIEWS

THEME CODE	DEFINITION	EXAMPLES
Aspirations diploma. Get ASP	Student describes goals or wants	Finish high school and get my a job and try to go to college. “And now as soon as I get a job I’m going to”
Interests have liked INTR	Student describes activity, object or place	“Ever since I was in third grade I to draw.” “The thing that I am more interested in are plays”
Career Interests CA_INTR video	Describes what a person does at work or names a career	“I would like working at a circle K.” “The careers that most interests me is and editing and probably be a veterinarian.”
Interest. Experience background, I INTR_EXP tech and lights on packed	Where a student has had an experience in an area of interest	“I was an usher, I was in the was help building sets, I was in the box.” “I’m the one that pushes the baskets bags groceries” “We put up a bunch of Christmas people’s houses” “Like Saint Mary’s food bank, I just up food in a box”
Evaluation. Self EVAL_SELF really easy	Reflects on personal attributes or abilities	“Which I agree, I do have a temper” “An electrician because I find it to do.”
Evaluation career.”	Describes another persons’	“He’s friendly. He’s nice. I like his

EVAL mechanic.”	attributes or abilities.	“I see him as a technician or as a
Supportive. Give need and SUP_GIV on when on	Describes their intention to help or support another	“I like the idea of helping others in being like that person they can rely they are in pain” “right away you could just help them fixing it”
Supportive. Receive shows SUP_REC me and school.”	Describes how they’re helped by another person or thing.	“My dad because he’s the one that me.” “Because she always looks out for makes sure I’m doing good in
Career Model Family Carrington CAR_MOD.FAM my dad	Describes the work a family member does	“My Uncle Troy he a nurse at college” “pretty much cabinet making cause has been teaching me how”
Career Model CAR_MOD and takes house.”	Describes the work of some- one they have observed	“she’s on the phone she’s like a telemarketer” “Um she helps special needs kids care of them at their house or our
Challenges I’ve been CHAL now and	Areas where they express difficult skill acquisition;	“I haven’t had the chance because in group homes and hospitals.” “we’re reading Shakespeare right it’s pretty hard to understand.”
Money MNY	Mentioned money	“Be more like cautious with my spending like saving up and stuff.”

		“It was going to cost too much to get them cured.”
Uncertainty UNCRT confused	When the student says that they don’t know or is confused	“Well I know where there’s a place but I don’t know what it’s called” “I don’t want that like I’m about which one I want.”
Steps STPS	Describe soft skills; don’t be late, be respectful, proper etiquette	“Get training with people, the able to do a teamwork thing” “I can follow directions very well”
Career Model Steps CAR_MOD_STPS	Describes steps to beginning a career or prior to work	“Because he’s a cop and he started off living with his mom”
Career defined: CAR_DEF	How a career is defined and different from a job	“A career is like something that you want to do” “A career by like going to school getting good grades”
Preparation talking to PREP need I think	How to prepare for a career	“keep getting ready for a job by my boss” “You need your resume, you your stuff from high school”

APPENDIX E
PARENTAL LETTER OF PERMISSION

Dear Parent:

My name is Mr. Cook. In addition to being your child's teacher this year, I am also a graduate student under the direction of my chair, Dr. Linda Caterino, in the Mary Lou Fulton Teachers College at Arizona State University. I am conducting a research study to gather information about student career interests. The purpose of this letter is to inform you about how data from this study will be used in my dissertation as well as other formats, such as conferences or journal articles. If you desire, you and your child may request the study results upon the completion of the study.

The activities I am conducting with your child are a part of the literacy strategies curriculum. Activities will involve two 30 – 40 minute interviews, journal writing 5 minutes at the start of every class and a 25 item survey regarding career interests. There will also be presentations once a week, from six different professionals in the community who will speak about their life experiences leading them to their career choice. Each session will take place in the classroom during normal school hours. During the sessions, I will take field-note observations and audio recordings of the students' engagement and interests in the activities. The sessions will be video recorded and transcribed. Afterwards the recordings will be catalogued in the career center for viewing by other students researching their own career interests.

Using the information gathered by your child's participation in this study is voluntary. If you choose to not have your child's information used you may decide at any time to withdraw your child's information from the study. There will be no penalty and it will not affect your child's grade, or their standing in the class in any way. Likewise, if your child chooses not to participate or to withdraw their information from the study at any time, there will be no penalty for their decision to withdraw.

The potential benefits related to the participation in this program include the development of relationships and rapport between students who participate in the project, increased awareness of career opportunities and descriptions, and an opportunity to share and gain ideas, and knowledge as it pertains to career interests, identity and academic motivation. There are no foreseeable risks or discomforts to your child's participation.

Although your child's contributions will be kept confidential and anonymous, he/she may be quoted in my dissertation. The results of this study will be used for my dissertation, but your child's name will never be shared. Data will be stored with me in my classroom at Glendale High School in a locked storage.

If you have any questions regarding this research study or your child's participation in this study, please do not hesitate to contact me or my chair Dr. Linda Caterino via the information below:

Jeffrey Cook at 623-435-6200, or e-mail at jeffrey.cook@guhsdaz.org

Dr. Linda Caterino (Linda.Caterino@asu.edu).

Sincerely,

Jeffrey Cook

By signing below, you are giving consent for your child _____ (child's name) to participate in the program.

Signature

Printed Name

Date

APPENDIX F
PARENT RECRUITMENT SCRIPT

Currently I am engaged in research towards a dissertation at ASU. My research is, as you might expect, centered on improving student learning and achievement. Therefore, I am requesting your child's participation for my research. A dissertation is original research that is required for doctoral students, like myself, to publish. The purpose of my research is to learn how students decide on which career field interests them and what goals they set as a result. The sessions will be part of the literacy strategies curriculum and will focus on skills covered in class. While your child's attendance and participation along with the materials your child produces will be necessary to receive credit for the class, the use of produced materials in my research is optional.

As part of your child's participation, he/she will observe and interview visiting professionals who will model their professions through a series of 30 – 40 minute presentations. Students will also participate in an interview, conducted by me, both before and after the series of presentations to record the development of their opinions of themselves and career interests. The interviews will be audio recorded and your child will be able to review his/her answers after they've been written down. The interview will be approximately 30 - 40 minutes. The information that is gained from my study, including journals, interviews and student research may be published in my dissertation. However, all of your child's contributions will remain anonymous. You and your child will receive a copy of the study if you're interested. Should you choose to let your child participate in my research project, your child will not only help contribute to my knowledge, but also to the knowledge of everyone who will read my work.

If you choose to not allow your child to participate, there is no penalty to your child's academic standing in my class. His/her participation by using and publishing their input and results is completely voluntary.

If you have any questions please contact me at 623-435-6200.

APPENDIX G
STUDENT RECRUITMENT SCRIPT

Currently I am engaged in research towards a dissertation at ASU. My research is, as you might expect, is centered on improving student learning and achievement. Therefore, I am requesting your participation for my dissertation research. A dissertation is original research that is required for doctoral students to publish and to graduate with a doctorate degree. The purpose of my research is to learn how students decide on which career field interests them and what goals they set as a result. The sessions will be part of the literacy strategies curriculum and will focus on skills covered in class. While your attendance and participation along with the materials you produces will be necessary to receive credit for the class, the use of the information produced with the materials in my research is optional.

As part of your participation, you will observe and interview visiting professionals who will model their professions through a series of 30 – 40 minute presentations. You will also participate in an interview, conducted by me, both before and after the series of presentations to record the development of your opinions and the development of your career interests. The interviews will be audio recorded and you will be able to review your answers after they've been written down. The interview will be approximately 30 - 40 minutes. The information that is gained from my study, including journals, interviews and student research may be published in my dissertation. However, all of your contributions will remain anonymous. You and your parent will receive a copy of the study at your request. Should you choose to participate in my research project, your will not only help contribute to my study, but also to the knowledge of everyone who will read my work.

If you choose not to contribute your information, there is no penalty to your academic standing in my class. Your information and results from your participation is completely voluntary.

APPENDIX H
ASSENT FORM

I am doing a research study about a program that will explore student career interests by reflection, surveys and presentations. A research study is a way to learn in depth about what teaches us about people. If you decide that you want to be part of this study, your information will remain anonymous. Information will be gathered by attending presentations, recording your thoughts, participating in two interviews and completing a survey. Each session will last for one 55 minute class period. The study will run for a total of 16 weeks (one semester). As part of course you will still be required to complete all of the aforementioned activities to receive credit.

However, you're information may not be shared unless I have your consent. There are no foreseeable discomforts or risks that may happen because of your participation in this study.

At the conclusion of this study I will write a report about what was learned. As I mentioned above, this report will not include your name or that you were in the study. It may include examples of your contributions during your participation in the study.

You do not have to be in this study if you do not want to be. If you decide to stop after we begin, that's okay too. If you do not want to be in this research study, there will not be any consequences or repercussions to your class grade. Your parents know about the study and have approved your participation in it.

If you give your permission to participate in this study, please sign your name.

I, _____, want to be in this research study.

(Sign your name here)

(Date)

APPENDIX I
SCHOOL PERMISSION LETTER

March 8, 2016

To whom it may concern,

I, _____, Principal of _____ High School and _____, Assistant Superintendent of _____ High School District give Jeff Cook permission to do research at _____ High School. Jeff will work in partnership with me as the principal. If you have any questions or concerns regarding this, please feel free to contact me at 555-123-4567.

Respectfully,

_____ High School, Principal