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The Evaluation of Schools to College and Career (S2C) Readiness Program for Middle School Student

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THE EVALUATION OF SCHOOLS TO COLLEGE AND CAREER (S2C) READINESS
PROGRAM FOR MIDDLE SCHOOL STUDENT

By

Sima D. Gandhi

A Dissertation Submitted to the

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University of the Pacific
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2020

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By

Sima D. Gandhi

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THE EVALUATION OF SCHOOLS TO COLLEGE AND CAREER (S2C) READINESS
PROGRAM FOR MIDDLE SCHOOL STUDENT

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By

Sima D. Gandhi

DEDICATION

This dissertation is not something that can be achieved alone. Many people and mentors have helped develop this. I would like to take this opportunity to dedicate and acknowledge those who have impacted my doctoral journey. First and foremost, I thank God for the blessings and for helping me through all the difficulties. You are the one who provided me the guidance to finish this degree. Thank you, Bhagwan!

I dedicate this dissertation to my father who passed away in 2004. Dad, thank you for teaching me to persevere and for preparing me to face the challenges with faith and humility. You were the constant source of inspiration to my life. Although you are not here to give me strength and support, I always feel your presence. This has been the impetus to help me strive to achieve my goal of finishing this dissertation. Dad, I know you are up there, listening, watching over me and sending me your blessings constantly. You are my guardian angel. I hope you are proud of me wherever you are. I love and miss you. To my children, Krish, Rishi, and Anu, you have made me stronger, better and more fulfilled than I could have ever imagined. I love you to the moon and back. Remember, to always work hard, be humble, dream big, and reach for the impossible.

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THE EVALUATION OF SCHOOLS TO COLLEGE AND CAREER (S2C) READINESS PROGRAM FOR MIDDLE SCHOOL STUDENT

Abstract

By Sima D. Gandhi

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2020

There is a lack of research on what it means to be college and career ready at the middle school level, and this creates confusion for students when they enter high school and must select courses that are aligned with their college and career goals. This study sought to understand how the Schools to College and Career (S2C) Readiness Program impacts middle school students at the charter school. In order to understand this impact, the study looked at how the S2C Readiness Program relates to students' understanding and awareness of CCR at the school.

Using a quantitative approach this study will sought to answer: What factors influence middle school students' awareness of college and career options after completing the S2C Readiness Program? To answer the guiding question middle school students completed two surveys. Archival data was also collected and analyzed. The results from the student survey responses showed an increase in interest in different careers as student performance level (measured from MAP score) increased. Furthermore, as students completed the S2C Readiness Program, their understanding of basic skills and content knowledge also increased. The results did show an increase in engagement and interest in their S2C elective courses. Also, students responded with an understanding of what it means to be college and career ready as they completed the S2C Readiness Program. There was also an increase in students seeking to understand what it means to be college and career ready as students get older. The research did

not support a positive link between S2C elective class choice and college and career awareness. Many students responded that they did not explore college and career interests in their S2C class or on their own and did not engage in projects related to college and careers in their S2C elective class.

This study sought to understand this impact, the study looked at how the S2C Readiness Program impacted students' understanding and awareness of CCR at the charter school. Knowing that many students do not have the skills and tools necessary to be college and career ready this study hoped to provide insight for improving the S2C Readiness Program at the charter school. This research provided recommendations for improving the S2C Readiness Program at the charter school as well as college and career education opportunities in middle schools in general. This dissertation concluded with recommendations for future research to support such initiatives from elementary to the high school level.

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LIST OF ABBREVIATIONS

CCR College and Career Readiness

SCLT Social cognitive learning theory

SCCT Social cognitive career theory

CHAPTER 1: INTRODUCTION

“Education with a purpose” (Mobley, Sharp, Hammond, Withington, & Stipanovic, 2017, p. 57) is important as teachers help our students be college and career ready. Educators and administrators attempt to provide a rich curriculum that is content driven with a heavy focus on skills and tools to meet employability demands. There is an urgency to discuss College and Career Readiness (CCR) as educators help students in K-12 develop an awareness of what it means to be college and career ready. The goal for students by the time they leave high school is to be prepared to either enter a career or go off to college. Current high schools have begun implementing programs to support students in being prepared for college and career after they leave high school. However, as Glessner, Rockinson-Szapkiw, and Lopez (2017) and Royster, Gross, and Hochbein (2015) discussed, there is a need to embed a CCR program as early as middle school because students who do not show readiness for college and career by the end of 8th grade are less college and career ready when they graduate high school. This study sought to understand how the Schools to College and Career (S2C) Readiness Program impacts middle school students at one charter school in California. In order to understand this impact, the study looked at how the S2C Readiness Program related to students’ understanding and awareness of CCR at a charter school in California.

Research Site

The charter school is an independent charter with their own governing board. This school is a choice charter school, and a lottery system is used to for student admissions. The total student population is 446. The ethnicities of the student body are White, Hispanic, African American, Asian, and Native Americans. Approximately, 45% of students are on free

and reduced lunch. The school is currently implementing a multi-tiered system of support (MTSS). California Department of Education (2017) defines MTSS as an, “integrated, comprehensive framework that focuses on Common Core State Standards, core instruction, differentiated learning, student-centered learning, individualized student needs, and the alignment of systems necessary for all students’ academic, behavioral, and social success” (para. 2). In other words, it is a program to help educators work together to ensure all students are provided with equitable access and opportunities for academic, social, and emotional success. To help address the academic piece of MTSS, the charter school administrators have implemented the S2C Readiness Program to help students prepare for college and career. This research on CCR at the middle school will inform and provide insight on how the S2C Readiness Program is currently being implemented at the charter school.

Program Description

The S2C Readiness Program has been implemented within the charter school. Although this program is unique to the school site, other CCR program models that are like the S2C Readiness program have been implemented at other high schools. However, a program like this has not been implemented at a middle school yet. As part of the literature review, Chapter 2 will discuss other similar models such as career technical education (CTE) programs that are currently being implemented at other high schools. In addition to the core classes (English, math, science, history, and physical education) students at the school are placed in an intervention or enrichment class in the morning and an elective in the afternoon. The aim of the S2C Readiness Program is to provide students with a sense of awareness for CCR. As a result of completing the S2C Readiness Program, middle school students should have a sense of awareness of the different college and career options to help them make appropriate and

informed choices as they transition from middle school to high school. A detailed description about the program will be discussed in chapter three.

Background

College readiness is defined as a student's academic ability that is measured by the courses they take in high school, standardized test score, remediation need, and overall high school GPA (An & Taylor, 2015; Conley, 2012). Defining CCR with assessment scores only has created controversy. The term college readiness has become operationalized where test scores (An & Taylor, 2015) are used to determine readiness of a high school student to enter college. Traditionally, readiness has been a term used as the skills and content knowledge that is needed to be successful as they transition from elementary to postsecondary. Further research is necessary to understand the benefits of these academic measures. If students are provided rigorous and relevant classes in middle school where students' success is academically measured in different ways, would college readiness look different at the high school level?

Also, the unequal emphasis on college readiness versus career readiness has created a disparity. Career readiness has been defined as having readiness based on coursework that is specific to a certain occupation or certificate of completion (Conley, 2013). Historically speaking, career readiness has not been used interchangeably with college readiness. Students have typically been separated into two categories: one bound for college, and the other for work. There is a drive for CCR to be towards college over career, "with CCR extending an enduring debate over the fundamental role of public education as provider of a liberal versus a vocational education" (Conley, 2013, p. 4). This leads to an unequal balance between college readiness versus career readiness. However, to be competitive in the growing workforce students will need to have a "set of similar foundational thinking skills, content knowledge, and learning strategies

if they are to be successful in their careers and be productive members of society” (Conley, 2013, p. 3). Having students choose one path over another creates confusion and limits opportunities for students.

The large focus of choosing either a liberal (college) or vocational (career) education has created an unequal balance. The gap leads students to enter the workforce without the skills and competencies needed to be successful early. This research will be able to further the discussion and provide insight in supporting students in college and career awareness.

College and Career Awareness

Adapted from the Work Based Learning (WBL) continuum, college and career awareness will be defined in this study as students’ awareness of post-secondary college and career options they may wish to pursue (Conley, 2013). After completing the program students who are aware of college and career options will be able to make informed decisions about the course choices that will prepare them for post-secondary college and career paths. Students with college and career awareness will be able to understand the variety of the different college and career options that are available to them after completion of the S2C Readiness Program.

Self-Efficacy

Adapted from Bandura (2001), self-efficacy is defined as the ability of a student to perform a specific task, in a specific context, to achieve a specific goal. Student self-efficacy plays an important role in understanding students’ awareness. Students with high self-efficacy are more likely to have an awareness of the different college and career options because they intrinsically are more motivated to explore the availability of options.

Problem Statement

There is a lack of understanding amongst educators and administrators of what it means to be college and career ready at the middle school level. This lack of understanding leads students to enter high school without the awareness of different college and career options to select high school courses that lead to a successful and satisfying career (Benz & Kochhar, 1996). When students are unaware of college and career options and lack the skills to select high school courses aligned with these options, this results in resistance from students to explore different college and career options. This resistance on a larger scale leads to a lack of readiness skills when entering the workforce. The focus from high school educators and administrators on completion rates, rather than student readiness has created a problem that needs to be addressed.

Purpose of Study

The purpose of this research was to understand middle school students' awareness about the availability of different college and career options at a charter school in California. Knowing that many students do not have the skills and tools necessary to be college and career ready this study sought to provide insight for program improvement at the school. This research also contributed to the field by providing analytical generalizations for other middle schools as they begin to explore CCR programs at the middle school level. This gap is important and needs to be addressed because students are entering the workforce ill equipped with skills and knowledge.

Research Question

The objective of this research study was to apply the learnings from this study to improve and inform how the S2C Readiness Program is currently being implemented at the school. At the end of this study, administrators and educators at the site should be able to understand and provide needed support to middle school students. The purpose of this was to examine students'

awareness of college and career options within the context of a S2C readiness program. Below are the questions that drove this study.

Guiding Question

What factors influence middle school students' awareness of college and career options after completing the S2C Readiness Program?

Sub-questions. This study had three sub-questions.

1. Do performance levels relate to student awareness of different college and career options?
2. How does student self-efficacy relate to college and career awareness?
3. How does the S2C elective class choice relate to college and career awareness?

Significance of the Inquiry

This inquiry was significant because implementing CCR programs at the high school level is just too late. When students enter high school without a clear understanding of CCR, they are less likely to pursue different courses and career options. Students who lack awareness struggle to identify their interests and select courses. Furthermore, they are less likely to pursue courses in direct alignment with their interests. Creating programs earlier is a must; embedding CCR programs as early as middle school is a necessity because only 25% of students who took the American College Testing (ACT, 2012) in 2011 showed college readiness (Glessner et al., 2017; Royster et al., 2015).

Readiness programs should start early because many students do not have the academic skills or competencies to be successful after high school. Students should be able to enter high school with an awareness of the different options available to them. This will allow them to make informed decisions about course load and college and career options. When students are

not provided with skills and competencies needed to be successful early, lead to employers having difficulty finding qualified applicants.

This is important, because according to the Business Roundtable (2014), employers are having difficulty finding employees who have skills needed for entry level-positions. This is troubling, because Baby Boomers are expected to retire and exit the workforce in the next three years (Fry, 2019). The findings from this research will help guide and inform current practices at the school. This research will also help prepare students make informed decisions about their future and prepare them to be qualified applicants for jobs.

Framework

Bandura's (2001) social cognitive learning theory (SCLT) is one of the main theories that drive this research. SCLT subscribes to the idea that cognitive processes are developing brain activities for the adolescent student (Bandura, 1986, 1999, 2001). Self-efficacy occupies a pivotal role in social cognitive theory because the belief of students' impact and influence the choices they make in their educational journey (Bandura, 2001). The self-efficacy of students is impacted when they are not aware of their different options. The perception of their ability to perform a specific task, in a specific context, to achieve a specific goal (Bandura, 2001) can impact their awareness. It is important to understand how middle school students' perceptions about CCR impact their awareness of available college and career options.

Social cognitive career theory (SCCT; Lent & Brown, 2008) is the second theory that drives this study. The SCCT framework was created by researchers to explain career, academic interest, choice, and the performance of students (Lent & Brown, 2008). This framework is important for this study because most educational high school systems have CCR programs set in place such as CTE (Lent & Brown, 2008). However, an understanding of college and career

awareness at the middle school level is necessary. Within this framework the research will be centered around understanding middle school student awareness about CCR. Furthermore, Experiential Learning Theory (ELT) which is a component of SCCT will also be explored as it relates to CTE at the high school level. The framework is discussed in detail in Chapter 2.

Chapter Summary

This chapter is an introduction to the background and research questions that focus on understanding college and career awareness at the middle school level. With Baby Boomers expected to exit the workforce in the next three years it is imperative to provide students with programs that embed CCR early. Research has indicated the necessity for students to be provided with the skills and competencies to be college and career ready earlier than high school (Conley, 2010). The purpose of this study was to examine middle school students' awareness of different college and career options after completing the S2C Readiness Program at a charter school in California. Chapter 2 presents a review and synthesis of the current literature related to CCR.

Definition of Terms

College and Career Awareness

Adapted from the Work Based Learning (WBL) continuum, college and career awareness will be defined in this study as students' awareness of post-secondary college and career options they may wish to pursue (Conley, 2013).

College Knowledge

The term *college knowledge* refers to students' awareness of post-secondary college and career options they may wish to pursue (Hooker & Brand, 2010). After completing the S2C Readiness Program students who are aware of college and career options will be able to make

informed decisions about the courses that will prepare them for post-secondary college and career paths. Students with college and career awareness will be able to understand the variety of different college and career options that are available to them after completion of the S2C Readiness Program.

Self-efficacy

The term self-efficacy is defined as the perception a person has of their own ability to perform a specific task, in a specific context, to achieve a specific (Bandura, 2001).

CHAPTER 2: REVIEW OF THE LITERATURE

Critical thinking, cooperative learning (teamwork), inquiry learning, problem solving, content learning and public speaking are all the skills students need to compete in the next generation (Darling-Hammond et al., 2015). A rich curriculum that infuses transferable skills is what students need in order to prepare our next generation for employability (Hansen & Hoag, 2018). According to Rothman (2012), technology has created a transformation in the workforce from hiring students with routine skills to now hiring students to be problem solvers and critical thinkers (Rothman, 2012). As it stands right now students are not prepared to enter an entry level career or go off to college by the time, they leave high school. As Lombardi, Seburn, and Conley (2011) discussed, there is a huge difference between the idea of being eligible for college and career based on age and requirements versus being college and career ready. The purpose of this literature review is to provide a better understanding of the history of CCR and what it means to be college and career ready in the indeterminate future.

Two streams of research are included in this review of literature: awareness of college and career options, and self-efficacy. To understand the factors that impact student awareness and self-efficacy, the research will be supported using SCLT (Bandura, 2001), with an emphasis placed on the construct of self-efficacy (Bandura, 1986), and SCCT (Lent & Brown, 2008). Both theories support the concept of CCR. In the next section, each theory is defined and discussed in relation to this research study.

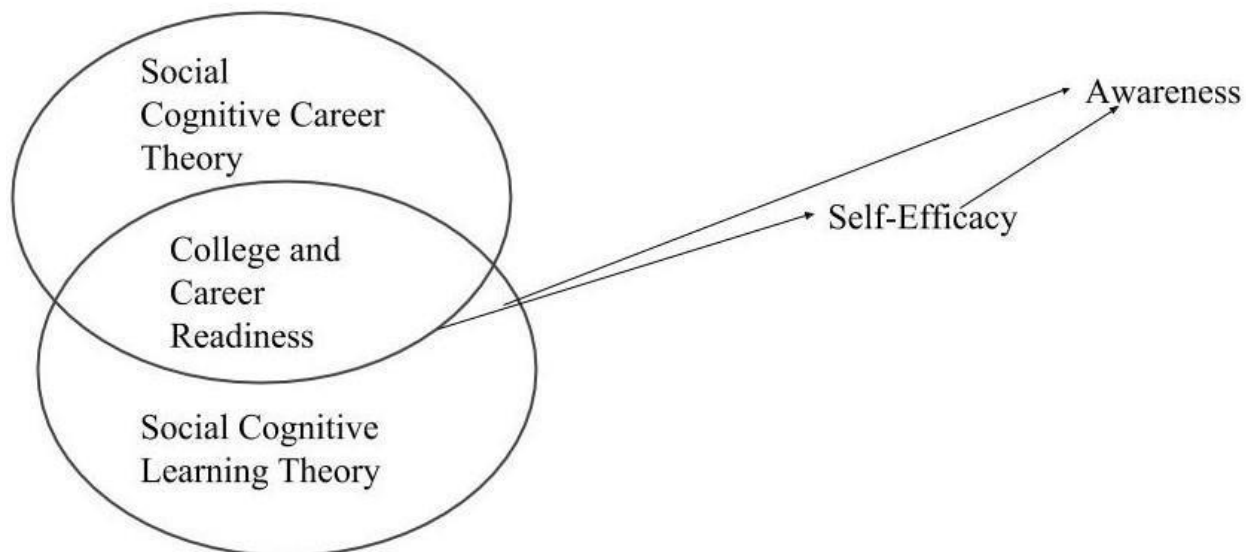


Figure 1. SCLT and SCCT and effects on student's CCR

Figure 1 presents the conceptual model that used in this research. As noted in Figure 1, Bandura's (2001) SCLT and Lent and Brown's (2008) SCCT theories inform the CCR among middle school students. These two theories are elucidated in the following sections.

Social Cognitive Learning Theory

According to Bandura's (2001) SCLT, cognitive processes are emergent brain activities that exert determinative influence with self-efficacy as the foundation of human agency. This is important because in order to understand the meaning of CCR in the 21st century it is important to understand the determinants that impact student motivation, belief, affect and action (darling-Hammond et al., 2015). Self-efficacy is an important factor in understanding how students are motivated (Schunk & Mullen, 2012). Lack of motivation from students leads to resistance from them as they enter high school (Schunk & Mullen, 2012). Understanding students' self-efficacy at the middle school level will help provide a bigger picture of students' perceptions about being successful in their college and career paths (Usher & Pajares, 2006). In the next section, self-

efficacy is explained, with emphasis placed on how self-efficacy beliefs impact students' understanding of the different college and career options available to them.

Self-Efficacy

Self-efficacy is defined as one's belief about one's own ability to be successful (Bandura, 1986). It is a person's perceptions of his/her ability to perform a specific task, in a specific context, to achieve a specific goal (Bandura, 2001). Self-efficacy affects the way one thinks and feels (Bandura, 2001). A person's self-efficacy serves as an important role in SCLT because efficacy not only influences self but also impacts other elements (Bandura, 2001).

Self-efficacy beliefs may influence students' college and career choices they make in their life (Usher & Pajares, 2006). Usher (2009) deduced from his findings that students with high self-efficacy had more achievement in mathematics than students with low self-efficacy. Students use their successes and failures as an indication of the academic choices they make in a school setting (Usher, 2009). In other words, students' self-efficacy influences the class choices they make (Usher, 2009). However, a limitation in this study is that the researcher only looked at self-efficacy in a middle school math classroom. Further research is needed to understand how self-efficacy impacts students' selection of college and career options amongst all middle school classrooms. For example, do students with low-self efficacy select courses that are less rigorous? It would be interesting to understand how self-efficacy relates to students' selection of different college and career options and how this ultimately impacts their awareness of CCR.

Glessner et al. (2017) also studied self-efficacy in middle school students. However, they looked at self-efficacy of students after participating in an intervention class (Glessner et al., 2017). In Glessner et al.'s (2017) study, students participated in an online career exploration intervention, which included a college visit. The researchers in this study were able to determine

that self- efficacy rates for students wanting to attend college was higher for middle school students who participated in the intervention career exploration online class (Glessner et al., 2017). An implication of this, as suggested by Glessner et al. (2017), is that career education should be thought about as a priority, and that policies should be set into place for curriculum in career education. Researchers in this study were only interested in looking at self-efficacy of students after completing the intervention class (Glessner et al., 2017).

Further research is necessary to understand the impact a school wide program has on student understanding of CCR. Furthermore, it is important to understand the impact self-efficacy has on feeling more motivated about the availability of different college and career options. Glessner et al. (2017) used an online based intervention program to provide students the opportunity to explore different career options. The research on self-efficacy specific to middle schools is limited (Usher & Pajares, 2006). Further research is still necessary to understand the awareness of middle school students, and their self-efficacy after completing a school wide program.

Social Cognitive Career Theory

SCCT (Lent & Brown, 2008) has been used extensively to understand student beliefs about career choices, interests, personal goals and the ways they make educational choices that affect their college readiness (Nugent et al., 2015). SCCT posits that relationship between learning experiences and choice is mediated by “self-efficacy and outcome expectations” (Bocanegra, Gubi, & Cappaert, 2016, p. 243). Students’ choices are impacted by their self-efficacy, also known as personal beliefs (Lent & Brown, 2008). In other words, SCCT examines how career and academic choices develop together (Lent & Brown, 2008).

Three Core Ideas of SCCT

Lent, Brown, and Hackett (2002) organized their SCCT framework around three postulates, which are important in understanding CCR from a historical perspective. The SCCT framework focuses on: (a) how academic and career interests develop, (b) how students make academic and career choices, and (c) how success is achieved in academics and career pursuits (Bocanegra et al., 2016). As suggested by Lent et al. (2002), the three core postulates provide the foundation for the argument that self-efficacy (student belief), outcome expectations (graduation), and performance goals (determination) are all linked and influence each other in the ways that students perform. The performance may change based on new experiences (Lent et al., 2002).

As posited in the SCCT (Lent & Brown, 2008), the three elements of self-efficacy, outcome expectations, and performance goals affect the career, academic development and choice that students make. As discussed previously, self-efficacy is defined as one's own beliefs about completing a task (Bandura, 1986). Although these beliefs are not fixed, a person's self-efficacy is developed from their own performance, learning, social interaction and how he or she feels (Gibbons & Shoffner, 2004). Outcome expectations are the consequences a person may believe will happen when a behavior is performed (Gibbons & Shoffner, 2004). Personal goals are defined as decisions a person makes prior to beginning a new activity or engaging in future plans (Gibbons & Shoffner, 2004). Students will develop career interests and academic pursuits when they feel a sense of personal competency and positive outcome (Gibbons & Shoffner, 2004). Furthermore, the environment that the students are in may affect the career choices they make (Gibbons & Shoffner, 2004).

SCCT Concepts of Interest, Choice, and Performance

There are three key elements of SCCT: *interest*, *choice*, and *performance*. Lent and colleagues (Lent et al., 2002; Lent & Brown, 2008) defined interest as an application of interest expressed in different careers and academic goals based on the personal belief that students will be successful. In other words, when students have positive experiences during an activity that is linked to a career, their interest levels in that career increase (Lent et al., 2002; Lent & Brown, 2008). Rigor in a classroom that provides students the opportunity to learn with different methods is crucial to their academic success (Lent et al., 2002; Lent & Brown, 2008). When students are not exposed to interesting and engaging learning opportunities associated with a career that promote their ability, efficacy, and positivity, they are less likely to be interested in the career (Lent et al., 2002). When students have positive experiences during activities linked to careers their interest levels increase (Lent et al., 2002). For example, high school students that are provided with Career Technical Education (CTE) options are more likely to have a positive learning experience and will thus have an increase in interest for different career options (Bishop & Mane, 2004).

The choice element of SCCT refers to students selecting careers developing personal goals toward achieving their career goals based on their interests (Lent et al., 2002; Lent & Brown, 2008). However, the choices they make are impacted by their school environment (Lent et al., 2002; Lent & Brown, 2008). If the school environment is not supportive, students are less likely to find careers based on their interests (Lent et al., 2002; Lent & Brown, 2008). Moreover, when students must change their career interests because of barriers, environments, and limited opportunities, their choices will be made primarily based on job availability, self-efficacy beliefs, and outcome expectations (Lent et al., 2002). For example, when students are in environments

with poverty or lack of parental support students are less likely to make choices based on interest (Katz & Assor, 2007). It is likely for choice to be based on availability (Lent et al., 2002).

The last component of SCCT is performance; a student's academic and job performance will be affected by ability, self-efficacy, expectations, and goals (Lent et al., 2002). Also, failure occurs when the skills required for an occupation do not correlate with the performance of the student (Lent et al., 2002). However, it is important to note that the literature states the importance of setting a goal (Smith, 2002). Goal setting will help students in attaining an increase in performance levels (Smith, 2002). Furthermore, according to Smith (2002), the need for a connection between past performance, self-efficacy, outcome expectations, and goals are important in determining the performance outcomes for students. Smith (2002) argued for the need to provide students with employability skills to be successful in their careers. When students do not have the performance ability to perform specific tasks, they are more likely to fail which ultimately impacts their self-efficacy (Smith, 2002).

The cognitive theories discussed above play an integral role in understanding the academic performance of students. Along with cognition, experience also plays an integral role in student success (Kolb, Boyatzis, & Mainemelis, 2001). In the next section, the concept of Experiential Learning Theory (ELT; Healey & Jenkins, 2000) is reviewed.

Experiential Learning Theory

Healey and Jenkins (2000), have defined ELT as “the process whereby knowledge is created through the transformation of experience” (p. 2). Students achieve knowledge by grasping and transforming their experience (McCarthy, 2010). Work experience plays a central role as students learn through their experiences (McCarthy, 2010). Courses are designed to improve student learning (McCarthy, 2010). In other words, students need to experience their

own learning; ELT provides a holistic approach to learning (McCarthy, 2010). Learning styles are considered amongst the different academic specialties (Kolb et al., 2001). Using this holistic approach, learning occurs through the merging of experience, perception, cognition, and behavior (McCarthy, 2010). The ELT model has been used extensively in CTE courses at the high school level (McCarthy, 2010). The diverse learning experiences and opportunities provided to students' increase their self-efficacy and knowledge. The next section will discuss how CTE courses at the high school level impact the experience of students.

Experiential Learning Theory and Career Technical Education

Most CTE courses in a classroom consist of teaching, application, work experiences, and activities related to career and technical professions (Clark et al., 2010; Scott & Sarkees-Wircenski, 2008). CTE programs using this type of learning are referred to as using experiential learning (Clark et al., 2010; Scott & Sarkees-Wircenski, 2008). These experiences are characterized as problem-solving and hands-on learning experiences (Clark, Threeton, & Ewing, 2010). CTE courses are designed to provide a real life and a hands-on learning experience approach, and it provides students with diverse learning experiences and opportunities to explore college and career options (Clark et al., 2010; Scott & Sarkees-Wircenski, 2008). This type of learning provides students the opportunities to gain knowledge through theory and then use their learning to complete tasks that align to an occupational setting (Clark et al., 2010; Scott & Sarkees-Wircenski, 2008).

However, CTE has only been offered to high school students (Dare, 2006). Although these experiences provide students with real life and hands-on learning, CTE courses have not been fully offered at the middle school level (Benson et al., 2005). This leads into another limitation in that students enter high school without the skills they need to be successful (Dare,

2006). Students should understand this type of learning as it impacts awareness of CCR and is crucial for their academic success (Dare, 2006). The next section will define CTE and provide a historical perspective.

Career Technical Education

CTE is defined as a connection between coursework in a classroom setting and a work-based learning program that creates experiences for students (Mobley et al., 2017). CTE courses help students navigate through their career choices and projects that are based on skills and real-world problems (Mobley et al., 2017). Historically, CTE was designed to provide high school students an environment to thrive in when it was not possible to excel in a traditional high school (Dougherty & Lombardi, 2016). The intent is to prepare youth for varying careers with varying levels of education (Dougherty & Lombardi, 2016). CTE courses have been designed to help students apply academic content knowledge to real workplace skills and are generally modeled after the careers that students may enter one day; these students feel prepared during the transition to college and work (Sunda, Finnell, & Berry, 2015). Students describe their experiences as positive (Sunda et al., 2015). They are provided with important information about different programs and feel confident with their college and career options (Mobley et al., 2017). Sunda et al. (2015) argued that students were engaged and increased their capacity when the Common Core curriculum was embedded in CTE courses, because they were provided instructional opportunities to solve their own problems.

CTE courses have been designed to provide high school students with opportunities to solve their own problems within real-world situations (Benson et al., 2005). However, research has not been conducted to understand if these types of opportunities would benefit students as

early as middle school (Benson et al., 2005). In the next section, there is a discussion on the empirical literature on CCR.

College and Career Readiness

Morningstar, Zagona, Uyanik, Xie, and Mahal (2017) argued that academic competency should not be a separate class or set of skills from the general curriculum. These experiences should take place throughout students' educational journeys starting from kindergarten (Morningstar et al., 2017). The consensus amongst educators does not appear to indicate the need to incorporate CCR skills into the core curriculum (Conley, 2013).

There is still a preference among educators for college over career (Conley, 2013). However, Royster et al. (2015) reported that only 25% of students who took the ACT exam in 2011 demonstrated college readiness. The purpose of the ACT exam according is to provide a benchmark for students and indicate success in college academic courses such as English and math (Royster et al., 2015). It is important to note that 75% of students did not have the academic skills to be successful after high school (Royster et al., 2015). This is troubling because only 25% of students had the competent skills required for college (Royster et al., 2015). The other 75% lack the skills they need in English and math (Royster et al., 2015). Further research is still necessary in order to understand how an embedded curriculum with CCR skills would impact students' understanding of the different paths.

The preference of choosing one path over the other – career or college - has created debate (Conley, 2013). This polarization of choosing a college or career path has created confusion for students as they enter high school because of the push for one or the other; a college or career path (Conley, 2013). These paths are determined based on academic grades

and California Assessment of Student Performance and Progress (CAASPP) scores (California State PTA, 2020).

This confusion has led to the Every Student Succeeds Act (ESSA) (U.S. Department of Education, 2019). The ESSA has called for a change in education (U.S. Department of Education, 2019). A holistic approach to education is the focus where schools and students are being held accountable by measuring student success in different ways aiming to prepare students for life after graduation (Darling-Hammond et al., 2016). The ESSA focuses on creating a system where students will be set up to master academic content, think critically, collaborate, communicate, and think independently (Darling-Hammond et al., 2016). Preparing students to be college and career ready in requires schools to provide students with opportunities to have their learning be meaningful where there is a focus on CCR versus college or career. Readiness skills should incorporate both academic and technical (Darling-Hammond et al., 2016).

According to the ACT (2012), academic readiness is not the only determinant of readiness. Other key factors such as student academic behavior and career planning are important in helping students have a sense of awareness (ACT, 2012). Together, these elements provide a complete picture for student readiness (Conley, 2012). As Conley (2012) argued, in order to be competitive in the growing workforce students will need to have a certain amount of thinking skills, content knowledge, and strategies for learning to be successful in their careers (Conley, 2012). To compete in the workforce students will need both academic and technical skills (Conley, 2012). Furthermore, these readiness skills need to be incorporated early, so that students enter high school with an awareness of the different college and career options (Conley, 2012). The lack of alignment between content knowledge and skills that students need to be

successful has created a need for early awareness of different college and career options (Lombardi et al., 2011). Further research is still necessary in order to understand CCR in middle school and the impact it has on students as they transition from middle school to high school (Dare, 2006).

Royster et al. (2015) argued that students need early access to rigorous coursework with opportunities to be successful. Royster et al. (2015) posited that, by providing rigorous coursework early to students, students will be college and career ready. Encouraging students to aspire to college by accelerating their learning in preparation for college coursework supports their educational development and readiness for college and career (Royster et al., 2015). The researchers made, however, an implicit assumption that college is more important than a career (Royster et al., 2015). This separation of college and career may be detrimental for students.

Since all students eventually want to enter the workforce, separating college and career is not realistic because to be successful in a career student will need a certain set of content knowledge and foundational skills (Conley, 2013). As students transition from one system whether it be college or work, to another, students will need a certain set of content-based knowledge and foundational skills to be successful (Conley, 2013). Therefore, separating college and career creates problems for students as they make pivotal decisions about their future. Further research is still necessary to understand student perceptions about their awareness of different options when they enter high school (Conley, 2013). The next section discusses the current CCR programs available for high school students.

Programs of Study

Programs of study (POS) are the programs currently in place at high schools across the United States (Castellano, Richardson, Sundell, & Stone, 2017). These POS are designed to offer courses that blend academic and content standards with CTE standards by providing students with opportunities to have hands-on and work-based learning situations (Castellano et al., 2017). According to Kolb et al.'s (2001) ELT, students are more likely to be college and career ready at the high school level when they are exposed to CTE courses and programs (McCarthy, 2010).

Student achievement at the high school level when students are enrolled in CCR programs has been researched extensively (Darling-Hammond et al., 2015). Using structural equation modeling (SEM) and an instrumental variable approach, Castellano et al. (2017) tested the effects of POS on high school student GPA and graduation rates. They sought to understand the effect of enrollment and participation in CTE courses on GPA and graduation (Castellano et al., 2017). The results from the SEM showed a significant relationship between increases in high school graduation rates and GPA and a higher number of offered CTE courses.

However, programs supporting students' CCR at the high school level may be too late (Dare, 2006). There is not enough evidence showing the benefits of CCR programs at the middle school level. There appears to be many gaps within the middle school age group in supporting middle school students' CCR. Although CCR programs at the high school level have shown to increase student academic success, the same cannot be said for middle schools (Dare, 2006). There is a lack of understanding of CCR at the middle school level. The next section discusses the current gaps in CCR.

Gaps in Research

Interdisciplinary Education

College and career development and exploration have become an integral part of students' educational journey as they transition from elementary to middle school (Conley, 2013). Further research is necessary to understand student perceptions about college and career options at the middle school level (Conley, 2013). Lapan et al. (2016) argued for the need to integrate a career development program in a traditional classroom, to provide students with the opportunity to make important decisions about what they need to do in order to be college and career ready. The researchers in this study used an eight-week English language arts (ELA) and career development curriculum with 7th grade students (Lapan et al., 2016). Students showed an increase in understanding the necessary decisions needed to be college and career ready (Lapan et al., 2016). A limitation of Lapan et al.'s (2016) study was that they only focused on ELA, indicating the need to understand integration of career development in all courses and not just ELA. College and career awareness are an important part of the child's education especially as they transition from middle school to high school (Dare, 2006). There is not enough research showing how students' awareness of different college and career options impact the choices they make (Lapan et al., 2016).

There is a need for educators and policy makers in helping middle school students understand career development as a "synergy by leveraging the relevance of what students are studying to enhance students' engagement in their learning and consequently improve academic achievement" (Lapan et al., 2016, p. 13). When students can integrate their learning with career development, students see the relevance and value of what they are learning, which ultimately promotes student achievement (Lapan et al., 2016). The lack of understanding of CCR at the

middle school level has created an urgency for school administrators to create programs to be set in place at the middle school level that provide students the opportunity to enhance their learning through career exploration and awareness of the different options. Furthermore, Morningstar (2016) discusses the need for CCR curriculum to be embedded into their daily experience and for curriculum to support CCR as early as middle school. Further research is still necessary in order to understand the benefits of programs that provide students the opportunity to explore different college and career options at the middle school level. It is necessary to understand how these programs impact middle school students.

Setting the Expectation

Current research indicates the need for CCR programs early in students' education (Conley, 2013). According to The National Center of Education Statistics (NCES; 2016), as of 2011, between 30% to 60% of freshmen students needed to take remedial classes in college. This high rate indicates a need for programs to prepare students for college and career. Tai, Lui, Maltese, and Fan (2007) examined 8th grade students' expectations of going to college. Findings from Tai et al.'s (2007) study indicated that the students who wanted to pursue a science career were 1.9 times more likely to earn a four-year college degree in science than students who did not desire a science-related career. A limitation of Tai et al.'s (2007) study is that the researchers focused on students interested in a science career, which makes their findings difficult to generalize to students interested in other types of careers.

It is important to understand how choices change when students are exposed to different career options earlier (Conley, 2013). In Tai et al.'s (2007) study, the researchers only looked at college-bound students. Results may differ in studies that focus on middle school students and expand beyond students who are interested in just science-related careers. Further research is

necessary in order to understand the impact of readiness programs beyond science and the expectation from educators of college and career being set earlier than high school.

Early awareness for students in college and career options is important for their success. Preparing students for rigorous coursework early is important to meet CCR standards that have been set forth nationwide (Royster et al., 2015). High schools do have many programs set in place to support students in different pathways based on interests and aspirations (Bishop & Mane, 2004). However, not enough research exists that look at programs at the middle school level. Further research is needed to understand the impact CCR programs have on student interest at the middle school level.

Career Development in Females

Social Role Theory (SRT) provides a perspective on how students perceive a career choice (Shapiro et al., 2015). SRT is defined as one where students are inclined to act a certain way based on their defined gender roles (Shapiro et al., 2015). These expectations lead students to pursue certain career roles (Shapiro et al., 2015). Research in adults indicates how these social gender roles influence the occupational paths men and women choose and these paths are based on what they are expected to do (Shapiro et al., 2015). Furthermore, when researchers looked at young adolescents, they found that gender roles start as early as two and their identity in terms of career aspirations and choices begin as early as middle school (Shapiro et al., 2015).

As argued by Shapiro et al. (2015), it is apparent that middle school students do begin to think about their careers as early as middle school. Gender roles impact their thinking, which ultimately influence their career choices (Shapiro et al., 2015). Further research is necessary to understand how these influences impact the career choices of young adolescent girls. This is because most women contribute to at least half of the household income (Parker & Stepler,

2017). If women are contributing this much to the household, why are young girls still interested in jobs labeled as “pink collar” where the pay is still substantially lower (Stoesz, Karger, & Carrilio, 2017)? Research on providing learning experiences that explore career interests is vital in allowing both males and females to understand the different options available to them.

Low Socioeconomic Status Career Options

Current research shows that low socioeconomic students are most likely to lose interest in CCR as life experiences impact priorities (Yerdelen, Kahraman, & Tas, 2016). Yerdelen et al. (2016) examined middle school students’ perceptions about STEM-related careers. The researchers found that middle school students had positive perceptions of STEM fields, regardless of their gender or socioeconomic status (Yerdelen et al., 2016). Their perceptions were always positive regardless of their life experience and home life (Yerdelen et al., 2016). However, Yerdelen et al. (2016) argued that students of lower socioeconomic status were at a disadvantage, as they had little information about different STEM career options, despite the demand for guidance about STEM occupations. The researchers determined that low socioeconomic students did not often choose STEM careers, but they did not look to see if the same was true for other careers (Yerdelen et al., 2016). Further research is still needed to understand low socioeconomic students’ awareness of college and career options.

Career Technical Education

The need for CTE is an important topic for many educators and researchers alike (Dare, 2006). It is no surprise that CTE courses have been around at high schools for many decades (Bishop & Mane, 2004). Career technical education courses are designed to help students apply academic content knowledge to real workplace skills and are generally designed to model careers students are interested in (Sunda et al., 2015). High school students who complete these

programs often do feel prepared during the transition to college and work (Sunda et al., 2015). Students describe their experiences as positive as they are provided with different information regarding college options and feel confident with the choices they make (Mobley et al., 2017). However, high school may be just too late. It is necessary to understand awareness of different college and career options in middle school.

Mobley et al. (2017) found that CTE students were more interested in discussing careers with academic counselors than with other students. Moreover, the researchers found that students had a desire to explore different college and career options due to their inherent curiosity (Mobley et al., 2017). However, a limitation in their research and others has been the focus on primarily high school students (Mobley et al., 2017). Further research is necessary in understanding how a program that promotes college and career awareness would impact middle school students. Further research is imperative to learn the specific aspects of CCR programs for middle school.

Concluding Thoughts

The purpose of this literature review was to discuss CCR programs to better understand the gaps in the research. This literature review is only the beginning, as there are many gaps that need to be addressed in helping and supporting students transition from K-12 education into being college and career ready. It is evident that the biggest gaps appear to be in middle school. Middle schools are not providing adolescent students with opportunities to explore different college and career options. This ultimately impacts middle school student awareness of different college and career options. The lack of understanding in awareness amongst middle school students of different college and career options created a need for this study.

CHAPTER 3: METHODOLOGY

The intent of this research was to understand middle school students' awareness of college and career options at a charter school in California. There is a lack of understanding among school educators and administrators of what it means to be college and career ready at the middle school level. This ultimately leads students to enter high school without the skills they need to select courses. Middle schools aim to provide students with skills and content knowledge early, thus allowing them to make informed decisions about the different college and career options.

The objective of this research study was to inform and improve how the school's CCR (S2C) Program, which is currently being implemented at the charter school. At the end of this study, administrators and educators at the site may be able to utilize findings from this study to inform current practices at the site. The guiding question and associated sub-questions for this research are provided below.

Guiding Question

What factors influence middle school students' awareness of college and career options after completing the S2C Readiness Program?

Sub-questions

1. Do performance levels relate to student awareness of different college and career options?
2. How does student self-efficacy relate to college and career awareness?
3. How does the S2C elective class choice relate to college and career awareness?

Chapter Roadmap

The purpose of this chapter is to provide the methodological approach taken in this study. In the first section of the chapter, the definition of *college and career awareness* is revisited. The purpose of this study was to examine the relationship between student performance, self-efficacy, and how S2C elective classes relate to student awareness of different and college and career options. This relationship is shown in Figure 2.

In this chapter, the methodology is described in detail, and an outline of the study is provided. The goal of the study along with the methodology used to answer the inquiry questions is discussed. The following section provides a detailed description of the S2C Readiness Program, including information on the program's key components that comprise the classes offered at the charter school. Descriptions of the participants are then provided, as are descriptions of the instruments used to collect data. The chapter ends with sections on the data analysis conducted for the study and on study trustworthiness and validity.

College and Career Awareness Revisited

As discussed in Chapter 1, college and career awareness is students' awareness of post-secondary college and career options they may wish to pursue (Conley, 2013). After students have completed the program, students who are aware should be able to make informed decisions about the course choices that will prepare them for college and career success. Students who have this awareness will be able to understand the variety of the different college and career options available to them after completing the S2C Readiness Program.

Relationship Model

The diagram below provides the relationship model showing the different factors that may affect student awareness. Middle school students lack of understanding in college and career awareness has created a need for this study. The diagram below shows the different factors impacting awareness at the middle school level. The arrows in the diagram indicate all the relationships. Achievement may impact self-efficacy, elective class choice, and awareness; self-efficacy may impact student awareness and S2C elective class choice; S2C elective class choice may directly impact awareness. Measures of Academic Progress (MAP) will be used to measure student achievement. The next section will describe the approach used in this study.

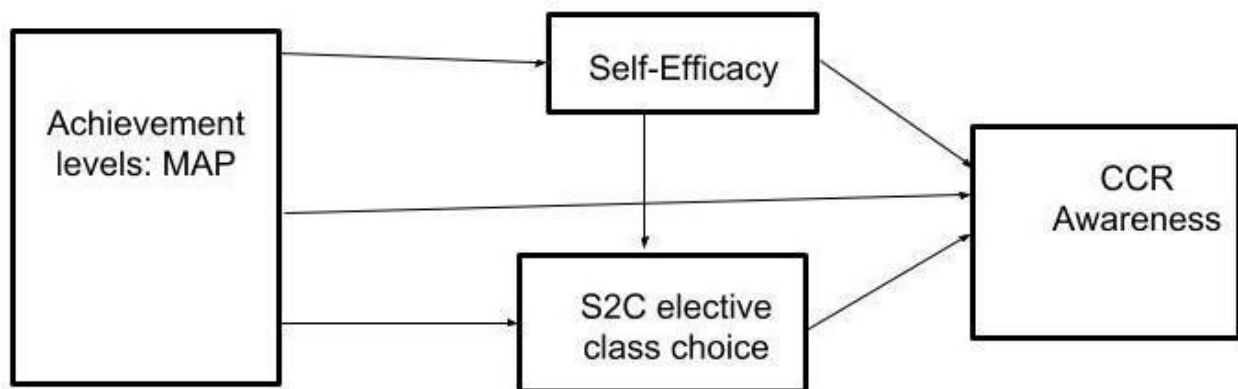


Figure 2. Achievement levels, self-efficacy, S2C class, and CCR awareness

Methods Approach

This research study was quantitative in nature. The data came from surveys and archival data. The data provided insight into the problem and facilitated improvements in the S2C Readiness Program implementation at the charter school. The analyzed data provided an understanding of college and career awareness at the charter school.

Program Description

The S2C Readiness Program is currently being implemented at the charter school. In addition to their core classes (English, math, science, history, physical education), students at this school are placed in an intervention or enrichment class in the morning and an S2C elective class in the afternoon. The procedure for student placement in the intervention and enrichment class will be discussed below.

Intervention and enrichment class. Using the NorthWest Evaluation Association (NWEA) and the Measures of Academic Progress (MAP) assessments, school administrators assess student performance in the fall and winter to them in an appropriate intervention or enrichment course. Questions on the MAP assessment increase in complexity based on their response to the previous question (HCPSS, 2020).

The Rasch UnIT (RIT) score from the MAP assessment is an estimate of the student's achievement level and growth in reading and math (HCPSS, 2020). A different score is provided for each student in reading and math (HCPSS, 2020). The RIT score is the raw score for each student. Each score is compared to the average score of students tested across the country in the same grade and term (fall, winter, spring) (HCPSS, 2020). The students' placement in intervention or enrichment is based on their RIT score which is the raw score for each student.

The students raw score is compared to the national average (HCPSS, 2020). If students meet the minimum criteria (national average), they are considered at grade level (HCPSS, 2020). These students are placed in an enrichment class (HCPSS, 2020). However, when students do not meet the minimum RIT score, they are placed in an intervention class (HCPSS, 2020).

Intervention course. Four types of intervention courses are offered for students. However, reading takes priority over math because of the nature of word problems. In other words, if students have not met proficiency in both reading and math, students will receive support in reading first. When they do not meet the minimum RIT score in either English language arts (ELA) or math, the student is placed in a tutorial program where they work on targeted instruction of deficient skills to help fill in the gaps. This intervention class is fluid and students can test out of the class during the next MAP testing window.

When students are far below grade level based on the RIT score, teachers compare MAP data with the California Assessment of Student Performance and Progress (CAASPP) score. If the scores on both MAP and CAASPP indicate student proficiency to be far below grade level, they are placed in an intensive online intervention program to work on larger gaps that cannot be filled within the year. The online program used to support these students in ELA is the Reading Plus Program which is a personalized and an adaptive reading program for students with larger gaps that cannot be filled within one year. The online program used to support students in mathematics is TenMarks, a personalized online math practice program for students with larger gaps that also cannot be filled within one year. These classes are also fluid where students can move out if their scores show proficiency during the next MAP testing window.

Enrichment. If students reach the minimum RIT score in reading and math on the MAP assessment students are offered an enrichment opportunity. Enrichment opportunities for students

included (a) integrated Mathematics 1, a high school math course; (b) art, in which students learned how to draw and paint; (c) band, where students learned an instrument of their choice; and (d) Teacher Assistance, a class where students learned about the responsibilities and roles of a teacher. It is important to note that these classes are also fluid; when students do not meet the minimum RIT score requirement on the next MAP assessment, they are placed in an intervention class to work on missing skills and concepts. The next section will discuss the different elective options provided for all students in the afternoon.

S2C elective class course. Students can select from six elective courses in the afternoon. Based on their selection and seniority students are placed in an elective course. Eighth grade students have priority and students are guaranteed to be placed in their first or second choice. Additionally, students cannot take the same course as they did the previous year. Descriptions of each course are provided in the next section.

- Science Technology Engineering and Mathematics (STEM) - Students explore theories and how objects work. This class is inquiry driven and hands on where students engage their curious minds in all things STEM. Students spend the year doing activities: building bridges, looking at ecosystems, exploring the effects of plant growth, building circuits, and solving problems. During the last trimester students develop a culminating project.
- Choir/Musical Theatre - This is a year-long performing arts class. Students will learn and participate in musical plays throughout the year with a final production of Alice in Wonderland Jr. at the end of the year.
- Leadership - This class consists of student leaders who plan school events, embed themselves in the community, and are closer to being career ready. They learn how to effectively communicate and increase positive school culture and spirit through student ideas. Students learn about and use the parliamentary process, create resumes, fill out job applications, job shadow, and more.
- Life Management - Students explore topics that relate to everyday life. Students learn basic skills for personal money management, food safety, nutrition, recipe preparation and sewing repairs. Students spend time learning about health and the role food plays in health. This class is focused on helping students prepare for daily life skills and possible careers beyond.

- Technology Innovation - This class takes an in-depth look at how to effectively use technology. Students get familiar with various programs to help create presentations, practice different technology programs, learn coding and build games using code.
- Art - This class helps students develop their artistic skills using different materials such as, coloring pencils, markers and watercolors.
- Photography - This class is focused on learning how to take pictures. Students learn how to use a camera and ways to avoid common photography mistakes.

Methodology

This study took place at a charter school in California. The inquiry occurred in the classroom of the researcher. The researcher had complete access to the school as the researcher was the teacher and an Instructional Coach for the school. This inquiry benefits the school and students as it provides administrators with insight to make improvements to the program. At the end of this study students will have the opportunity to make informed decisions about the college and career options that are available to them. Furthermore, administrators and leadership team members can use the findings to further develop and improve the S2C Readiness Program to better support students in being aware of different college and career options.

This research was exploratory, as CCR has been studied extensively at the high school level, but it has not been studied for middle school students (dare, 2006). As it was discussed in Chapter 1 high school is too late; CCR needs to happen earlier and therefore this type of research is necessary. The goal of this research was to understand the awareness of middle school students after completing the S2C Readiness Program at the charter school.

The researcher for this study was a practitioner-investigator. The researcher was a teacher and Instructional Coach at the school, and this insider role helped in the decisions the school makes about the program based on the results of the study. Since it is already known from Chapter 2 that there is a gap in research for CCR at the middle school level, the results from

this inquiry will provide insight in S2C Readiness Program implementation. Also, being a current employee of the school will mean the researcher had easier access to student participants and data as the organization saw value in the research. Researcher bias was mitigated as the research was conducted in a different classroom with students' first period teacher.

Description of Participants

The participants in this study were 5th through 8th grade students at the charter school, a K-8 independent charter with their own governing board. They are overseen by Sutter County. A lottery system is used to admit students with a total student population of 446. The governing board of the school approved the research being conducted at school. All middle school students were offered the opportunity to participate. However, participation was completely voluntary. One hundred fifty-five students were surveyed in 5th through 8th grades. Since students are under the age of 18, a parental consent form was sent home along with a copy of the survey questions before students began the study.

The researcher in this study was a practitioner-investigator as the participants were students in the teacher's classroom. Also, the risk factor for the students in this inquiry was low as the researcher had developed a relationship with all students for the past two years through her role as a teacher and an Instructional Coach. The researcher had access to the participants for surveys, and archival data. The archival data collected for this study came from MAP. The researcher used a selective random sample by providing all students the opportunity to participate in the study. The school benefited from this study because the results allowed administrators to make informed decisions about the current S2C Readiness Program.

Data Collection

To understand the overarching question: What factors influence middle school students' awareness of college and career options after completing the S2C Readiness Program, data was collected in different phases. Given that the objective of this research is to influence the current S2C Readiness Program at the charter school, each question was addressed quantitatively. The data collection method used will be discussed in detail below.

Quantitative Data Collection

To address the different inquiry questions archival data was collected and students completed two different surveys. All survey data and archival data was collected and analyzed separately. A description of each survey will be provided below.

Self-efficacy survey. Students first completed a self-efficacy survey that was adapted from Pintrich and DeGroot (1991). For the purpose of this study, the questions from the original survey were modified to measure self-efficacy in middle school students at the charter school. Certain questions not relevant to the study were eliminated; additional questions relevant to this study were created. The researcher created the survey using Google Forms and the survey was standardized. A copy of the full survey has been included in Appendix C.

Student awareness survey. The researcher asked 5th grade students to complete the survey. It is important to note that 5th grade students were not participating in the S2C Readiness Program yet. Students in grades 6-8 were asked to complete the student awareness survey after completing the S2C Readiness Program. The survey used for this research was standardized. The results from both groups were analyzed. Timing of the survey was addressed as students are more likely to be tired, fatigued, and nervous at the end of the day. Students not

participating in the program (5th grade students) took the survey first thing in the morning. Students in grades 6-8 took the survey during first period, and on the last day of the program.

The researcher created the survey using Google Forms. Questions on understanding students' awareness of the different college and career options that are available to them after completion of the S2C Readiness Program were asked in the survey. Questions include their understanding of different job opportunities, career interests, college choices, life skills, and different requirements for college and vocation. The survey provided an understanding of students' awareness of the different college and career options. A copy of the full survey has been included in Appendix B.

Validity. Validity for the study was maintained in two ways. Only one survey was given at a time. The reasoning for this was to keep student minds on one set of questions at a time only. Second, by capturing self-efficacy data at an earlier point in the year, it clarified self-efficacy as an independent variable which has temporal precedence in relation to college and career awareness which could strengthen the directionality of the relationship between the two variables as discussed in the relationship above.

Data Collection Method

A quantitative method was used to address the guiding research question: What factors influence middle school students' awareness of college and career options after completing the S2C Readiness Program? College and career awareness were measured using an awareness survey, self-efficacy survey, and by collecting and analyzing archival data. The information collected from both surveys and archival data provided an understanding of students' awareness of different college and career options.

Archival data was collected and analyzed to address the first sub-question: Do performance levels relate to student awareness of different college and career options. In order to understand the first sub-question MAP scores of all middle school students were collected. Also, students completed the student awareness survey after the completion of the program. To understand the relationship between student performance and their awareness, the MAP scores and results from the awareness survey were compared and analyzed.

To address the second sub-question: How does student self-efficacy relate to college and career awareness the researcher will collect and analyze data collected from the self-efficacy survey and awareness survey. The data was analyzed to understand the impact self-efficacy has on student awareness of the different college and career options after completing the program. The next section will discuss how the data was analyzed.

To understand the relationship of the S2C elective class choice and college and career awareness student aggregated data was collected. These data were analyzed to understand the relationship between the choice the students make and their awareness of different college and career options. There could also be a relationship between self-efficacy and the choices they make which may impact their overall awareness of different college and career options.

Data Analysis

The data for this research was analyzed using quantitative methods. A comparison of the different variables: self-efficacy, performance level, and S2C elective class choice was used to understand the dependent variable: college and career awareness. To address all the questions, the reader will walk through student responses to the career exploration survey items to provide the reader with a better understanding of student college and career awareness.

Quantitative Data Analysis

The collected data from both surveys and archival data were tabled and analyzed to determine relationships. Various Tables were developed based on student responses from both surveys and were compared and analyzed. Descriptive statistics explained the college and career awareness as students progressed from 6th to 7th to 8th grade. Ultimately the analysis of this inquiry compared the different factors: performance level, self-efficacy, and S2C elective class choice to the dependent variable which is awareness of different college and career options. Through this analysis the strength of the relationships helped understand how the factors relate to student awareness.

Trustworthiness

The trustworthiness and role of the researcher was important in this study. A relationship between the participants and researcher was established. Trust was developed given that the researcher spent the last two years with those students. The reliability in this research was developed through the data collection tools and methodology discussed above.

Limitations

A major limitation of this study was the small size and length of study. The student population changes from year to year which means the study cannot be used to generalize within the state. With a small sample size, it was not possible to get a statistically significant result in the analysis of the data. Furthermore, the sample size of students was small, and the research site was located in a small rural part of Northern California which may not reflect and represent the demographics of the entire state population. Another limitation of this study was the timing of the research. To get more information about a program, a survey at the beginning of the year and

end of the year would have been beneficial to provide a comparison of changes in awareness from beginning to the end.

Ethical Considerations

This research was conducted to help inform and improve current practices at a charter school in California. As they are under the age of 18, adolescent students are a protected research group and therefore their protection is crucial. All students had an informed parental consent form, and the form specifies that students could stop their participation in the research at any time. The questions were not intrusive, and a relationship between the researcher and participants were established over the past two years. Furthermore, this study was approved by the school board. The school board is composed entirely of parents and community members.

Chapter Summary

The goal of this study was to understand student awareness of college and career options at the middle school level. In this chapter, there were discussions on the approach, methodology, and methods that were used to collect and analyze data in order to achieve an understanding of awareness to help inform administrators about the current S2C Readiness Program at the charter school. Data collection and analysis plans were also reviewed.

CHAPTER 4: RESULTS

The purpose of this research was to understand middle school students' awareness of CCR at one charter school in California. Knowing that many students do not have the skills and tools necessary to be college and career ready this study should be able to provide insight for improving the implementation of the Schools to College and Career (S2C) program at the school. The objective of this research study was to apply the findings from this study to improve and inform the S2C Readiness Program at one charter school in California. Using the findings from this study, administrators and educators at the site will be able to understand and provide needed support to middle school students. This study sought to understand students' awareness of college and career options. Below are the questions that drove this study.

Guiding Question

What factors influence middle school students' awareness of college and career options before and after completing the S2C Readiness Program?

Sub-questions

1. Do performance levels relate to student awareness of different college and career options?
2. How does student self-efficacy relate to college and career awareness?
3. How does the S2C elective class relate to college and career awareness?

To address all the questions, it is important to first walk the reader through student responses to career exploration survey items to provide the reader with a better understanding of student college and career awareness.

Results

Career Interest

All students in 5th through 8th grades were asked if they had a career interest. Results showed that 139 (90%) students of the 155 surveyed had a career interest. Table 1 provides information on students having a career interest across 5th through 8th grade. It is important to note that the lowest number of students indicating a career interest was in 5th grade ($n = 25$, 71%). The 5th students had not yet participated in the S2C Readiness Program. Thirty-four (92%) 6th graders, 42 (96%) 7th graders, and 37 (97%) 8th grade students had a career interest.

Table 1
Career Interest by Grade

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|-------------------------|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| Total Sample Size | 35 | | 37 | | 45 | | 38 | |
| Have a Career Interest? | n | % | n | % | n | % | n | % |
| No | 10 | 29% | 3 | 8% | 3 | 4% | 1 | 3% |
| Yes | 25 | 71% | 34 | 92% | 42 | 96% | 37 | 97% |

Table 2 provides information on the number of career interests for 5th through 8th graders. As shown in Table 2, 18 (72%) of the 5th graders, who had yet to participate in the program, had not narrowed their focus in careers and as such, reported having interest in 4 or more careers. Thirty (88%) of 6th graders and 30 (70%) of 7th graders reported having interest in 2-3 careers, the most frequent response. On the other hand, 25 (68%) of 8th graders indicated an interest in

only one career, which may suggest that as students' progress in the S2C Readiness Program they become more focused in their career interests.

Table 2
Number of Career Interests by Grade

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|-----------------------------|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| Total Sample Size | 25 | | 34 | | 43 | | 37 | |
| Number of Career Interests? | n | % | n | % | n | % | n | % |
| One | 2 | 8% | 3 | 9% | 9 | 21% | 25 | 68% |
| Two to three | 5 | 20% | 30 | 88% | 30 | 70% | 12 | 32% |
| Four or more | 18 | 72% | 4 | 13% | 4 | 9% | 0 | 0% |

Table 3 provides information on understanding of job opportunities across 5th through 8th graders. As shown in Table 3, only 40% of 5th graders with a career interest indicated an understanding of job opportunities associated with their career interests, whereas 74% of 6th graders indicated an understanding of job opportunities. Most 7th and 8th grade students (81% for both groups) understood the availability of job opportunities. Overall, students with career interests who participated in the S2C Readiness Program were far more likely to indicate an understanding of job opportunities than the 5th grade students who did not participate in the program.

Table 3
Understanding of Job Opportunities by Grade

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|---|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| Total Sample Size | 25 | | 34 | | 43 | | 37 | |
| Have Understanding of Available Job Opportunities? | | | | | | | | |
| | n | % | n | % | n | % | n | % |
| No | 15 | 60% | 25 | 74% | 35 | 81% | 30 | 81% |
| Yes | 10 | 40% | 9 | 26% | 8 | 9% | 7 | 9% |

Survey data were then analyzed to examine the percentage of students by grade who expressed no interest in careers but had started to think about careers. This information is presented in Table 4. Few students in 7th ($n = 2$) or 8th ($n = 1$) grades had no career interests, and of those few, all had started thinking about their careers. In contrast, only 1 out of the 3 (33%) 6th grade students with no career interests had started thinking about careers. Among 5th grade students, only 2 out of 10 (20%) had begun thinking about careers. This could be attributed to the younger age or to not yet participating in the S2C Readiness Program. At this point, it cannot be said with certainty whether the S2C Readiness Program had an impact on students thinking about careers if they did not yet have a career interest.

Table 4
Career Interest by Grade

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|--------------------------------------|-------------------------|-----|-------------------------|-----|-------------------------|------|-------------------------|------|
| No Career Interest Total Sample Size | 10 | | 3 | | 2 | | 1 | |
| Started Thinking about Careers? | n | % | n | % | n | % | n | % |
| No | 8 | 80% | 2 | 34% | 0 | 0% | 0 | 0% |
| Yes | 2 | 20% | 1 | 66% | 2 | 100% | 1 | 100% |

Knowledge of Requirements for Pursuing Career Interests

Students who responded with a career interest were then asked about their understanding of basic skills needed and content knowledge needed to be successful in their career interest. As indicated in Table 5, 48% of the 25 5th grade students indicated an understanding of basic skills needed for their career interest; and only 20% of 5th grade students had an understanding of the content knowledge needed to be successful in their careers of interest. Among the 34 6th graders with career interests, 74% indicated an understanding of basic skills needed and 59% indicated an understanding of content knowledge needed. For the 43 7th graders, 67% understood basic skills needed (a dip from 6th grade), but 82% understood content knowledge needed for their career interests. For the 37 8th graders, 81% and 87% of students, respectively, understood basic skills and content knowledge needed.

Table 5
Basic Skills and Content Knowledge Needed by Grade

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|--------------------------|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| Total Sample Size | 25 | | 34 | | 43 | | 37 | |
| | n | % | n | % | n | % | n | % |
| Basic Skills | | | | | | | | |
| No | 13 | 52% | 9 | 26% | 14 | 33% | 7 | 9% |
| Yes | 12 | 48% | 25 | 74% | 29 | 67% | 30 | 81% |
| Content Knowledge | | | | | | | | |
| No | 20 | 80% | 14 | 41% | 8 | 18% | 5 | 13% |
| Yes | 5 | 20% | 20 | 59% | 35 | 82% | 32 | 87% |

Results in Table 5 suggest that, as students progressed in the S2C Readiness Program, their understanding of the basic skills and content knowledge needed to be successful in their career interests also increased, supporting an increase in their overall college and career awareness. One caveat regarding students' understanding of basic skills and content knowledge needed is that the open-ended response questions asking them to list basic skills and content knowledge they needed were not often clearly aligned to the career interests they had identified. A detailed content analysis of the responses to these open-ended questions is beyond the scope of this study.

All students with a career interest were asked what the educational requirements are to pursue their career interest. Table 6 provides the results from their responses. A substantial majority of students ($n = 43, 31\%$) indicated that they did not know the educational requirements

needed for their career interest. Interestingly only 10 (7%) students responded that they did not even need to complete high school for their career interest, and 35 (25%) indicated a need for a high school diploma for their career interest. This percentage (25%) is higher than the percentage (20%) of students who indicated needing a four-year college degree as the educational requirement for their career interest. However, when grouping the educational categories of certification programs from a community college ($n = 13$, 9%), a two-year college degree ($n = 5$, 4%), a four-year college degree ($n = 28$, 20%), or a graduate/professional degree ($n = 5$, 4%), 51 (37%) students indicated that some level of college education was required for their career interests.

Table 6
Educational Requirement Needed for Career Interest

| Education Needed for Career Interest | Frequency | Percentage |
|--------------------------------------|-----------|------------|
| Some high school | 10 | 7% |
| High school diploma | 35 | 25% |
| Certification from community college | 13 | 9% |
| Two-year college degree | 5 | 4% |
| Four-year college degree | 28 | 20% |
| Graduate/professional degree | 5 | 4% |
| Do not know education requirements | 43 | 31% |

Plans After High School and Knowledge of College Requirements and Costs

All students in 5th through 8th grades were then asked what their plans were after high school, with their results provided in Table 7. Of the 35 5th grade students, who had yet to participate in the S2C Readiness Program, 30 (86%) had no idea of their plans after high school. In contrast, only 5 (13%) of 6th graders, 2 (4%) of 7th graders, and 1 (3%) of 8th graders had no plans idea of their plans after high school.

For 6th graders, the most common plans were to work part-time and attend college part-time ($n = 8$, 22%), work full-time ($n = 7$, 19%), enter a vocational training program ($n = 6$, 16%), or enter the military ($n = 5$, 13%). In contrast, only 1 (3%) 6th grader planned on attending a two-year college, and just 2 (5%) planned on attending a four-year college after high school. Among 7th and 8th graders, 25 (56%) and 27 (71%), respectively, indicated that they plan to attend a four-year college after high school. More years in the S2C Readiness Program and approaching high school age appear to be related to plans to attending a four-year college after high school. This may also have to do with students' gained knowledge of the educational requirements needed for their career interests, which may be associated from students' participation in the S2C Readiness Program.

Table 7
Plans after High School by Grade

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|--------------------------------------|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| Total Sample Size | 35 | | 37 | | 45 | | 38 | |
| | n | % | n | % | n | % | n | % |
| Attend two-year college | 0 | 0% | 1 | 3% | 5 | 12% | 2 | 5% |
| Attend four-year college | 2 | 5% | 2 | 5% | 25 | 56% | 27 | 71% |
| Attend vocational training program | 0 | 0% | 6 | 16% | 5 | 12% | 3 | 8% |
| Work full-time | 0 | 0% | 7 | 19% | 1 | 2% | 2 | 5% |
| Enter the military | 3 | 9% | 5 | 13% | 2 | 4% | 2 | 5% |
| Work part-time and attend college | 0 | 0% | 8 | 22% | 2 | 4% | 1 | 3% |
| Work for a year, then attend college | 0 | 0% | 3 | 9% | 3 | 6% | 0 | 0% |
| Have no idea | 30 | 86% | 5 | 13% | 2 | 4% | 1 | 3% |

All students were asked to provide what they thought were the minimum requirements for attending a four-year college. Results from this question are presented in Table 8. The majority ($n = 25$, 71%) of 5th graders indicated that they did not know the requirements needed to attend a four-year college. The next largest percentage of 5th graders ($n = 5$, 15%) were those who thought that there are no minimum requirements needed for admission to a four-year college in California. A majority ($n = 20$, 54%) of 6th graders also indicated that they did not know the requirements needed to attend a four-year college.

Students in the 7th and 8th grade students had a better understanding of the requirements needed to attend a four-year college. Most 7th graders ($n = 25$, 56%) and 8th graders ($n = 28$,

74%) knew that an A-G completion requirement is needed to attend a public four-year college in California. Ten (22%) of 7th graders and 5 (13%) of 8th graders indicated that two years of English, math, science, and social science are required for admission to a four-year college in California. Only 5 (11%) of 7th graders and 2 (5%) of 8th graders reported not knowing the requirements needed to attend a four-year college.

Table 8
Requirements to Attend a Four-year College

| | 5 th Graders | | 6 th Graders | | 7 th Graders | | 8 th Graders | |
|---|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| | 35 | | 37 | | 45 | | 38 | |
| Requirements to Attend a Four-year College | | | | | | | | |
| | n | % | n | % | n | % | n | % |
| No minimum requirements | 5 | 15% | 7 | 19% | 5 | 11% | 3 | 8% |
| A-G completion requirement | 1 | 3% | 0 | 0% | 25 | 56% | 28 | 74% |
| Two years of English, math, science, and Social science | 4 | 11% | 10 | 27% | 10 | 22% | 5 | 13% |
| Do not know | 25 | 71% | 20 | 54% | 5 | 11% | 2 | 5% |

Students who reported having a career interest were then asked about their understanding of the costs associated with attending college (see Table 9). Of the 139 students, 120 (86.3%) reported knowing the cost to attend a two-year college. As shown in Table 9, a large number ($n =$

101, 85%) did not accurately know the cost of a two-year college. Only 19 students (15%) knew that the cost to attend a two-year college in California is between \$5,000 and \$10,000.

Of the 139 students with a career interest, 100 (72%) indicated that they knew the cost of attending a four-year college in California. However, when asked to provide the cost to attend a four-year college, students' answers varied. An even 50% reported that the cost to attend a four-year college would be between \$10,000 to \$30,000. A quarter ($n = 25$, 25%) reported the cost to be between \$1 and \$10,000, while one-fourth ($n = 20$, 20%) thought the cost to be more than \$30,000. A small percentage (5%) of students thought attending a four-year college would not cost anything.

Table 9
Cost of Attending Two-year and Four-year College

| Cost of College | Frequency | Percentage |
|--------------------------|-----------|------------|
| Two-year College | | |
| \$0-\$5000 | 50 | 42% |
| \$5,000-\$10,000 | 19 | 15% |
| More than \$10,000 | 51 | 43% |
| Four-year College | | |
| \$0 | 5 | 5% |
| \$1-\$10,000 | 25 | 25% |
| \$10,000-\$30,000 | 50 | 50% |
| More than \$30,000 | 20 | 20% |

Relationship between S2C Elective Class Choice and Awareness

The third sub-question focused on students' perceptions as to how the S2C elective classes related to their college and career awareness. The students were asked about the opportunity to explore different college and career options in their S2C classes (Table 10) and on their own (Table 11). It is critical to denote that there was a total of 139 students in 5th through 8th grade who reported a career interest. However, of that 139, just the 120 (86%) 6th-8th grade students were enrolled in the S2C Readiness Program.

Table 10 provides information on the class preferences for all 120 students in the S2C class as well as class preferences across two student groups, those who did not have a CCR opportunity and those who had one or more opportunities to explore college and career options in their S2C class. As denoted in Table 10, more than 50% of students in Leadership, Art, Choir/Musical Theatre, and Photography S2C classes responded that they had opportunities to explore college and career options at least once a week or more, whereas fewer than 50% of students in STEM, Technology Innovation, and Life Management had such opportunities. EL students assigned to ELD support instead of an S2C class had no such opportunities at all.

Table 10
Exploration of College and Career Options in S2C Elective Classes

| | Students in S2C | | Never Had CCR | | Had CCR Opportunity | |
|-----------------------|-----------------|-----|---------------|-----|---------------------|-----|
| | Class | | Opportunity | | Once or More/Week | |
| Total Sample Size | 120 | | 58 | | 62 | |
| S2C Classes | | | | | | |
| | n | % | n | % | n | % |
| Leadership | 13 | 11% | 5 | 9% | 8 | 13% |
| STEM | 18 | 15% | 10 | 17% | 8 | 13% |
| Technology Innovation | 21 | 18% | 11 | 19% | 10 | 16% |
| Life Management | 17 | 14% | 10 | 17% | 7 | 11% |
| Art | 17 | 14% | 7 | 12% | 10 | 16% |
| Choir/Music/Theater | 14 | 12% | 5 | 9% | 9 | 15% |
| Photography | 17 | 14% | 7 | 12% | 10 | 16% |
| ELD | 3 | 2% | 3 | 5% | 0 | 0% |

As shown in Table 11, 70 students (58%) reported that they never explore college and career options on their own. Additionally, all students in STEM responded that they explored college and career options at least once a week or more on their own, whereas fewer than 50% of students in the other S2C classes responded that they explored college and career options on their own. The students assigned to ELD support reported that they explore college and career options on their own. Overall, this should be a major concern for the S2C Readiness Program, as a main purpose of all classes in this program is to provide meaningful opportunities to explore college and career options.

Table 11
Exploration of College and Career Options on Own Time

| | Students in S2C Class | | Never Engage in CCR on Own Time | | Engage in CCR Once or More/Week on Own Time | |
|-----------------------|-----------------------|-----|---------------------------------|-----|---|-----|
| Total Sample Size | 120 | | 70 | | 50 | |
| S2C Classes | | | | | | |
| | n | % | n | % | n | % |
| Leadership | 13 | 11% | 7 | 10% | 6 | 12% |
| STEM | 18 | 15% | 0 | 0% | 18 | 36% |
| Technology Innovation | 21 | 18% | 17 | 24% | 4 | 8% |
| Life Management | 17 | 14% | 15 | 21% | 2 | 4% |
| Art | 17 | 14% | 9 | 13% | 8 | 16% |
| Choir/Music/Theater | 14 | 12% | 10 | 14% | 4 | 8% |
| Photography | 17 | 14% | 10 | 14% | 7 | 14% |
| ELD | 3 | 2% | 2 | 4% | 1 | 2% |

Table 12 provides students' responses about classroom projects associated with CCR. Of the 120 students in the S2C class, 58 (48%) responded that they never worked on classroom projects that helped them understand the availability of different jobs and careers. A total of 62 students reported having one or more class projects related to CCR. Of these 62 students, 37 (60%) students said they have worked on classroom projects at least once, while 25 (40%) students said they had worked on such projects in their S2C classes "many times." Overall, more than 50% of students in Leadership, STEM, Choir/Musical Theatre, and Photography, responded that their classroom projects in their S2C Elective class related to the availability of different jobs and careers. Conversely, fewer than 50% of students in Technology Innovation, Life

Management, and Art had such opportunities. E1 students assigned to ELD support instead of an S2C class had no such opportunities at all. The students assigned to ELD support instead of an S2C class had no such opportunities at all. This is also a concern, as all classes defined as part of the S2C Readiness Program is to provide students with information for pursuing college and career options related to the content and focus of the class.

Table 12
Exploration of College and Career Options as Part of S2C Class

| | Students in S2C Class | | Never Had Class Projects Related to CCR | | Had One or More Class Projects Related to CCR | |
|-----------------------|-----------------------|-----|---|-----|---|-----|
| Total Sample Size | 120 | | 58 | | 62 | |
| S2C Classes | | | | | | |
| | n | % | n | % | n | % |
| Leadership | 13 | 11% | 0 | 0% | 13 | 21% |
| STEM | 18 | 15% | 0 | 0% | 18 | 29% |
| Technology Innovation | 21 | 18% | 18 | 31% | 3 | 5% |
| Life Management | 17 | 14% | 15 | 26% | 2 | 3% |
| Art | 17 | 14% | 11 | 19% | 6 | 10% |
| Choir/Music/Theater | 14 | 12% | 5 | 9% | 9 | 14% |
| Photography | 17 | 14% | 6 | 10% | 11 | 18% |
| ELD | 3 | 2% | 3 | 5% | 0 | 0% |

To summarize, S2C students reported taking a variety of S2C elective classes. However, there is strong supporting evidence of a lack of opportunity to explore different college and career options. The implications of these findings for needed improvements to the S2C Readiness Program at the school will be discussed in Chapter 5.

Relationship between Performance Level and Awareness

To measure the performance of participating students, archival data from the MAP assessments were analyzed. All students received a Rasch Unit (RIT) score which shows student growth over time. A higher score indicates a higher achievement in that subject when they are compared to student peers across the nation. For the purposes of this study the RIT scores were grouped as 170-200, 200-220, and 221-250.

Performance Level and Awareness of College and Career Options

To address the sub-question regarding how performance levels related to student awareness of different college and career options, reading and math RIT scores of participating students in the S2C Readiness Program were compared across student groups, those with and those without a career interest. Table 13 provides the results for the MAP Reading and Math scores across student groups. As stated previously, 139 students indicated they had a career interest. Of those 139 students, 68 (50%) had a MAP reading score from 201-2220 and 63 (44%) had a MAP reading score from 221-250. With regard to the MAP math scores, 132 (95%) of the 139 students with a career interest were in the highest MAP math group (201-250). There was more variability in MAP reading and Math scores across the 16 students who did not have a career interest. For example, 6 (37%) of the 16 students without a career interest had average MAP Reading scores from 170-220. However, 7 (44%) had a MAP Reading score from 221-259. Two (13%) of the 16 students without a career interest had an average MAP Math score from 170-200, but 9 (56%) had an average MAP Math score from 221-250. Because so few students scored in the lower performance levels reported for MAP in Reading and Math, and as most students had at least one career interest, it is not clear how much performance levels affect career interests.

Table 13
Average MAP Reading and Math Scores by Career Interest

| | Students with a Career Interest | | Students Without a Career Interest | |
|----------------------------|------------------------------------|-----|---------------------------------------|-----|
| Total Sample Size | 139 | | 16 | |
| Average MAP Math Scores | | | | |
| | n | % | n | % |
| Average MAP Reading Scores | | | | |
| 170-200 | 8 | 6% | 6 | 37% |
| 201-220 | 68 | 50% | 3 | 19% |
| 221-250 | 63 | 44% | 7 | 44% |
| Average MAP Math Scores | | | | |
| 170-200 | 1 | 1% | 2 | 13% |
| 201-220 | 6 | 4% | 5 | 31% |
| 221-250 | 132 | 95% | 9 | 56% |

Table 14 provides information on comparisons between students grouped by MAP Reading scores (i.e., 170-200, 200-220, and 221-250) and their elective S2C courses. A higher number of students with MAP scores from, 221-250 took an elective STEM ($n = 10$, 36%) as compared to students with MAP Reading scores of 200-220 ($n = 5$, 16%) and students with MAP Reading scores of 170-200 ($n = 3$, 5%). Similar findings were reported for the Leadership class elective. From the results below it can be determined that students with higher MAP scores are more likely to choose STEM and Leadership courses. This could be due to higher performing students having an interest in STEM careers as a profession.

Table 14
Average MAP Reading Scores by S2C Class

| | Students with MAP Reading Scores from 170-200 | | Students with MAP Reading Scores from 200-220 | | Students with MAP Reading Scores from 221-250 | |
|-----------------------|--|-----|--|-----|--|-----|
| Total Sample Size | 62 | | 30 | | 28 | |
| S2C Classes | | | | | | |
| | n | % | n | % | n | % |
| Leadership | 2 | 3% | 4 | 14% | 7 | 25% |
| STEM | 3 | 5% | 5 | 16% | 10 | 36% |
| Technology Innovation | 10 | 16% | 6 | 20% | 5 | 18% |
| Life Management | 15 | 24% | 1 | 4% | 1 | 4% |
| Art | 7 | 11% | 8 | 26% | 2 | 7% |
| Choir/Music/Theater | 13 | 21% | 1 | 4% | 0 | 0% |
| Photography | 9 | 15% | 5 | 16% | 3 | 10% |
| ELD | 3 | 5% | 0 | 0% | 0 | 0% |

Table 15 provides information on students categorized by MAP math scores across S2C class electives. A higher number of students with MAP scores from 221-250 took an elective STEM class ($n = 15$, 28%) as compared to students with MAP Math scores of 200-220 ($n = 2$, 5%) and students with MAP Math scores of 170-200 ($n = 1$, 4%). Similar findings were reported for the Leadership class elective. From the results below it can be determined that students with higher MAP Math scores are more likely to choose STEM and Leadership courses. This could be due to higher performing students having an interest in STEM careers as a profession.

Table 15
Average MAP Math Scores by S2C Class

| | Students with MAP Math Scores from 170-200 | | Students with MAP Math Scores from 200-220 | | Students with MAP Math Scores from 221-250 | |
|-----------------------|---|-----|---|-------|---|-----|
| Total Sample Size | 26 | | 40 | | 54 | |
| S2C Classes | | | | | | |
| | n | % | n | % | n | % |
| Leadership | 1 | 4% | 2 | 5% | 10 | 19% |
| STEM | 1 | 4% | 2 | 5% | 15 | 28% |
| Technology Innovation | 5 | 19% | 10 | 25% | 6 | 11% |
| Life Management | 10 | 38% | 4 | 10% | 3 | 6% |
| Art | 1 | 4% | 5 | 12.5% | 11 | 20% |
| Choir/Music/Theater | 2 | 8% | 10 | 25% | 2 | 4% |
| Photography | 5 | 19% | 5 | 12.5% | 7 | 12% |
| ELD | 1 | 4% | 2 | 5% | 0 | 0% |

Self-Efficacy and College and Career Awareness

In order to understand how self-efficacy influenced students' college and career awareness, students participating in the S2C Readiness Program were asked to complete a self-efficacy survey. For clarity in this study, the results were examined in relation to those students who 'agreed' (i.e., strongly agree and agree) and those who 'disagreed' (i.e., strongly disagree to agree) to the self-efficacy questions. The following Tables provide information on students' responses.

Tables 16, 17, and 18 provide information for the show the relationship between 6th grade students' self-efficacy and their beliefs about their S2C elective class. Students in 6th grade had

only participated in this program for one year at the time of this study, while 7th and 8th grade students had been participating in the S2C Readiness Program for two years. Overall, students in all three grades were engaged in their S2C classes (59%, 78%, and 92% respectively) and found the material they were learning in the program to be interesting. There was, moreover, a steady increase from 6th to 8th grade of the percentage of students who had strong self-efficacy beliefs about their college and career awareness. Only 22% of 6th grade students reported having a great deal of knowledge about college and career awareness. However, 44% of 7th grade students and 74% of 8th grade students reported having a great deal of knowledge about college and career awareness. Also, only 19% of 6th graders rated their study skills as excellent compared to other students in S2C classes, compared to 33% for 7th graders and 39% for 8th graders.

Table 16
Self-efficacy and S2C Classes: 6th Grade Students

| Self-Efficacy Question | Agree | | Disagree | |
|---|-------|-----|----------|-------|
| | n | % | n | % |
| Compared with other students in the S2C Readiness Program, I think I am a good student. | 25 | 68% | 12 | 32% |
| I like what I am learning in the S2C Readiness Program. | 22 | 59% | 15 | 41% |
| Compared with other students in the S2C Readiness Program I think I know a great deal about college and career awareness. | 8 | 22% | 29 | 78% % |
| I think what we are learning in the S2C class is interesting. | 30 | 81% | 7 | 19% |
| My study skills are excellent compared to other students in my S2C elective class. | 7 | 19% | 30 | 81% |

Table 17
Self-efficacy and S2C Classes: 7th Grade Students

| Self-Efficacy Question | Agree | | Disagree | |
|---|-------|-----|----------|-----|
| | n | % | n | % |
| Compared with other students in the S2C Readiness Program, I think I am a good student. | 30 | 67% | 15 | 33% |
| I like what I am learning in the S2C Readiness Program. | 35 | 78% | 10 | 21% |
| Compared with other students in the S2C Readiness Program I think I know a great deal about college and career awareness. | 20 | 44% | 25 | 56% |
| I think what we are learning in the S2C class is interesting. | 39 | 87% | 6 | 13% |
| My study skills are excellent compared to other students in my S2C elective class. | 15 | 33% | 30 | 67% |

Table 18
Self-efficacy and S2C Classes: 8th Grade Students

| Self-efficacy Question | Agree | | Disagree | |
|---|-------|-----|----------|-----|
| | n | % | n | % |
| Compared with other students in the S2C Readiness Program, I think I am a good student. | 30 | 79% | 8 | 21% |
| I like what I am learning in the S2C Readiness Program. | 35 | 92% | 3 | 8% |
| Compared with other students in the S2C Readiness Program I think I know a great deal about college and career awareness. | 28 | 74% | 10 | 26% |
| I think what we are learning in the S2C class is interesting. | 31 | 82% | 7 | 18% |
| My study skills are excellent compared to other students in my S2C elective class. | 15 | 39% | 23 | 61% |

Tables 19, 20, and 21 provide information on students' sense of self-efficacy for each grade level in relation to the program and S2C classes. In general, as students get older their self-efficacy did not increase significantly or consistently. Even after participating in the program for 2 years, only 18% of 7th grade students and 39% of 8th grade students expected to do well in their classes compared to other students. On the other hand, the proportion of students that were sure they could understand the ideas taught in the program rose from 54% for 6th graders to 89% for 7th graders and 95% for 8th graders. The proportion of students who expected to do well in their intervention/enrichment class rose from 32% for 6th graders to 76% for 7th graders but then fell somewhat to 53% for 8th graders.

Students who agreed they do an excellent job on class problems and tasks rose somewhat from 6th grade (46%) to 7th grade (56%) and to 8th grade (97%). The percentage of students that preferred challenging classwork to learn new things only rose slightly from 19% to 22% and 24% for 6th, 7th, and 8th grade students, respectively, but the percentage that agreed that it is important to learn what is being taught in class rose much more, from 46% to 71% and 92% for 6th, 7th, and 8th grade students, respectively. There was also a significant increase in the percentage from 6th to 7th and 8th grade (46%, 56%, and 92%, respectively) in students for whom understanding college and career awareness was important.

There was a high percentage of students in all three grades with high anxiety about tests, with 5%, 96%, and 97% of 6th, 7th, and 8th graders, respectively, reported that they, "worry a great deal about tests." Furthermore, there was an increase in not remembering facts due to "nervousness during a test" as students progressed from 6th to 7th, and 8th grade (32%, 56%, and 84%, respectively). However, there was a large increase in students being motivated to learn from the mistakes they make on tests as they progressed from 6th to 8th grade. Only 46% of 6th

grade students reported that they were motivated to learn from their mistakes, while 96% of 7th graders and 92% of 8th graders reported that they try to learn from their mistakes.

The proportion of students who were certain they can understand the ideas taught in the S2C Readiness Program and who understood the importance of college and career awareness rose significantly from 6th to 8th grade. This could be attributed to age or students feeling more confident after being in the program for 2 years. Overall, it is concerning that student self-efficacy did not consistently improve on other self-efficacy survey items as students progressed through the S2C Readiness Program.

Table 19
Self-efficacy and S2C Readiness Program and Classes: 6th Grade Students

| Question | Agree | | Disagree | |
|---|-------|-----|----------|-----|
| | n | % | n | % |
| I prefer class work that is challenging to learn new things. | 7 | 19% | 30 | 81% |
| Compared to other students in this class I expect to do well. | 9 | 24% | 28 | 75% |
| I am so nervous during a test that I cannot remember facts I have learned. | 12 | 32% | 25 | 68% |
| It is important for me to learn what is being taught in classes. | 17 | 46% | 20 | 54% |
| I am certain I can understand the ideas taught in this program. | 20 | 54% | 17 | 46% |
| I expect to do very well in my intervention/enrichment class. | 12 | 32% | 25 | 68% |
| I do an excellent job on the problems and tasks assigned in all my classes. | 17 | 46% | 20 | 54% |
| When I do poorly on a test I try to learn from my mistakes. | 17 | 46% | 20 | 54% |

(Table 19 Continued)

| | | | | |
|--|----|-----|----|-----|
| I worry a great deal about tests. | 35 | 95% | 2 | 5% |
| Understanding college/career awareness is important to me. | 17 | 46% | 20 | 54% |

Table 20

Self-efficacy and S2C Readiness Program and Classes: 7th Grade Students

| Question | Agree | | Disagree | |
|---|-------|-----|----------|-----|
| | n | % | n | % |
| I prefer class work that is challenging to learn new things. | 10 | 22% | 35 | 78% |
| Compared with other students in this class I expect to do well. | 8 | 18% | 37 | 81% |
| I am so nervous during a test that I cannot remember facts I have learned. | 25 | 56% | 20 | 44% |
| It is important for me to learn what is being taught in classes. | 32 | 71% | 13 | 29% |
| I am certain I can understand the ideas taught in this program. | 40 | 89% | 5 | 11% |
| I expect to do very well in my intervention/enrichment class. | 34 | 76% | 11 | 24% |
| I do an excellent job on the problems and tasks assigned in all my classes. | 25 | 56% | 20 | 44% |
| When I do poorly on a test I try to learn from my mistakes. | 42 | 93% | 3 | 7% |
| I worry a great deal about tests. | 43 | 96% | 2 | 4% |
| Understanding college/career awareness is important to me. | 25 | 56% | 20 | 44% |

Table 21
Self-efficacy and S2C Readiness Program and Classes: 8th Grade Students

| Question | Agree | | Disagree | |
|---|-------|-----|----------|-----|
| | n | % | n | % |
| I prefer class work that is challenging to learn new things. | 9 | 24% | 29 | 76% |
| Compared with other students in this class I expect to do well. | 15 | 39% | 23 | 61% |
| I am so nervous during a test that I cannot remember facts I have learned. | 32 | 84% | 6 | 16% |
| It is important for me to learn what is being taught in classes. | 35 | 92% | 3 | 8% |
| I am certain I can understand the ideas taught in this program. | 36 | 95% | 2 | 5% |
| I expect to do very well in my intervention / enrichment class. | 20 | 53% | 18 | 47% |
| I do an excellent job on the problems and tasks assigned in all my classes. | 37 | 97% | 1 | 3% |
| Even when I do poorly on a test I try to learn from my mistakes. | 35 | 92% | 3 | 8% |
| I worry a great deal about tests. | 37 | 97% | 1 | 3% |
| Understanding college/career awareness is important to me. | 35 | 92% | 3 | 8% |

Information in the tables indicate that, as students progressed from 6th to 8th grade, the percentage of students wanting to do well increased from 6th grade (19%) to 7th grade (22%) and then to 8th grade (24%). Also, nervousness in remembering facts in their classes also increased significantly from 6th grade (32%) to 7th grade (56%) and then to 8th grade (84%). Interestingly, almost all the students worry about tests regardless of their grade. It is also important to mention that there was a steady increase in understanding the ideas taught in the S2C Readiness Program as they progressed in the program from 6th grade (54%) to 7th grade (89%) and then to 8th grade (95%). Developmental changes do occur when students are in middle school could affect

responses to self-efficacy. The age of the student could also impact the reported responses. Furthermore, students in grades 7th and 8th grade had participated in the program for 2 years at the end of this research. Students in 6th grade had only completed one year. This could have also impacted the results in this study.

There is also a difference in the importance of understanding college and career awareness based on students' class grade. After participating in the program for one year 46% of 6th graders reported the importance of understanding college and career awareness. There was a steady increase (56% of 7th graders and 92% of 8th graders) in wanting to understand college and career awareness after participating in the program for two years.

Statistical Results

It is important to note that statistical tests, specifically, analysis of variance (ANOVA) and chi-squares, were conducted. Results from these analyses were not significant. The lack of significance was likely due to the remarkably high number of students who reported having a career interest ($n = 139$).

Anecdotal Results

There were conversations with students where they indicated that the S2C classes were engaging. They also expressed frustration in some of their courses, most notably in the areas of technology, home economics, and theater, because these classes did not provide them opportunities to explore different college and career options. Students mentioned the need for projects and classroom activities to be aligned with careers related to their class. They indicated that their classroom projects did not connect with real-world job opportunities. Through these informal conversations it was evident that a need for activities related to career interest was necessary in a S2C Readiness Program.

Conclusion

Certain conclusions can be drawn from the data. Findings showed that a lower percentage of 5th grade students, who did not participate in the S2C Readiness Program, did not have a clear understanding of the basic skills and content knowledge needed for their career interest as compared to the students in 6th-8th grades. It is also important to note that, as the grade of the student increased, a higher percentage of students know the basic skills and content knowledge needed for college and career. It is important to note that, based on students' responses to open-ended questions inquiring about basic skills and content knowledge, students did not show a clear alignment to the career interest that they identified. Indeed, students' responses were rather ambiguous, students reported skills and content knowledge that were not relevant to their career interest. It was evident from the responses that students did not understand the difference between basic skills and content knowledge needed for their career interest. A detailed analysis of those responses is beyond the scope of this study.

Conclusions can be drawn regarding students' understanding of the educational requirements needed to pursue their career interest. Results showed that over a third of students did not know the educational requirements needed for their career interest. Additionally, of the 139 students reporting a career interest, responses regarding the low cost of attending two-year or four-year colleges varied greatly.

As indicated in the findings, many students were not provided the opportunity to explore college and career options in their S2C class. Many also do not explore college and career options on their own. This is concerning because the purpose of all the S2C classes in the program is to provide students with meaningful opportunities to explore college and career

options. Furthermore, most students did not work on classroom projects related to college and career in their S2C classes. This again is a concern because all S2C classes defined as part of the S2C Readiness Program should be providing students with information to pursue college and career options as it relates to their content and focus of the class. Although students do take a variety of S2C classes, there is strong supporting evidence of a lack of opportunity to explore different college and career options in these classes. The implications of these findings for improvements to the S2C Readiness Program at the school are discussed in Chapter 5.

Information was provided regarding MAP Reading and Math scores and career interest. It appears that, as student academic performance increased, student interest in a career also increases. Most students placed in the high MAP score groups (i.e., having scores between 221 and 250) indicated an interest in a career choice. However, it cannot be determined definitively that there is a link between academic performance and career interest.

To understand the impact self-efficacy has on college and career awareness all participating students were asked to complete a self-efficacy survey. The results indicate that students were engaged in their S2C elective classes and found their learning to be interesting. Students reported that they perceive themselves to have a higher understanding of college and career awareness compared to their peers. There is a significant increase in the percentage of students wanting to understand what it means to be college and career ready as students get older. However, students show worry towards tests regardless of age or time spent in the program. Overall, the data supports a possible link between student self-efficacy and their college and career awareness. However, that link could be due to multiple factors.

Chapter 5 that follows is the last chapter in the dissertation. Implications of the findings in this chapter as well as the limitations in the data will be addressed in Chapter 5. The

following chapter will also include recommendations for improving the S2C Readiness Program at the charter school, as well as college and career education opportunities in middle schools in general, as well as recommendations for future research to support such initiatives.

CHAPTER 5: DISCUSSION

This study sought to understand how participation in a middle-school S2C Readiness Program would influence charter school students' college and career interests. The purpose of this research was to understand middle school students' awareness about the availability of different college and career options at one charter school in California. Knowing that many students do not have the skills and tools necessary to be college and career ready the goal of this study was to provide insight into program implementation at one charter school in California. In addition, this study also explored the relationship between student self-efficacy indicators and college and career awareness and interest.

The objective of this research study was to apply the learnings from this study to improve and inform the S2C Readiness Program at the school. Administrators and educators at the site will be able to understand and provide needed support to middle school students in defining and pursuing their college and career interests. The next section of this study discusses the results in detail.

Results of the Study

The results of this study addressed one overarching research questions and three sub-questions. The overarching research question focused on the factors that may influence middle school students' awareness of college and career options after participating in the S2C Readiness Program. The first sub-question focused on the relationships between students' MAP Reading and Math scores and their awareness of college and career options. Information gleaned from student survey responses showed that interest in different careers increased as student performance (as measured from MAP scores) increased. Furthermore, as students completed the

S2C Readiness Program, their understanding of basic skills and content knowledge need for their career interest also increased.

The second sub-question focused on the relationship between students' self-efficacy and their college and career awareness. The results did show an increase in engagement and interest in their S2C elective courses. Also, students responded with an understanding of what it means to be college and career ready as they completed the S2C Readiness Program. There was also an increase in students seeking to understand what it means to be college and career ready as students get older. It is important to note that there is a possible link between student self-efficacy and student college and career awareness.

The third sub-question focused on the associations between students' S2C elective classes and their college and career awareness. The research did not support a positive link between S2C elective class choice and college and career awareness. Many students responded that they did not explore college and career interests in their S2C class or on their own and did not engage in projects related to college and careers in their S2C elective class. Although students reported to have a better understanding of college and career options available to them after completing the S2C Readiness Program there is not enough supporting evidence to conclude that it is because of the program itself.

Discussion

Compared to 5th graders, students in 6th through 8th grades were more likely to have a career interest and indicated an understanding of job opportunities. A factor in their lack of interest in careers could be attributed to age or to not yet participating in the S2C Readiness Program. It is also important to note that many students reported that they never explore college and career options in their S2C elective courses and at home. Students not being provided with

meaningful opportunities to explore different college and career options is concerning given the nature of the program itself. This is also a likely factor impacting student awareness of college and career options and requirements.

Three students did not even get the opportunity to choose their own S2C elective class. English learner (EL) students were pulled for designated EL support during elective time. These students were among the students in the survey that reported that they had no career interest. The lack of opportunity to participate in the S2C elective classes is another factor impacting student awareness.

Addressing Gaps in Research

College and career development and exploration become an integral part of students' educational journey as they transition from elementary to middle school. This research hoped to understand student perceptions about college and career options at the middle school level. Lapan et al. (2016) argued for the need to integrate a career development program in a traditional classroom to provide students with the opportunity to make important decisions about what they need to do in order to be college and career ready. This research sought to understand the necessary decisions needed to be college and career ready. College and career awareness are an important part of the child's education especially as they transition from middle school to high school. The researchers in Chapter 2 studied college-bound students. This gap led to the need for further research at the middle school level. The findings from this study provided further understanding of college and career awareness. As discussed previously, high schools do have many programs set in place to support students in different pathways based on interests and aspirations. However, not enough research exists that look at programs at the middle school level. Therefore, it was necessary to use this research as a framework for further study.

As it was discussed in Chapter 2, Career technical education courses are designed to help students apply academic content knowledge to real workplace skills and are generally designed to model careers students are interested in (Sunda et al., 2015). High school is just too late. This research was necessary to understand awareness of different college and career options in middle school. This research hoped to address the biggest gaps appear to be in middle school.

Also, as it was suggested by Glessner et al. (2017), career education should be thought about as a priority, and that policies should be set into place for curriculum in career education. This research helped understand the impact self-efficacy has on feeling more motivated about the availability of different college and career options. Glessner et al. (2017) used an online based intervention program to provide students the opportunity to explore different career options. This research was limited; further research was necessary to understand the awareness of middle school students, and their self-efficacy after completing a school wide program. The findings from this study contributed to the overall education community.

Implications and Recommendations for Practice

This study sought to understand the awareness of CCR in middle school students at one charter school in California. The purpose of the study was to apply the findings from the study to provide insight and to improve implementation of the Schools to College and Career (S2C) program at the school. The administrators and educators at the site will be able to use the findings from this study to inform and improve the S2C Readiness Program. Following are some of the factors that should be considered when developing a S2C Readiness Program for middle school students.

Study findings show that students in the S2C Readiness Program were more likely to have a career interest than 5th graders. This could be attributed to age. One suggestion would be

to bring the S2C Readiness Program down to 5th grade students as they will be transitioning to middle school the following year. Further research about assessments and career interest are needed to further understand the link between standardized testing and career choice.

Age, program engagement, and self-efficacy could also be factors in whether a student has a career interest. Although the data shows an increase in student engagement and interest in their S2C elective classes there is not enough evidence to conclude that the S2C elective class that students choose is related to their college and career awareness. As discussed in Chapter 4, the results of the data do support the finding that students have some understanding of college and career awareness and that they do understand the after high school options that are available to them after completion of the S2C Readiness Program. The link could be due to participating in the program, the S2C elective class choice, age, and student engagement. Although it is difficult to say which factor contributes most to student understanding of college and career options it is important for program developers and teachers to provide students the opportunity to explore different career options in their S2C classes. It is important to note again that the open-ended response questions where students were asked to list the basic and content knowledge for their career interest did not show a clear alignment to the career interest that they had identified.

All students with a career interest were also asked the educational requirements needed to pursue their career interest. Results in Chapter 4 showed that a high proportion of students did not know the educational requirements needed for their career interest. Additionally, student responses did not indicate they knew an accurate cost of attending a 4-year state college as their answers varied significantly. This kind of information should be provided in all S2C elective classes. Another suggestion would be to provide more structure in all the S2C elective classes to

ensure that students have opportunities to explore different career options in class through meaningful class projects.

Additional professional development opportunities may be needed for teachers to learn ways to better support middle school students in gaining college and career awareness. One strategy is to explore different curriculum choices such as Naviance, that provide students opportunities to explore different colleges and careers. Naviance is a CCR software that helps to provide students with the ability to plan for college. Additionally, providing teachers opportunities to collaborate on ways to integrate college and career awareness across all content areas is critical in the development of the S2C Readiness Program. Furthermore, as Morningstar (2016) discusses there is a need for CCR curriculum to be embedded into their daily experience and for curriculum to support CCR as early as middle school. Further research is still necessary in order to understand the benefits of programs that provide students the opportunity to explore different college and career options at the middle school level.

English learner students not being provided the opportunity to take a S2C class hinders these students from developing a career interest. The 4 EL students included in this study did not get an opportunity to have choice in S2C elective class choice as this was time used for designated EL support. To best support all students in college and career awareness it is imperative to provide an opportunity to explore different college and career options. One suggestion would be to modify the program to provide designated EL support during a different part of the day.

Finally, the self-efficacy data in Chapter 4 shows that students are engaged in their S2C elective classes and perceive themselves to have a higher understanding of college and career awareness compared to their peers. Furthermore, as students get older there is a significant

percentage of students wanting to understand what it means to be college and career ready. It is important to use students' high self-efficacy in understanding college and career awareness to support students in exploring different college and career options. Exploration activities and projects around college and career can serve to be beneficial in increasing college and career awareness. It is important to note that not all the S2C elective classes in this program were meaningful to support students' college and career awareness. As discussed in Chapter 4, the Photography and Life Management did not provide activities with a relevant connection to college and career options. Also, students reported anecdotally that the Technology Innovation course had a focus on making Google slides, typing, and basic computer skills without a clear link to how these skills relate to their job choice in the future.

As it was discussed in Chapter 4, most students reported that they did not have many opportunities to explore college and career options. Additionally, 58% of the students reported that they never explored college and career options on their own. The lack of opportunity to explore college and career options in their S2C elective is problematic. The purpose of all the classes in this program is to provide meaningful opportunities for all students to explore different college and career options. However, results did provide evidence that supports the lack of opportunity to explore different college and career options. Data findings support a need for improvement in the various S2C courses.

Middle school is a prime age for students to begin thinking about college and career options. The findings from this study can be used to improve the S2C Readiness Program at the charter school. Results may help other middle school administrators as they begin to develop CCR programs. Analytical generalizations can be made from this study to help develop and implement CCR programs at the middle school level. It is apparent from the findings that some

of the S2C elective courses at the charter school did not provide students the opportunity to explore college and career options while enrolled in the program.

From this research study, we can learn that while students are taking S2C elective courses it is imperative for teachers to develop classroom activities and projects that show a direct link with different college and career options, job opportunities, and educational requirements. For example, a STEM elective course should offer activities and projects in the classroom that link the students with career options and the educational requirements needed for their career interests. Without these clear links between the courses, job opportunities, and educational requirements needed for careers students are not able to have an awareness of college and career.

Implications for Future Research

This study focused on understanding middle school students' awareness of CCR at one charter school in California. Knowing that many students do not have the skills and tools necessary to be college and career ready, this study focused on providing insight for improving the implementation of the S2C Readiness Program at the charter school. The objective of this research study was to apply the findings from this study to improve and inform the S2C Readiness Program at the school. The findings of this research support the need for a greater effort in educators to provide various opportunities for students to explore different college and career opportunities in S2C classes. As a result of this study, further research could be conducted to inform and improve different CCR programs at the middle school level.

A research study could also be conducted to understand students' awareness of college and career before and after participating in a S2C Readiness Program in an elementary school. These students could then be followed to secondary schools to understand how their awareness for college and career develops and changes. Another study could also seek to understand what

college and career exploration opportunities are provided in high school after participating in an elementary and/or middle school S2C Readiness Program.

Conclusion

This study sought to understand how the S2C CCR program impacted students' understanding and awareness of college and careers at one charter school in California. Knowing that many students do not have the skills and tools necessary to be college and career ready this study hoped to provide insight for improving the S2C Readiness Program at the school. In this chapter, recommendations were provided for improving the S2C Readiness Program at the school as well as college and career education opportunities in middle schools in general. This chapter concluded with recommendations for future research to support such initiatives from elementary to the high school level.

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APPENDIX A: INFORMED CONSENT FORM (PARENTS)

Dear Students and Parents,

You are invited to participate in a research study conducted by Sima Gandhi. The purpose of this research is to understand college and career awareness of middle school students. This study seeks to inform and improve current practices of the Schools to College and Career (S2C) Readiness Program. The information learned from this study will help improve the current program at the charter school. Your child's participation will involve the completion of two surveys. The first survey will be conducted as soon as consent has been received. The second survey will be conducted at the completion of the S2C Readiness Program in May 2019. Their participation in this study will last no longer than 15 minutes. Measures of Academic Progress (MAP) data using our school Illuminate system will be collected to analyze student self-efficacy and S2C class choice.

There are some possible risks involved for participants. The risks associated with participation in this research project are as follows: Psychological - Students may become anxious and/or nervous during the survey. Students will be told the responses to the surveys are confidential, not graded and they can stop at any time. Sociological – Students may feel embarrassed to discuss their awareness and self-efficacy. Students will feel a sense of security because they will be told they can stop at any time and confidentiality will be maintained as they will only be identified with their identification number. The findings will be aggregated data and will not identify any individual student.

By participating in this study, I will be able to better understand student motivation, class choice, and their awareness of college and career. This will ultimately help improve our current S2C Readiness Program. Lastly, this research may help us understand student awareness of different college and career options. Your child's response to the survey will be strictly confidential. Your child's identity will not be revealed in any publication resulting from this study. The child's identity and privacy will be protected. Data collected from MAP and surveys will not be shared with anyone else except my dissertation chair and myself. The results from the survey and map data will be kept in a password protected file.

Participation in this research study is voluntary. You may refuse to allow your child to participate or withdraw your child from the study at any time. Your child will not be penalized in any way should you decide not to allow your child to participate or to withdraw your child from this study.

If you have any questions or concerns about this study or if any problems arise, please contact Sima Gandhi at 310-940-0401. If you have any questions or concerns about your child's rights as a research participant, please contact the IRB Administrator, Office of Research and Sponsored Programs, University of the Pacific at 209-946-7716. If students have any anxiety during the survey, they can see a school counselor.

If your child decides to participate, he/she is free to discontinue participation at any time without penalty or loss of benefits to which you are entitled. By signing this you indicate that you have read and understand the information provided above, that your child's participation is completely voluntary, that you may withdraw your consent at any time and discontinue participation at any time without penalty or loss of benefits to which your child is otherwise entitled. You may keep a copy of this for your records, and you are not waiving any legal claims, rights, or remedies.

A copy of the survey has also been provided for you to view.

I have read this parental permission form and have been given the opportunity to ask questions.

_____ **I do give my permission for my child to participate in this study.**

_____ **I do not give my permission for my child to participate in this study.**

Participant's signature _____ Date: _____

Child's Name: _____

APPENDIX B: STUDENT AWARENESS SURVEY

Dear Student,

Thank you for your willingness to participate in this survey. Your responses to this survey are completely anonymous and will strictly be used for research. For my dissertation I am attempting to understand student awareness of College and Career options after the completion of the S2C Readiness Program. The results of this survey will be used to evaluate the S2C Readiness Program and make the needed improvements to the program. Your responses will not impact your grade. You may stop at any time.

By completing and submitting this survey you indicate that you and your parents have read and understand the information provided on the consent form, that your participation is completely voluntary, that you may withdraw your consent at any time and discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You may keep a copy of this for your records, and you are not waiving any legal claims, rights, or remedies.

1. What Schools to CCR (S2C) class are you currently enrolled in?
 - STEM
 - Photography
 - Leadership
 - Technology
 - Life Management
 - Choir/Musical Theater

2. Please answer the following questions about your beliefs on how prepared you feel. Please respond with strongly agree, agree, strongly disagree, or, disagree.
 - I understand the job opportunities available to me.
 - I understand the cost of college.
 - I understand the different college requirements.
 - I have an understanding of what career I am interested in.
 - I understand the different job skills needed for different careers.
 - I have an understanding of different life skills such as: sewing and computer use.
 - I know my academic strengths.
 - I want to enter the workforce immediately after completing high school.
 - I want to go to college.
 - I know how to explore different career options.
 - My S2C class is providing me with different career options.
 - My S2C class is providing me with degrees needed for certain careers.

3. What is your gender?
 - Female
 - Male
 - Other: _____
 - Prefer not to say

4. What is your approximate Grade Point Average (GPA)?
 - 3.6 - 4.0
 - 3.0 - 3.5
 - 2.0 - 2.9
 - Below 2.0
 - I don't know the meaning of Grade Point Average

5. What is your Coded Identification Number: _____

APPENDIX C: STUDENT SELF-EFFICACY SURVEY

Dear Student,

Thank you for your willingness to participate in this survey. Your responses to this survey are completely anonymous and will strictly be used for research. For my dissertation I am attempting to understand student awareness of College and Career options after the completion of the S2C Readiness Program. The results of this survey will be used to evaluate the S2C Readiness Program and make the needed improvements to the program. Your responses will not impact your grade. You may stop at any time.

By completing and submitting this survey you indicate that you and your parents have read and understand the information provided on the consent form, that your participation is completely voluntary, that you may withdraw your consent at any time and discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You may keep a copy of this for your records, and you are not waiving any legal claims, rights, or remedies.

1. Please answer the following questions about your beliefs on how prepared you feel. Please respond with strongly agree, agree, strongly disagree, or, disagree.
 - Compared I prefer class work that is challenging so I can learn new things.
 - with other students in this class I expect to do well.
 - I am so nervous during a test that I cannot remember facts I have learned.
 - It is important for me to learn what is being taught in my classes.
 - I like what I am learning in the S2C Readiness Program.
 - I'm certain I can understand the ideas taught in this program.
 - I expect to do very well in my intervention / enrichment class.
 - Compared with other in this program, I think I'm a good student.
 - I am sure I can do an excellent job on the problems and tasks assigned for this program.
 - I have an uneasy, upset feeling when I take a test.
 - I think I will receive a good grade in this program.
 - Even when I do poorly on a test I try to learn from my mistakes.
 - I think what I am learning in this program is useful for me to know.
 - My study skills are excellent compared to others in this program.
 - I think what we are learning in this program is interesting.
 - Compared with other students in this program I think I know a great deal about college and career awareness.
 - I worry a great deal about tests.
 - Understanding college and career awareness is important to me.
 - When I take a test, I think about how poorly I am doing.

2. What is your gender?
 - a. Female
 - b. Male
 - c. Other: _____
 - d. Prefer not to say

3. What is your approximate Grade Point Average (GPA)?
 - a. 3.6 - 4.0
 - b. 3.0 - 3.5
 - c. 2.0 - 2.9
 - d. Below 2.0
 - e. I don't know the meaning of Grade Point Average

4. What is your Coded Identification Number: _____