COLLEGE AND CAREER READINESS: AN INTERVIEW STUDY OF HIGH SCHOOL GRADUATES AND THEIR DESCRIPTION OF POSTSECONDARY LIFE

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COLLEGE AND CAREER READINESS: AN INTERVIEW STUDY OF HIGH SCHOOL GRADUATES, FOUR YEARS AFTER GRADUATION

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The purpose of this research is three-fold: first, to build an understanding of how high school graduates describe their engagement in college and career ready skills, knowledge, and behaviors during and after high school. The second is to understand how graduates describe secondary school college and career development programs and initiatives. Finally, based on graduate descriptions of struggle after high school, the research uncovered gaps in college and career readiness upon graduation. The conceptual framework for the study was grounded in David Conley's (2014) Four Keys to College and Career Readiness Model, and social cognitive career theory was explored throughout the study.

A qualitative interview study was conducted to gain a better understanding of how students engage in the acquisition of college and career ready skills, and what college and career ready skills they struggle with upon graduation. Interviews of high school graduates from a southwestern Pennsylvania school district were conducted following Clara Hill's (1997) Consensual Qualitative Research Method interview process. Analysis of the data included deductive coding using the Four Keys to College and Career Readiness (Conley, 2014), and the social cognitive career theory model of career self-management (Lent & Brown, 2013). Second

cycle pattern coding revealed themes of how graduates engaged in college and career readiness, and how their secondary school experiences did or did not contribute to their readiness.

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1.0 INTRODUCTION

The Baby Boomer Generation was born after the Greatest Generation fought through the struggles of World War II. My mother, father, aunts, and uncles are just a few of the "Baby Boomers". My father once told me that when he was in high school he had three big options when he graduated. Option one was to find immediate, low skill employment in a local western Pennsylvania steel mill or coal mine. Option two was to sign up for the military; an option that he and many of his Baby Boomer counterparts shied away from in the midst of turmoil in Vietnam. The third option, was to go to college, choose a field of study, and follow through on working within that field upon graduation. My father chose the option three, but many of his Baby Boomer counterparts opted for option one. Option one did not require much skill beyond being able to learn the low level skills and jobs associated with the mill, mines, and small labor shops, as well as being able to comply with the demands of workplace rules and regulations. At the time, the educational system in America was designed to prepare students for this industrial society (Schwahn & McGarvey, 2012). However, today's economy, workplace, and society are far different from the economy the Baby Boomers prepared for.

Today's workforce demands highly skilled, knowledgeable, and adaptable personnel to meet the challenges of a rapidly changing economy and society (Fleming, 2013). Therefore, schools must shift focus from rote recall of factual information and compliance, to enduring understandings, skills, and long term transfer goals that will prepare students for ongoing

postsecondary learning and adaptability to meet the demands of today's workforce. To do this, secondary education institutions must focus their efforts in developing the skills and understandings for college and career readiness (CCR) for all students. CCR will be defined as the ability of a student to enter a postsecondary institution of learning, certificate program, or the workforce without the need for remediation in basic academics or skills related to the postsecondary pathway. In addition, students should develop and possess the behavioral aspects of student and employee performance such as time management, persistence, adaptability and the interpersonal skills necessary for ongoing growth and success at the postsecondary level (ACT, 2013; Conley, 2012; National Assessment Governing Board, 2009).

1.1 PROBLEM AREA

Today's economic and political landscape call for more students being college and career ready upon high school graduation (Conley, 2010). However, efforts to ensure all students are prepared for the rigor of postsecondary education and work through test based accountability structures have come up short for many students, while educational leaders continue to learn from past efforts to build better systems of ensuring all students are college and career ready for today's economy and workplace (Darling-Hammond, Wilhoit, & Pittenger, 2014). Leaders of secondary education continue to grapple with how they can better prepare students with the skills, behaviors, and understandings for college and career (Barnes & Slate, 2013). Although secondary schools implement programs and curriculum activities to address college and career ready standards, colleges and employers continue to report a gap in skills and knowledge necessary for postsecondary school and work environments.

A Harvard University study predicts that by 2018, 90 percent of all jobs in the United States will require some form of postsecondary education or training (Fleming, 2013). However, nearly 40 percent of currently admitted and enrolled postsecondary education students, and almost 50 percent of all community college students require at least one remedial course upon entering their postsecondary studies (National Conference of State Legislatures, 2016). Likewise, workforce leaders in business and industry struggle to fill positions with highly qualified, and work ready employees (Kochan, Finegold, & Osterman, 2012). Closing the educational gap in college and career readiness is essential for maintaining the workforce necessary for continued economic stability (Allegheny Conference on Community Development, Burning Glass, & The Council for Adult and Experiential Learning, 2016).

Traditional academic measures such as standardized tests have long served as the benchmark for success among high school students and the schools they attend (Barnes & Slate, 2013). Unfortunately, the narrow focus on academic measures in reading, math, and specific science content does not accurately measure the level of success a student might have in his or her postsecondary endeavors. Standardized academic tests also fail to measure important qualities of CCR such as social and emotional learning skills, civic awareness, career pathway knowledge, higher order thinking skills, interpersonal skills, and individual knowledge of strengths and abilities as they connect to future goals and plans (Barnes & Slate, 2013; Bridgstock, 2009; Conley, 2014). The dependence on standardized testing, measuring narrow academic standards, has created an atmosphere in K-12 education that over emphasizes test preparation for tested areas, leaving gaps in other critical areas of college and career readiness (Camara, 2013).

The belief that comprehensive CCR development is an important part of secondary education is evident in the implementation of CCR programs designed to help students become aware of their postsecondary skills, abilities, and pathways. However, students and K-12 institutions continue to struggle with the stresses of making the mark associated with high stakes standardized tests which continue to drive the definition of educational success, even though they do not accurately measure CCR (Darling-Hammond et al., 2014). Likewise, programs and initiatives designed to promote CCR awareness often lack follow through in determining if the initiatives successfully influence student awareness of for college and career preparations (Camara, 2013).

1.2 COLLEGE AND CAREER READINESS IN PRACTICE

The lack of comprehensive CCR benchmarks and assessments, along with administrative structures emphasizing traditional academic measures of success, has led to a problem of practice where secondary schools lack knowledge of student readiness for postsecondary pathways and success upon graduation. Traditional narrow academic measures continue to guide decisions on student educational experiences, which influence student preparedness for postsecondary pathways. The emphasis on traditional measures hinders how students prepare for the multiple aspects of CCR during their time in secondary institutions for learning. Even though many secondary schools communicate CCR as an important focus for all students, measures of comprehensive CCR skills and knowledge such as social and emotional learning, civic awareness, career pathway knowledge, higher order thinking skills, and interpersonal skills are not included in many student evaluations, or requirements for high school graduation.

This study highlights one school district in southwestern Pennsylvania that prides itself on promoting CCR skills and understandings for all students. The educational leaders at Greensburg Salem School District often discuss the importance of CCR, and take time to build structures where stakeholders can focus on CCR skills and knowledge. However, the demands of state mandates and accountability structures continue to weigh on district stakeholders, and take precedence in determining educational success. For instance, even though students engage in student to teacher advisories, career preparation curriculum, and career programs; mandates for standardized testing continue to influence decisions on scheduling, graduation requirements, and the overall mindset of scholastic success for college and career preparation and readiness. The lack of focus on comprehensive CCR measures in the school setting leads to many students lacking the guidance, preparation, and skills to effectively transition into their postsecondary pathway. Considerations for the underlying factors motivating students to engage in CCR skills and understandings need uncovered for school systems to focus their efforts, assessments, and definitions of success around CCR for all students in a more structured manner.

1.3 INQUIRY QUESTIONS

The purpose of this inquiry is to understand how students from a selected school system engage in the skills, understandings, and behaviors necessary for transitioning to postsecondary education or work upon high school graduation. The inquiry also seeks to understand how secondary structures for CCR contribute to student readiness, and how students describe the value in those structures. Lastly, this inquiry explores how students describe gaps in their CCR to identify weaknesses in community CCR efforts.

The following research questions guided the qualitative case study inquiry for how the Greensburg Salem community can become more engaged in preparing its students with CCR skills, behaviors, and understandings for post high school success.

1) *How do high school graduates describe their engagement in acquiring the skills, knowledge, and behaviors for post high school transitions; including who they engage with to help prepare for their transition?*
2) *How do high school graduates describe the value of secondary college and career development programs based on their experience?*
3) *How do high school graduates describe their struggles when transitioning beyond high school; and, what college and career skills and behaviors do they describe to be lacking in the most?*

Engagement is defined as a multidimensional measure of behaviors, cognition, and emotions. Students are considered behaviorally engaged when they are actively doing what is demanded of them. Behavioral engagement is more easily observable than cognitive or emotional engagement because one can see the individual acting upon the task at hand. More difficult to observe is cognitive engagement, where the individual is thinking deeply about the task or topic at hand. Emotional engagement is observed as the connection one makes with the task or topic at hand. One who is emotionally engaged is difficult to pull away from the task because they develop a passion for the task at hand (Almarode, 2014).

2.0 REVIEW OF LITERATURE

This chapter provides a focused review of literature on CCR along with the conceptual framework of Conley's (2014) Four Keys to College and Career Readiness, and social cognitive career theory. The review of literature is centered on the educational problem of narrow CCR focus in secondary educational institutions, where academic knowledge and skills overshadow the support for building and assessing broader CCR skills and knowledge such as problem solving, college and career pathway knowledge, self-efficacy, learning techniques, and transitional skills such as financial literacy and understanding cultural and procedural norms in postsecondary environments. Even though there is much talk about the importance of promoting and developing CCR throughout the secondary educational setting, actions to shift practices, assessments, and focus to a broader understanding of CCR are sporadic and should be addressed (Barnes & Slate, 2013).

Through a review of literature I will define what CCR skills and understandings are, and how they are acquired. I also seek to understand the gaps in CCR skills, understandings, and behaviors in the workplace and postsecondary institutions of learning. Finally I will explore literature on social cognitive career theory, which provides explanations for how individuals develop their career identity.

2.1 CONCEPTUAL FRAMEWORK

The conceptual framework guiding this study is David Conley's (2014) Four Keys to College and Career Readiness Model. Conley argues that multiple measures are needed to better assess college and career readiness. Conley's definition for college and career readiness takes individual student abilities, interests, and goals into consideration, rather the one-size-fits all definition many other organizations and states have. He defines readiness as, "*a function of the ability to continue to learn beyond high school, and particularly in postsecondary courses relevant to students' goals and interests, as represented by their choice of major or certificate program*" (Conley, 2014). Conley's measure of college and career readiness is multidimensional, and is organized by what he calls the Four Keys to College and Career Readiness. The Four Keys are: 1) key cognitive strategies, 2) key content knowledge, 3) key learning skills and techniques, and 4) key transition knowledge and skills. Details of the skills, understandings, and behaviors associated with the four keys to college and career readiness are displayed in Table 1.

Table 1. Components of the Four Keys to CCR (Conley, 2014)

Key Cognitive Strategies	Key Content Knowledge	Key Learning Skills and Techniques	Key Transition Knowledge and Skills
Problem formulation • Hypothesize • Strategize Research • Identify • Collect Interpretation • Analyze • Evaluate Communication • Organize • Construct Precision and accuracy • Monitor • Confirm	Structure of knowledge • Key terms and terminology • Factual information • Linking ideas • Organizing concepts Technical knowledge and skills • Challenge level • Value • Attribution • Effort	Ownership of Learning • Goal Setting • Persistence • Self-awareness • Motivation • Help seeking • Progress monitoring • Self-efficacy Learning techniques • Time management • Study skills • Test-taking skills • Note-taking skills • Memorization/recall • Strategic reading • Collaborative learning • Technology	Contextual • Aspirations • Norms/culture Procedural • Institution choice • Admission Process Financial • Tuition • Financial Aid Cultural • Postsecondary norms Personal • Self-advocacy in an institutional context

Assessing the Four Keys calls for a multidimensional system of assessments rather than single standardized tests noted in many current school systems (Darling-Hammond et al., 2014). Likewise, multiple organizations have to play a role in assuring students and schools have the tools, resources, and supports to see that all students are not only assessed in each of the Four Keys; but that they also have the systems and tools in place to see that students engage in college and career readiness learning.

2.1.1 Key cognitive strategies

Institutions of higher education and workforce leaders place great emphasis on an individual's ability to think creatively, solve problems, and analyze situations independently for success in their environments (Bangser, 2008). Likewise, employers look for employees to be problem identifiers as well as problem solvers to move their businesses forward (Fleming, 2013). Individuals with the ability to apply skills and knowledge to new and unique situations are more

marketable than those who acquire knowledge, but lack the skills to apply the knowledge to new situations. (Fleming, 2016). Secondary school systems can prepare their students for postsecondary success with a focus on these independent thinking strategies. For example, a study of nearly 12,000 students from 700 high schools found that schools focused on independent learning, problem solving, and self-paced curriculum led to a higher likelihood of students being able to enter and succeed and at the college level (Cabrera & La Nasa, 2001). Secondary school systems have the ability to create structures that encourage the development of independent thinking strategies (Fleming, 2016).

2.1.2 Key content knowledge

Content knowledge has always been a focus in American schools. For many years, the physical school was where children had to be to access content information (Schwahn & McGarvey, 2012). Technology has made informational content much more accessible today, as long as the technology is available to the individual. What students learned in schools used to be a valued component of our education system. However, today's school system should focus on why students learn what they learn, and how students apply what they learn to new and unforeseen situations (Schwahn & McGarvey, 2012). School systems must continue to focus on important content information students need for post high school success, but should shift emphasis from basic acquisition of content knowledge, to the combination of acquiring content knowledge and skills, while exploring how to apply learned knowledge to new experiences and problems (Fleming, 2016). It is necessary for school systems to keep up with shifts in content necessary for post high school environments of work and education.

The ACT (2013) reported that only 26% of all ACT test takers from the class of 2012 tested as college and career ready in all four tested areas of English, reading, math, and science. Likewise, the National Conference of State Legislators reports that remediation costs associated with students not being prepared with the content knowledge necessary for postsecondary success is costing states and students nearly $2.3 billion annually. There is a need for school systems to align curriculum content to the content necessary for post high school environments of work and education (Camara, 2013).

2.1.3 Key learning skills and techniques

Learning skills and techniques, as they are identified by Conley, are often called soft skills. However, Fleming (2016) states that we should get away from the term soft skills, and call them employability or professional skills. One such skill is self-efficacy, or the ability to own one's learning, and know how to organize and manage one's own learning. Self-efficacy skills have been identified as desirable attributes for postsecondary institutions and business and industry sectors alike (Conley, 2014). A study of 631 high school students in grades 10-12 demonstrated that students with higher measures of self-efficacy and planning skills were more likely to follow through with career planning events to increase their chances following through with their plans for success after high school (Rogers & Creed, 2011). Another study looked into the correlation between self-efficacy and self-concept and student career awareness. The study, involving 165 12-year old students, revealed a strong positive correlation between student self-efficacy, self-concept, and career awareness. The study indicated that students with higher self-concept have a more positive outlook on school and learning (Nasir & Lin, 2012). Individuals engaged in

learning environments and personal interactions associated with career identity are more likely to develop skills associated with career goal setting and self-efficacy (R. Lent & Brown, 2013).

Although learning skills and techniques seem to indicate individual characteristics, there is evidence that school system characteristics can contribute to individual ownership of learning and the development of learning techniques (Johnson, 2008). One such study identified schools of similar socioeconomic status and different levels of academic rigor based on course offerings and the number of students taking the SAT. Higher rigor is attributed to an increased need for learning skills and techniques. As students approach rigorous learning situations, with open ended problem solving tasks, their likelihood of building independent learning skills increases. The study indicated that students from the more rigorous learning environments were more likely to persist in college and obtain their degree than the students from the school of less rigor (Johnson, 2008).

2.1.4 Key transition knowledge and skills

The argument for key transition knowledge and skills is grounded in the theory belief that students who do not understand how to navigate the postsecondary landscape, including understanding financial, procedural, and cultural norms, will struggle in transitioning to the different setting. Students without the understanding of collegiate landscapes, cultural norms, and other areas of college knowledge run a greater risk of failure when transitioning from high school to college (Hooker & Brand, 2010). It is not enough for students to acquire content knowledge and comply with the demand of the instructor and school. Schools must focus on college and career knowledge and understandings such as financial literacy, cultural norms, and independent living for students to successfully transition from high school college (Hooker &

Brand, 2010). Likewise, students looking to enter the workforce also benefit from building an understanding of the workplace environment and culture prior to entering it. Several studies indicate the importance of workplace training such as internship, externship, and apprentice programs in providing students with the knowledge and understanding of postsecondary work environments (Bangser, 2008; Brand & American Youth Policy Forum, 2009; Galles & Lenz, 2013; Hirschi, 2011; Kochan et al., 2012; Meijers, Kuijpers, & Gundy, 2013). Of all of Conley's (2014) Four Keys to CCR, transitional skills and understandings are least likely to be addressed in secondary schools in the United States (Conley, 2014).

2.2 DEFINING COLLEGE AND CAREER READINESS

For quite some time the skills, understandings, and behaviors necessary for college readiness were viewed as being different than the skills, understandings, and behaviors necessary for career readiness. However, as economies shifted from low skill labor and manufacturing to a more technical and service related market, the skills, understandings, and behaviors necessary for both college and career success started to come together (Conley & McGaughy, 2012). Only recently have scholars, politicians, and business leaders started to define the skills, understandings, and behaviors, necessary for both college and career success (Conley, 2012). Although there is no single definition for college and career readiness, practitioners, educational institutions, and political bodies share common themes and descriptors for CCR.

2.2.1 College and career readiness definition: The College Board

The College Board currently defines a student as being college and career ready if the student meets both the math and evidenced-based reading and writing benchmarks on the SAT Exam (The College Board, 2016). The current benchmarks for grade 11 students are scores of 460 out of 800 for the evidenced-based reading and writing, and 510 out of 800 for math. The College Board does not recognize any other measures for college and career readiness. Although the College Board's definition and measure of CCR has been considered a solid indicator of postsecondary preparation for many years, the focus is clearly on academic knowledge, and does not take into account other keys such as learning techniques and transitional skills.

2.2.2 College and career readiness definition: ACT

Like the College Board, and ACT also defines and measures college and career readiness. However, the ACT has indicated that other measures outside of traditional academic measures have to be taken into consideration. In a 2013 report, the ACT defined college and career readiness as, "the acquisition of knowledge and skills a student needs to enroll and succeed in credit-bearing first-year courses at a postsecondary institution without the need for remediation" (ACT, 2013). The report expanded the ACT's definition of college ready to include college and career. The expansion came as a result of an increased need for some form of postsecondary education, whether it be college, trade, technical, or other schooling beyond high school graduation. The ACT reports that 31% of all ACT tested students in 2013 met none of the academic benchmarks they associate with being college and career ready (ACT, 2013). The ACT CCR benchmarks include academic testing in reading, math, science, and English. The ACT

now argues that behavioral traits such as student motivation, social engagement, and self-regulation should be included as measures for college and career readiness for a more holistic view of readiness. The ACT indicates that measuring student motivation, social engagement, and self-regulation should be self-reported data on student grade point average, involvement in extra-curricular activities, and disciplinary incidents respectively (ACT, 2013). Although there is indication that multiple measures of student performance and behaviors will define college and career readiness, the majority of the measure from the ACT continue to be traditional academic measures from standardized tests, and they do not take into account key transitional knowledge and skills.

2.2.3 College and career readiness definition: Political influence

The reliance on traditional academic measure for defining college and career readiness is seen by many to be too narrow. Wally Barnes and John Slate (2013) argue that political rhetoric is concerned with education systems creating more college and career ready students; but, the measures of accountability are too reliant on traditional measures of academic ability more closely tied to college readiness alone (Barnes & Slate, 2013). They argue that the increased political push and associated academic centered accountability systems are leading schools into deeper one-size-fits-all academic success systems in a time where postsecondary academic needs are diverse (Barnes & Slate, 2013). Saying that systems are being developed to address college and career readiness, while only measuring traditional academic measures long associated with college readiness, does not fully address how all students will be prepared for various postsecondary environments (Bangser, 2008). Academic measures are important measures for postsecondary success, however additional measures beyond traditional academics have to be

taken into consideration to more effectively measure student readiness for college and career (Engberg & Wolniak, 2010). Some states are beginning to look at multiple measures to determine if schools are effective in helping students become college and career, as well as providing guidelines for what college and career students look like. However, like the ACT and College Board, many states have not addresses the need to address key transitional knowledge and skills (Conley, 2014).

2.2.4 College and career readiness definition: PA Department of Education

State departments of education have started to develop systems of assessment for college and career readiness that go beyond traditional academic measures (American Institutes for Research, 2016). Pennsylvania is beginning to look into multiple measures for determining college and career readiness for students and schools within the commonwealth. In a report to the state legislature, the Pennsylvania Department of Education (PDE) has outlined recommendations for redefining the measures for students being college and career ready. Current readiness in Pennsylvania is measured by a system of assessments called the Keystone Exams. The Keystone Exams measure student academic achievement in Algebra, Literature, and Biology. PDE is now suggesting that multiple measures be taken into account when assessing student readiness for college and career (Pennsylvania Department of Education, 2016a). The department's suggestions are to use composite scores, local course grades and assessments, career related certificate requirements, college level course completion, and other measures of student academic readiness (Pennsylvania Department of Education, 2016b). PDE suggested the development of secondary measures of student readiness to include measures of student attendance, course taking patterns, course completion, behaviors, and postsecondary tracking

systems to measure student persistence and completion of higher levels of education (Pennsylvania Department of Education, 2016a). Although they do not have specific suggestions on how to measure the non-academic traits, the suggestions move toward a more comprehensive defining and measuring of college and career readiness in Pennsylvania.

2.3 COLLEGE AND CAREER READINESS GAPS

Nearly 90 percent of all jobs in today's workforce require some form of postsecondary training, technical skills, and the adaptability to learn and keep up with the fast paced changes of the economy (Fleming, 2013). With many Baby Boomers seeking retirement, the job market will be open for students graduating high school and college who are looking for a career. However, many business and industry leaders state that young employees with years of traditional schooling are not equipped with the knowledge, skills, and abilities to take on jobs in today's workplace (Beatty & Burroughs, 1999; Bloom, Boersch-Supan, McGee, & Seike, 2011; Danigelis, Hardy, & Cutler, 2007; Gradstein & Kaganovich, 2004; McMahan & Sturz, 2006). Along with business and industry, institutions of higher learning also report too many students are not prepared for the learning requirements of higher education. A 2009 report from the American Youth Policy Forum indicates 42 percent of all community college freshman, and 20 percent of all four year collegiate freshman are in need of academic remediation upon acceptance (Brand & American Youth Policy Forum, 2009). The disconnect between the demands of the workplace and higher education have to be addressed in secondary education to start closing the gap in readiness for college and career for today's high school student (Bangser, 2008).

2.3.1 Workforce CCR gaps

The National Center for College and Career Transitions (NC3T) indicates a number of issues with educational systems and their ability to prepare young citizens for the current and future workforce. NC3T notices the importance of postsecondary education, but states that many secondary and postsecondary institutions are not matching credentials to the needs of the workplace (National Center for College and Career Transitions, 2014). There are also issues with student access to career counseling and career awareness aligned with the future workplace. The suggested student to counselor ratio is 250:1, while the current average ratio in United States schools is 479:1 (National Center for College and Career Transitions, 2014). Even if students have access to counseling services, there is also a concern that those counselors have not received adequate professional development on workforce and higher education demands, workforce trends, and comprehensive CCR (Bangser, 2008).

For well over four decades, education and political leaders have stated the need for making more students college and career ready upon graduation. Changes in standards, testing and accountability systems, and other reform movements have taken place in an attempt to build more CCR graduates (Barnes & Slate, 2013). However, a significant gap in the CCR skills necessary for postsecondary success remains (Balestreri, Sambolt, Duhon, Smerdon, & Harris, 2014). How schools help students engage in CCR knowledge and skill development is critical for workforce development and the future success of individual citizens (Kochan et al., 2012). In order to do this, school systems must establish systems and measures that encourage multiple measures of student achievement of CCR skills and abilities, rather than a traditional focus on narrow academic standards and measures (Pennsylvania Department of Education, 2016b).

With a growing need for highly skilled, motivated, and adaptable learners in the workforce, it is important to understand how educational systems can support the development of such individuals. It is also important to understand the factors that contribute to student engagement in CCR skills and understandings. The more we understand why students become engaged, the better we can design systems for supporting that engagement, and preparing all learners for postsecondary work and education.

2.3.2 Postsecondary education CCR gaps

Many students transitioning from high school to institutions of higher learning are not meeting the requirements for initial success. It was stated earlier that upwards of 40% of all first year college students, and close to 50% of all community college first year students are in need of least one remedial course upon entering the institution (National Conference of State Legislatures, 2016). The financial costs of remediation are coupled with the fact that less than 50% of remedial students complete their remedial courses, and less than 25% of community college remedial students complete a certificate or degree program within 8 years (National Conference of State Legislatures, 2016). The United States Department of Education found that 58 % of students not in need of remedial courses complete a bachelor's degree. That is in contrast to only 17% requiring remedial reading, and 27 % requiring remedial math (National Conference of State Legislatures, 2016).

2.4 EDUCATIONAL SHIFTS

Shifting how schools behave to support a new definition and measure for college and career readiness will require school systems and personnel to change traditional mindsets, processes, and structures. Those changes will result in an increased need for economic supports and community partnerships between K-12 institutions, institutions of higher education, political leaders, and business and industry partners (Westmoreland County Forum for Workforce Development, 2015). Professional staff will require intense professional development to understand how college and career systems of assessment, instruction, and mentoring work, what they look like, and how professional staff must engage in supporting student achievement of comprehensive college and career readiness (Bangser, 2008).

An increased focus on individual student measures, mentorships, pathways development, and supports for meeting college and career expectations will be necessary to meet the multidimensional demands of comprehensive college and career readiness for each student (National Center for College and Career Transitions, 2014). Educational structures will have to account for varying levels of postsecondary education pathways to make decisions on what coursework and curriculum individual students should be exposed to (Barnes & Slate, 2013). Alignment of individual interests, goals, and postsecondary aspirations to curriculum plans and coursework is critical to making sure students are engaged in the coursework necessary for their own postsecondary preparation (Schwahn & McGarvey, 2012).

In the Four Keys to College and Career Readiness Model, traditional academic content is set as a high priority goal for student success. However, non-traditional academic content such as financial literacy and college and career pathways are also included along with skills such as making cross curricular connections, civic and technology skills, and social and emotional

behaviors and skills. These multiple measures require a long term commitment to providing equitable emphasis on comprehensive college and career benchmarks for students that should start as early as elementary and middle school (Wimberly & Noeth, 2005). Seeing that teachers and school systems understand how to provide feedback and support for the multiple goals and expectations for all students will require ongoing professional development and support for all staff (Bangser, 2008).

2.5 SOCIAL COGNITIVE CAREER THEORY

Much of the existing theory and research on college and career readiness is grounded in Albert Bandura's (1986) social cognitive theory, where the focal point is self-efficacy and how cognitive, behavioral, and environmental factors play a role in influencing human behavior (Bandura, 1986). Social cognitive career theory (SCCT) evolved from social cognitive theory and pertains to human career development through the lens of three distinct aspects of career development: the formation and elaboration of career relevant interests, the selection of academic and career choice options, and the performance and persistence in educational and occupational pursuits (Lent, Brown, & Hackett, 1994). Much of the focus on SCCT centers on how content development and attainment contributes to individual career interests and pathways; and how individuals manage career related tasks and navigate the landscape of career awareness and obtainment (Lent & Brown, 2013). Individual career decision making and exploration, job searching, career advancement, negotiation of work transitions and understanding the educational landscape necessary for advancement in a career field are now central to SCCT (Lent & Brown, 2013).

The belief that factors such as support systems, gender, socio-economic status, and others play an integral role in individual career development are central to SCCT (Lent et al., 1994). SCCT carries a belief that all factors, including the individual student, are influential in the development of career identity, self-efficacy, and individual transitions into post high school pathways for success. Lent and Brown's (2013) model of career self-management indicates several variables supporting individual career development, and is grounded in the beliefs of SCCT. They indicate personal attributes such as gender and race have an influence on an individual's development of career identity, goals, and outcome; and these attributes are not able to be controlled by the individual or their environment (Lent & Brown, 2013). However Lent and Brown (2013) highlight two environmental factors that have a large influence on individual development of career identity, goals, and outcomes, which can be controlled or changed. They are: 1) contextual supports, such as families, peers, mentors, and financial supports; and 2) learning experiences (Lent & Brown, 2013). Engagement with contextual supports, learning experiences, or a combination of both, leads to an individual's career identity (Lent & Brown, 2013). However, cognitive supports that do not recognize an individual's interests and abilities, or learning experiences that are not aligned with exploration of interests and abilities, can lead to the development of a career identity that is not aligned with individual interests, abilities, and realistic career goals and outcomes (Keller & Whiston, 2008). School systems have the ability to adjust their learning environments, and influence staff members to connect with students as individuals to contribute to the development of career identities that are aligned with individual interests, abilities, and realistic career goals and outcomes (Fleming, 2016).

2.6 SUMMARY

The conceptual framework of the Four Keys to College and Career Readiness serves as a definition and comprehensive approach for identifying and benchmarking skills, knowledge, and behaviors which prepare students for post-high school transitions. Gaps in cognitive strategies, content knowledge, learning skills and techniques, and transition knowledge and skills is leading to increased remedial needs at colleges and universities and a less skilled labor force for the workplace. Closing those gaps will require understanding of the current situations in local contexts, and understanding how all stakeholders can contribute to the growth of CCR skills and behaviors. Social cognitive career theory provides a theory for how individuals develop their career interests, choice making, and persistence in their career identity and growth. Understanding what hard and soft skills are necessary for postsecondary success, and the processes that lead to the acquisition of such skills are central to this study.

3.0 METHODS AND APPLIED INQUIRY PLAN

Secondary school systems are tasked with preparing all students for successful transitions into diverse environments of postsecondary education and work. Although the pathways students take upon graduation are diverse in nature, there are characteristics of readiness that can be displayed in all of them. Secondary schools have been evaluating student readiness in academic areas such as math, reading, and science; but, most do not assess or evaluate how students are prepared for other skills and behaviors necessary for successful transitions after high school graduation (Camara, 2013). The review of literature in the previous chapter provides a definition for college and career readiness, assessable characteristics of college and career readiness, and variables that play a role in student acquisition of college and career ready skills, knowledge, and behaviors. This interview study investigated how graduates from a western Pennsylvania high school were influenced to engage in college and career readiness skills, understandings, and behaviors during or after high school, including who and what contributed to graduate engagement in college and career ready skills and knowledge. The study also investigated how the school contributed to graduate preparations for postsecondary pathways, and struggles graduates described as they relate to CCR skills, knowledge, and behaviors. This chapter provides details on the inquiry setting and the research methods for collecting and analyzing the interview data.

3.1 INQUIRY SETTING

The inquiry setting for this research was the Greensburg Salem High School (GSHS), part of the Greensburg Salem School District. Greensburg Salem is located in southwestern Pennsylvania, a region impacted by deindustrialization over the last 30 years. The deindustrialization in the region has created concerns in population and employment trends. Populations have been declining, the median age is increasing rapidly, and adolescent populations are decreasing quickly, all while the workforce is being depleted of highly skilled employees through retirements of Baby Boomers (Westmoreland County Forum for Workforce Development, 2015). However, an economic revitalization over the last fifteen years has diversified southwestern Pennsylvania's economy to include manufacturing, healthcare, banking, technology and other service industries. These industries are in need of highly skilled, knowledgeable, and motivated workers (Allegheny Conference on Community Development et al., 2016).

According to the Allegheny Conference, as of March 4, 2017, there were 26,982 jobs open in the 10 county Greater Pittsburgh region (Allegheny Conference, 2017). This includes openings within career fields associated with trades such as carpentry, masonry, auto technicians, and general laborers; as well as careers requiring higher levels of degree completion such as engineers, medical professionals, technicians, and many others requiring a postsecondary degree or certification. With the right guidance and preparation, younger populations of varying interests, abilities, and aptitudes are in a good place to find employment in southwestern Pennsylvania, as long as they are prepared with the knowledge, skills, and insights necessary for navigating the postsecondary world; and, have an understanding of how their individual interests and abilities fit within the workforce needs (Fleming, 2016).

Greensburg Salem is situated in the county seat of Westmoreland County. GSHS serves students and families in grades nine through twelve who come from small urban, suburban, and rural settings. The combination of urban, suburban, and rural settings creates a uniquely diverse school community. Although not ethnically or racially diverse, the geographical community settings and socioeconomic status of students and families throughout the district varies greatly. During the 2015-2016 school year, 86.72% of the students at GSHS were white, and 41.72% were economically disadvantaged (Pennsylvania Department of Education, 2017). Regardless of economic standing or cultural background, the educational staff at GSHS is guided by the mission to educate all children to become productive and responsible citizens through the acquisition of character, leadership, scholarship, and service skills for postsecondary preparedness.

Since the 2003-2004 school year, GSHS has implemented a Career Awareness Program (CAP) focusing on developing student awareness of individual skills and abilities as they relate to student preparation for college and career. CAP initiatives include seminars, career fairs, job shadows, and a culminating graduation project designed to align with an individual's college or career pathway. Elements of college and career knowledge similar to those described by Conley (2010) such as academic knowledge and skills, self-management skills, problem solving, and knowledge of postsecondary pathways and expectations are a focus of the CAP program. GSHS is confident that CAP efforts are leading to more students being college and career ready; however, very little data has been collected to support the confidence.

3.2 STAKEHOLDERS

Student readiness for college and career upon graduation affects a variety of stakeholders such as students, parents, teachers, administrators, and local business and industry. Nearly 90% of today's jobs require some form of certification training, education, or degree completion beyond that of a high school diploma (Balestreri et al., 2014; Fleming, 2013). Therefore, students must obtain the knowledge, skills, and behaviors associated with CCR to effectively navigate the postsecondary landscape and obtain the proper credentials necessary for their first job.

The primary stakeholders in CCR planning, programing, and assessment are the students of GSHS. In an effort to ensure all students are prepared with the knowledge skills and understandings required for postsecondary success, all GSHS students take part in CCR discussions and planning through the CAP program. Because students differ in their interests, abilities, and aspirations, the CAP program is structured to allow students to explore individualized pathways for postsecondary preparation and exploration. The culminating event in CAP is a senior project developed, planned, implemented, analyzed, and presented by the student. The entire project is driven by the student's interests, abilities, and postsecondary plans as they relate their career aspirations. However, graduation requirements at GSHS are based on the same course requirements regardless of individual interests or postsecondary plans. Standardized assessments such as the Pennsylvania Keystone Exams, Advanced Placement exams, SAT, ACT, and PSAT are used to identify student strengths and weaknesses prior to graduation. The senior project is the only project based graduation requirement connected to student interests and career aspirations. Even though Pennsylvania no longer requires such a project for graduation, Greensburg Salem believes the senior project is important for student preparation for college and career. Requirements for graduation at GSHS are primarily centered

on traditional academic measures, even though there is a distinct focus on CCR knowledge and skills through CAP. Understanding how CAP and other structures or personal relationships influence student postsecondary readiness and success is vital for planning how future students will be prepared for CCR within the school setting. At stake is the social, financial, and economic wellbeing of all students in their postsecondary lives.

3.3 INQUIRY APPROACH

An interview study involving 10 recent GSHS graduates was conducted in an effort to understand how GSHS students acquire the skills, knowledge, and behaviors, associated with CCR; how the college and career programs at GSHS contributed to graduate transitions to college or career; and the struggles graduates had in their post-high school transitions. The interview study was guided by three inquiry questions:

1) *How do high school graduates describe their engagement in acquiring the skills, knowledge, and behaviors for post high school transitions; including who they engage with to help prepare for their transition?*
2) *How do high school graduates describe the value of secondary college and career development programs based on their experience?*
3) *How do high school graduates describe their struggles when transitioning beyond high school; and, what college and career skills and behaviors do they describe to be lacking in the most?*

3.3.1 Interview design

The Consensual Qualitative Research Method (CQR) (Hill, Thompson, & Williams, 1997), provided a structure for organizing and conducting the interviews. The structure included the use of detailed semi-structured interviews with 8 to 10 scripted questions, each supported by 2 to 3 probing questions. The interview protocol was adapted from Phillips, Jobin-Davis, and White's (2002) protocol for their research on school-to-work transition, where 17 high school juniors were interviewed to understand how students perceived themselves as being ready for postsecondary environments (Phillips, Blustein, & White, 2002). The protocol for this study was divided into two parts. Protocol 1 was designed to elicit conversation and reflection about the graduate's experiences in and after high school as they related to college and career readiness and decision making. Protocol 2 was designed to promote conversation related to the graduate's satisfaction with their college and career decisions. Overall, the questions were structured to elicit a broad view of college and career readiness experiences. The protocol questions were crafted with Conley's (2014) Four Keys to CCR in mind.

Ten graduates from the Greensburg Salem class of 2013 were interviewed to determine how and why they engaged in college and career readiness skills, understandings, and behaviors. Young adults from the class of 2013 were selected because they did not work directly with me as a teacher or building administrator during their tenure at Greensburg Salem. However, they are familiar with who I am and my position in the district. Graduates needed to be familiar with me so that trust could be more easily established, but not too close that information could be withheld. The selection from the class of 2013 also ensures all graduates interviewed experienced the CAP program during their time at Greensburg Salem. With almost four years of separation from their high school experiences, the Class of 2013 graduates had time to

experience successes, struggles, and failures, while also being close enough to their high school experiences to reflect on those as well.

3.3.2 Graduate selection

Upon making the focus class decision, a spreadsheet was created with names and addresses at the time of graduation for all Class of 2013 graduates who were students at GSHS throughout their high school careers. Names and addresses were collected using the student information system at the school, which I had administrative access to. Three factors were taken into consideration for selecting graduates for the study: 1) representation from all three geographic communities; 2) gender; and, 3) diversity in postsecondary experiences.

Organizing the class of 2013 into geographic communities of residence and gender was the first step selecting priority graduates for contact. Geographic communities were determined using an existing land-use map for the City of Greensburg, South Greensburg Borough, and Southwest Greensburg Borough (Gannet Fleming Inc. Gibson-Thomas Engineering, 2005). Medium and high density residential areas were identified as urban communities, and low density residential areas were considered suburban communities. Salem Township is the fourth jurisdiction in the Greensburg Salem School District. There were no zoning maps for Salem Township. The township is considered a rural community, and for the purposes of this research, all addresses within Salem Township were considered rural.

All of the graduate addresses were mapped in Google Earth and compared with the existing land-use map. Each addressed was labeled as urban, suburban, or rural in the address spreadsheet. The spreadsheet was divided into three separate spreadsheets, one for each of the

community designations. Each of the community spreadsheets was organized alphabetically by graduate last name and then by gender.

Once geographic and gender considerations were organized, prioritizing graduates for contact was organized based on postgraduate plans, actual postgraduate status, and availability for contact. Conversations with the GSHS principal and counselor helped identify ten priority contact graduates for each community subgroup. Phone numbers for the priority contact graduates were collected from the student information system and entered into the spreadsheet.

Initial graduate contacts were then made until there was representation from all three geographic communities, gender, and postsecondary experiences. A minimum of three points of contact were made with each graduate. The first contact established an agreement to participate in the study. The second point of contact was made to schedule the interview. The interview was the third point of contact, and two of the graduates required another point of contact to complete the interview process. A total of 10 graduates were interviewed.

3.4 DATA COLLECTION AND ANALYSIS

Each graduate was interviewed using a semi-structured interview approach with the interview protocol. Interviews were conducted face-to-face, or by phone if face-to-face contact was not possible. Eight of the graduates were interviewed in one sitting, and two required a second interview session because of time constraints and the need to gather more information. All interviews were recorded with the permission of the participating graduate and transcribed through the transcribing service Rev.com.

The interview transcript data were reviewed and analyzed three times, one review for the analysis of each of the three inquiry questions. Each review was guided by a specific focus for gathering relevant stories, descriptions, and reflections pertaining to the inquiry question at hand. The following indicates the focus for each of the transcript reviews as they helped to gather data relevant to the understanding of the inquiry question at hand:

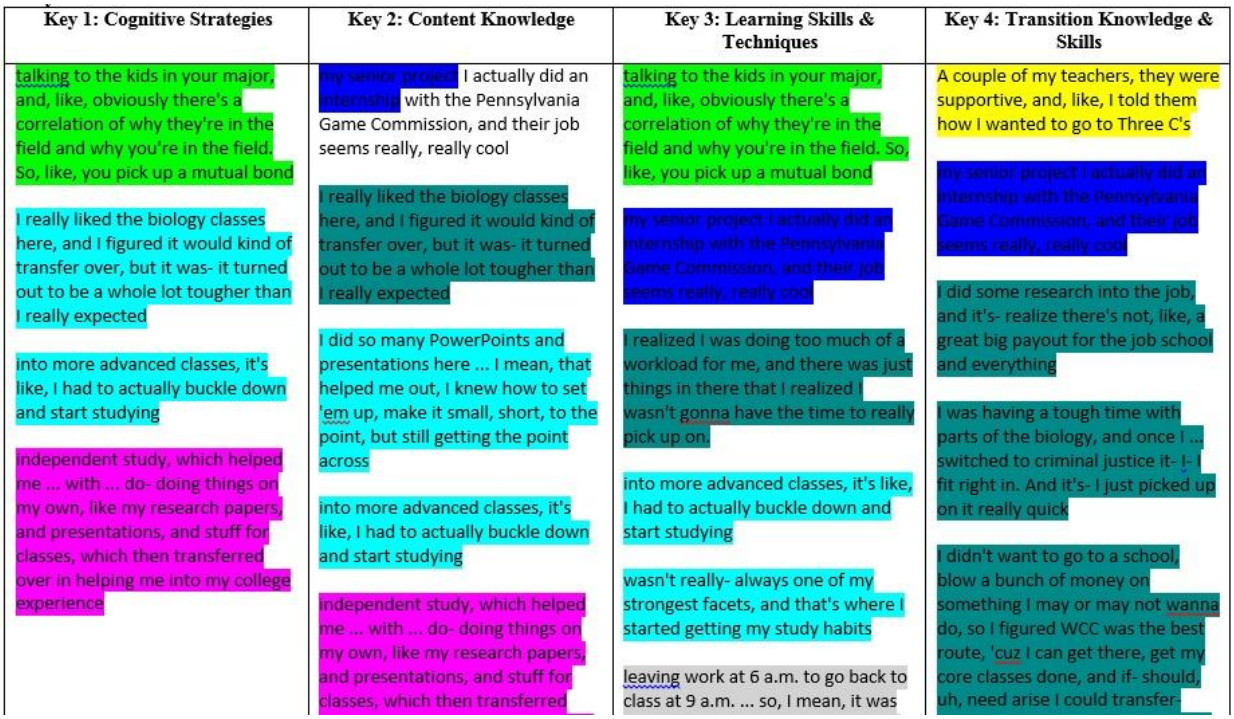
1) Specific graduate statements, stories, reflections, or descriptions relating to engagement with CCR skills, knowledge, and behaviors, as outlined by the Four Keys to College and Career Readiness (Conley, 2014).
2) Specific graduate statements, stories, reflections, or descriptions relating to GSHS college and career programming experiences.
3) Specific graduate statements, stories, reflections, or descriptions relating to struggles graduates had with CCR skills, knowledge, and behaviors, as outlined by the Four Keys to College and Career Readiness (Conley, 2014).

Three cycles of coding were conducted for each of the three data reviews. The first cycle of interview data was coded using a deductive approach (Gilgun, 2011) where graduate responses to the semi-structured protocol questions and probing questions were organized into a spreadsheet with four columns, one for each of the Four Keys of College and Career Readiness (Conley, 2014). Each graduate's statements were organized on a separate spreadsheet. Statements could be organized into multiple key areas of the spreadsheet as long as the statement referenced skills, knowledge, or understandings related to the key area.

Key 1: Cognitive Strategies	Key 2: Content Knowledge	Key 3: Learning Skills & Techniques	Key 4: Transition Knowledge & Skills
talking to the kids in your major, and, like, obviously there's a correlation of why they're in the field and why you're in the field. So, like, you pick up a mutual bond I really liked the biology classes here, and I figured it would kind of transfer over, but it was- it turned out to be a whole lot tougher than I really expected into more advanced classes, it's like, I had to actually buckle down and start studying independent study, which helped me ... with ... do- doing things on my own, like my research papers, and presentations, and stuff for classes, which then transferred over in helping me into my college experience	my senior project I actually did an internship with the Pennsylvania Game Commission, and their job seems really, really cool I really liked the biology classes here, and I figured it would kind of transfer over, but it was- it turned out to be a whole lot tougher than I really expected I did so many PowerPoints and presentations here ... I mean, that helped me out, I knew how to set 'em up, make it small, short, to the point, but still getting the point across into more advanced classes, it's like, I had to actually buckle down and start studying independent study, which helped me ... with ... do- doing things on my own, like my research papers, and presentations, and stuff for classes, which then transferred	talking to the kids in your major, and, like, obviously there's a correlation of why they're in the field and why you're in the field. So, like, you pick up a mutual bond my senior project I actually did an internship with the Pennsylvania Game Commission, and their job seems really, really cool I realized I was doing too much of a workload for me, and there was just things in there that I realized I wasn't gonna have the time to really pick up on. I did so many PowerPoints and presentations here ... I mean, that helped me out, I knew how to set 'em up, make it small, short, to the point, but still getting the point across into more advanced classes, it's like, I had to actually buckle down and start studying	A couple of my teachers, they were supportive, and, like, I told them how I wanted to go to Three C's my senior project I actually did an internship with the Pennsylvania Game Commission, and their job seems really, really cool few teachers who said, like, "Oh, if you don't go to college, or if you don't get into college, you're not- never gonna make anything of yourself, I did some research into the job, and it's- realize there's not, like, a great big payout for the job school and everything I was having a tough time with parts of the biology, and once I ... switched to criminal justice it- I- I fit right in. And it's- I just picked up on it really quick I didn't want to go to a school,

Figure 1. Example of first cycle code spreadsheet

The second cycle of coding used pattern coding methods to categorize first cycle codes (Saldaña, 2016). The color codes were derived from the Model of Career Self-management (Lent & Brown, 2013); however, emerging ideas not associated with the Model of Career Self-management were also considered. Statements of similarity were highlighted with the same color, while statements representing a new category were given a new color. This process of pattern coding (Saldaña, 2016) was conducted with all ten graduate spreadsheets. An example of the second cycle coding spreadsheet is displayed in Figure 2.



Key 1: Cognitive Strategies	Key 2: Content Knowledge	Key 3: Learning Skills & Techniques	Key 4: Transition Knowledge & Skills
talking to the kids in your major, and, like, obviously there's a correlation of why they're in the field and why you're in the field. So, like, you pick up a mutual bond I really liked the biology classes here, and I figured it would kind of transfer over, but it was- it turned out to be a whole lot tougher than I really expected into more advanced classes, it's like, I had to actually buckle down and start studying independent study, which helped me ... with ... do- doing things on my own, like my research papers, and presentations, and stuff for classes, which then transferred over in helping me into my college experience	my senior project I actually did an internship with the Pennsylvania Game Commission, and their job seems really, really cool I really liked the biology classes here, and I figured it would kind of transfer over, but it was- it turned out to be a whole lot tougher than I really expected I did so many PowerPoints and presentations here ... I mean, that helped me out, I knew how to set 'em up, make it small, short, to the point, but still getting the point across into more advanced classes, it's like, I had to actually buckle down and start studying independent study, which helped me ... with ... do- doing things on my own, like my research papers, and presentations, and stuff for classes, which then transferred	talking to the kids in your major, and, like, obviously there's a correlation of why they're in the field and why you're in the field. So, like, you pick up a mutual bond my senior project I actually did an internship with the Pennsylvania Game Commission, and their job seems really, really cool I realized I was doing too much of a workload for me, and there was just things in there that I realized I wasn't gonna have the time to really pick up on. into more advanced classes, it's like, I had to actually buckle down and start studying wasn't really- always one of my strongest facets, and that's where I started getting my study habits leaving work at 6 a.m. to go back to class at 9 a.m. ... so, I mean, it was	A couple of my teachers, they were supportive, and, like, I told them how I wanted to go to Three C's my senior project I actually did an internship with the Pennsylvania Game Commission, and their job seems really, really cool I did some research into the job, and it's- realize there's not, like, a great big payout for the job school and everything I was having a tough time with parts of the biology, and once I ... switched to criminal justice it- I- I fit right in. And it's- I just picked up on it really quick I didn't want to go to a school, blow a bunch of money on something I may or may not wanna do, so I figured WCC was the best route, 'cuz I can get there, get my core classes done, and if- should, uh, need arise I could transfer-

Figure 2. Second cycle pattern coding example

A third cycle of coding, also using pattern coding methods, was conducted to identify the overall themes (Saldaña, 2016). Table 2 details the applied inquiry plan for the study.

Table 2. Alignment of inquiry questions, evidence, research design, and data analysis

Inquiry Question	Evidence	Research Design	Data Analysis
How do high school graduates describe their engagement in acquiring the skills, knowledge, and behaviors for post high school transitions; including who they engage with to help prepare for their transition?	Graduate statements and descriptions relating to engagement with the Four Keys to College and Career Readiness (Conley, 2014).	Semi-structured interviews of graduates from the class of 2013 following the interview format of the Consensual Qualitative Research Method (Hill et al., 1997).	Cycle one deductive coding (Gilgun, 2011), followed by cycle two pattern codes of categories, and cycle three to identify overall themes (Saldaña, 2016) Emerging themes compared with themes in the literature
How do high school graduates describe the value of secondary college and career development programs based on their experience?	Graduate statements related to GSHS college and career programs and structures.	Semi-structured interviews of graduates from the class of 2013 following the interview format of the Consensual Qualitative Research Method (Hill et al., 1997).	Cycle one deductive coding (Gilgun, 2011), followed by cycle two pattern codes of categories, and cycle three to identify overall themes (Saldaña, 2016) Emerging themes compared with themes in the literature
How do high school graduates describe their struggles when transitioning beyond high school; and, what college and career skills and behaviors do they describe to be lacking in the most?	Graduate statements and descriptions relating to struggles with the Four Keys to College and Career Readiness upon graduation (Conley, 2014).	Semi-structured interviews of graduates from the class of 2013 following the interview format of the Consensual Qualitative Research Method (Hill et al., 1997).	Cycle one deductive coding (Gilgun, 2011), followed by cycle two pattern codes of categories, and cycle three to identify overall themes (Saldaña, 2016) Emerging themes compared with themes in the literature

3.5 STUDY LIMITATIONS

There are three limitations associated with this research. The first limitation is the sample size of graduates. From a graduating class of over 200 students, only 10 graduates were interviewed. Although their stories and reflections were rich and detailed, stories from a large sample of the graduate population were not heard. However, this study did not set out to seek a broad scope with limited depth in responses. The limited number of participants allowed for more depth and understanding of each graduate's situation.

The second limitation is associated with the representation of graduates. Although efforts were made to reach out to graduates who were disconnected school activities, people, and events, most of the graduates willing to participate in the study were connected in some way to extracurricular activities, classmates and adults, or were involved in school and community functions. Difficulties connecting with disconnected youth were the result of lacking contact information, refusal to participate, and an inability to reconnect beyond the first level of contact. The rich graduate stories documented in this research provide a deeper understanding of how GSHS students are prepared for college and career, but graduates who were not connected while in high school are not represented.

A third limitation is presented in my own bias with the research. Many qualitative studies, included those guided by the CQR method, have multiple researchers or auditors working with data interpretation (Hill et al., 1997). However, I was the only auditor of the data in this study, leading to my interpretation being the deciding factor on the coding of categories and themes that emerged from the data.

4.0 DATA ANALYSIS AND RESULTS

This is study set out to build a greater understanding of how students engage in the acquisition of cognitive strategies, content knowledge, learning skills, and transition knowledge associated with CCR. The study also sought to uncover gaps in one secondary school's college and career programming by listening to stories of postsecondary struggles as described by its graduates. Semi-structured interviews of ten Greensburg Salem High School graduates from the graduating class of 2013 were conducted to gather first hand stories and reflections on college and career readiness, and the influencing factors on the graduates' preparedness, or lack thereof, upon transitioning to life after high school. This chapter outlines the categories and themes related to CCR skills, knowledge, and understandings as they emerged from graduate interviews, and is compared to the existing literature on social cognitive career theory. The qualitative analysis of graduate stories helped build an understanding of the three inquiry questions guiding the study:

1) *How do high school graduates describe their engagement in acquiring the skills, knowledge, and behaviors for post high school transitions; including who they engage with to help prepare for their transition?*
2) *How do high school graduates describe the value of secondary college and career development programs based on their experience?*

3) *How do high school graduates describe their struggles when transitioning beyond high school; and, what college and career skills and behaviors do they describe to be lacking in the most?*

Interview data was reviewed and coded with an deductive approach (Gilgun, 2011), seeking to extract specific statements and descriptions relevant to each of the inquiry questions as they related to the Four Keys of College and Career Readiness Model (Conley, 2014) and the Model of Career Self-management (Lent & Brown, 2013).

The first reading of the interview transcripts focused on statements related to how each graduate engaged in CCR skills, knowledge, and understandings. Codes were then organized in a spreadsheet and into one or more of Conley's (2014) Four Keys to College and Career Readiness. The second reading of the interview transcripts sought to extract emerging statements related to GSHS college and career development programs. Codes were organized in a second spreadsheet based on positive and negative reflections. The third and final review of the transcripts focused on statements related to high school to postsecondary transition struggles. Once again the codes were organized in a spreadsheet, and into one or more of Conley's (2014) Four Keys to College and Career Readiness.

A second cycle of coding was conducted using pattern coding methods (Saldaña, 2016). Spreadsheets containing the first cycle codes were reorganized into categories of similarity, or patterns. Each first cycle code was analyzed, given a category title, and color coded. Codes of similarity were highlighted with the same color until all of the first cycle codes were attributed to a category. This process was done with all three first cycle data sets.

A third cycle of coding was applied to the second cycle categorical codes to identify themes within the data. Once again, pattern coding methods were used (Saldaña, 2016). The

process of highlighting categories to reorganize into themes was conducted. This chapter highlights the categories and themes associated with each of the three inquiry questions, and compares them with supporting literature on social cognitive career theory.

4.1 RESEARCH PARTICIPANTS

Southwestern Pennsylvania has undergone a transformation in its economy from a highly industrial economy, to a period of deindustrialization, to a diversified economy of manufacturing, healthcare, banking, technology and other service industries that require a highly skilled workforce (Allegheny Conference on Community Development et al., 2016). Situated within this region, Greensburg Salem School District is responsible for ensuring all of its graduates are prepared to meet the demands of postsecondary learning and the workforce. Understanding how eventual graduates are prepared for their post-high school transition was determined by listening to the stories of the graduates.

Graduates from the Greensburg Salem High School class of 2013 were targeted for participation in this interview study. Their stories, reflections, and experiences upon transitioning to life after high school helped in understanding how students engage in acquiring the skills and knowledge for postsecondary transitions, and the difficulties in transitioning to life after high school. The graduates were selected based on three factors: 1) geographic community of residence while in high school, 2) gender, and 3) postsecondary plans and experiences.

Ten graduates were able and agreeable to participate in the study. Geographic and gender representation were achieved, as well as a representation of various postsecondary pathways. There were three participants from the urban setting (2 female, 1 male), four

participants from the suburban setting (3 female, 1 male), and three participants from the rural setting (3 male). To maintain participant anonymity in this study, pseudonyms were applied to each of the graduates.

Table 3. Research Participants

Graduate	Gender	Community	Current Status
Lori	Female	Suburban	Attends four year university, studying education
Bill	Male	Suburban	Attends two year program for law enforcement training
Chris	Male	Rural	Attended four year university studying engineering; currently third year apprentice with plumbers and pipe fitters union
Steph	Female	Suburban	Attends five year physician assistant program
John	Male	Urban	Attends United States Air Force Academy
Katie	Female	Suburban	Attends four year program for nursing
Matt	Male	Rural	Small business owner and attending four year college studying computer information science and cyber security
Nadine	Female	Urban	Transferred from four year university to a different four year college, studying Spanish
Adam	Male	Rural	Third year apprentice with the bricklayers and allied craftworkers union
Julie	Female	Urban	Attends four year university, studying education

4.2 INQUIRY QUESTION #1: ENGAGEMENT IN CCR ACQUISITION

Presenting graduates with scripted protocol questions and probing for further details led to the collection of stories, reflections, and descriptions of successes, struggles, and decision making related to their preparation, planning, and transitioning to life after high school. Stories and descriptions were reviewed with a specific focus on how graduates described their engagement with CCR skills, knowledge, and behaviors. Statements related to CCR engagement were coded

though an deductive approach (Gilgun, 2011). The codes were analyzed through a second cycle of coding using pattern coding methods (Saldaña, 2016) which resulted in the identification of seven categories: 1) interactions with teachers and educators, 2) interactions with adult peers, 3) interactions with parents and family, 4) independent learning experiences, 5) coursework with high expectations, 6) career related field experiences, and 7) extracurricular involvement.

Third cycle analysis of the seven categories resulted in the determination of three themes to describe how graduates engaged with CCR skills, knowledge, and understandings. The themes were; 1) interactions with adult mentors, 2) autonomous learning experiences with high expectations, and 3) hands-on career or workplace experiences.

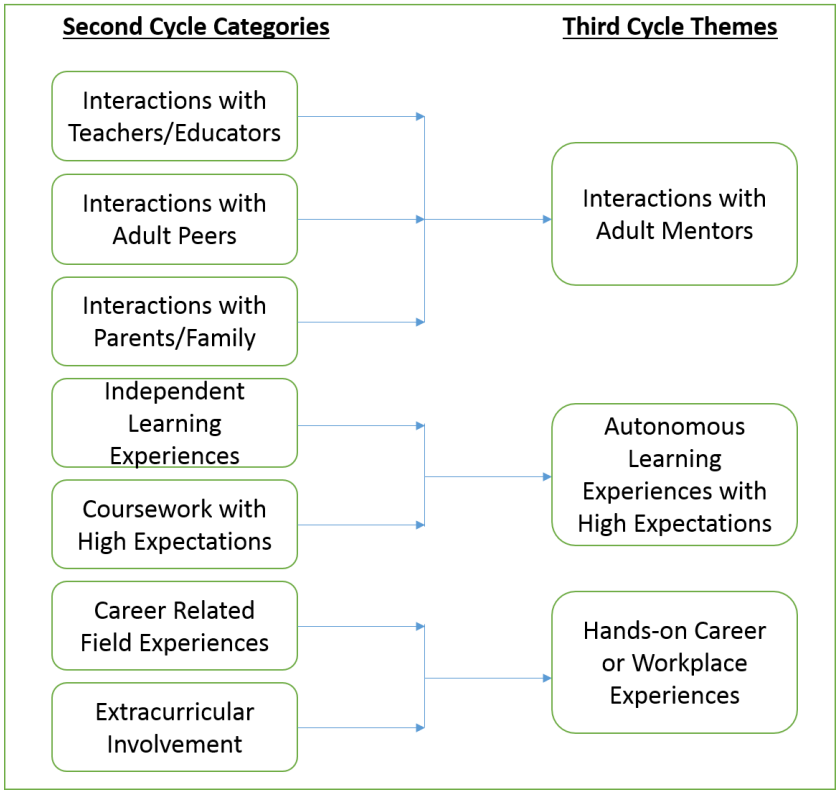


Figure 3. How graduates engage in CCR skill building

Supporting literature on social cognitive career theory indicates that individuals are more likely to engage in adapting their career behaviors and decisions when contextual factors such as family, friends, and experiences intervene and support the individual (Lent & Brown, 2013; Lent et al., 1994; Lent, Lopez, Lopez, & Sheu, 2008; Lindley, 2005). Lent, Brown's (2013) model of career self-management indicates influences on individual career engagement and behaviors. The influencing themes identified in the model are: 1) personality and contextual influences such as, social, family, and financial supports; and 2) learning experiences (Lent & Brown, 2013). Contextual influences and learning experiences have an impact on an individual's self-expectations, goals, and actions (Lent & Brown, 2013). The stories of the graduates support these statements in the literature.

4.3 INQUIRY QUESTION #2: REFLECTIONS ON GSHS COLLEGE AND CAREER DEVELOPMENT PROGRAMS

A second round of data analysis was conducted to uncover statements about specific college and career readiness programs at GSHS, and whether they contributed to helping graduates navigate the postsecondary landscape. Class of 2013 students participated in structured career preparation programming in grades nine through twelve which included a freshman seminar course, a sophomore career fair, a junior job shadow, and a graduation project known as the senior project. Specific graduate statements related to involvement and interactions with the career programs were coded using and deductive approach (Gilgun, 2011). Second cycle pattern coding methods (Saldaña, 2016) organized the data into six categories: 1) late engagement with postsecondary decision making, 2) lack of exposure to postsecondary options, 3) inconsistent advise from

adults, 4) financial illiteracy, 5) senior project experiences helped in transitioning, and 6) informative junior job shadow. Analysis of the categories led to a determination of two themes associated with career programming at GSHS: 1) structures supporting consistent college and career engagement are missing, and yet 2) beneficial individualized career experiences do exist in the junior job shadow and senior projects.

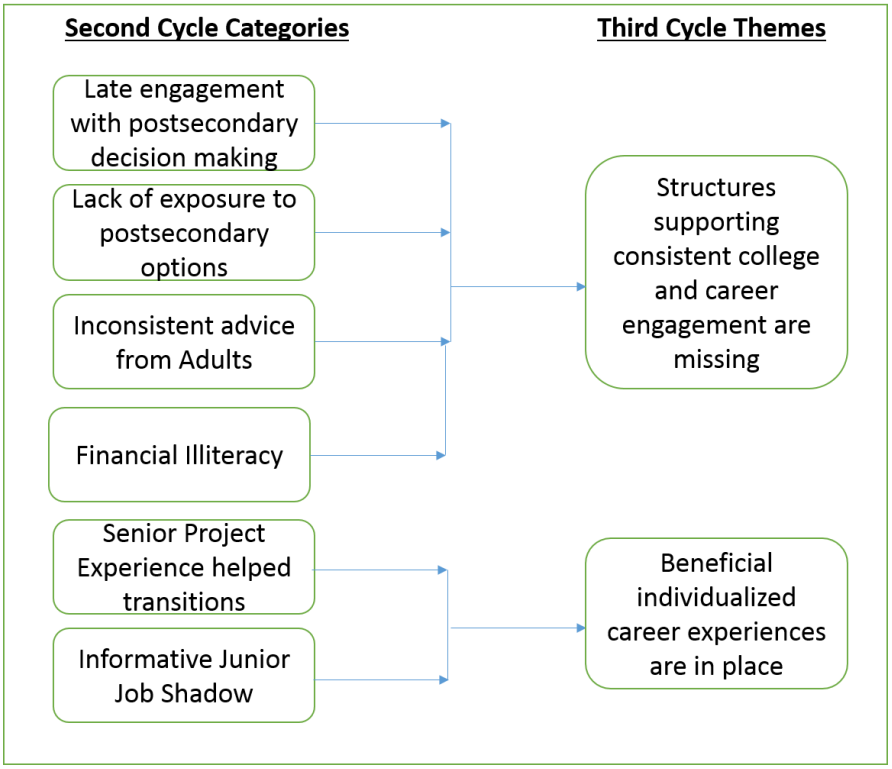


Figure 4. Description of GSHS Career Programming

Contextual influences such as peer, mentor, and family interactions can be supportive in developing individual career awareness and behaviors. However, when contextual supports pass along misinformed information, their support can turn into a barrier for individual college and career readiness (Lent & Brown, 2013). Likewise, learning experiences can act as a barrier to individual career growth if the structure is not supportive of individual needs, interests, or

abilities. Many of the graduates recalled being told that college was the pathway to success. For some this misguided, one-size-fits-all statement (Fleming, 2016), went as far back as elementary school. The stories of the graduates indicate that although there are structures in place to help with their development of CCR, there were missing, or misinforming components that ultimately led to some struggles after high school. Many of the graduates recalled hearing that college was the only pathway to success.

4.4 INQUIRY QUESTION #3: STRUGGLES WITH CCR SKILLS, KNOWLEDGE, AND UNDERSTANDINGS

A third analysis of interview data was conducted to understand how the graduates struggled in their transition from high school to their postsecondary pathways. Statements related to postsecondary struggles were coded using an deductive approach (Gilgun, 2011). Second cycle pattern coding methods (Saldaña, 2016) were conducted to analyze and organized the data into six categories: 1) unsure of abilities, 2) unsure of interests, 3) scholastic struggles, 4) lifestyle struggles, 5) financial struggles, and 6) wrong pathway. Analysis of the six categories led to a determination of three themes related to struggles with CCR skills, knowledge, and understandings: 1) A disconnect between interests, abilities, and options exists; 2) Difficulty adapting to postsecondary norms; and 3) Career pathway knowledge and options are lacking.

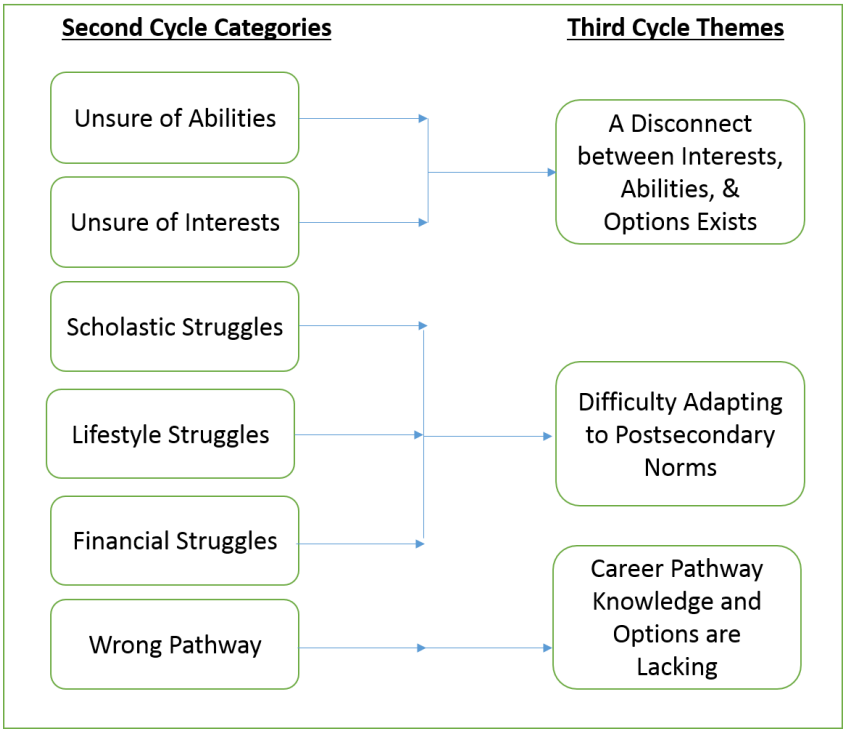


Figure 5. Gaps in CCR Skills, Knowledge, and Behaviors

The struggles described by GSHS graduates are reflective of a lack in self-awareness of abilities and interests, and a resulting misalignment of individual outcome expectations for their career pathways. This gap in transitional skills was noted by some graduates to be in their lack of identification of career interests, abilities, and realistic outcomes. Others who had clearly identified their interests and abilities noted a struggle in transitional skills associated with procedural knowledge of postsecondary institutional choice, admissions processes, and timelines for completing such transitional tasks. Very few of the graduates struggled in more academic areas of cognitive thinking, and content knowledge, but all indicated some struggle in areas associated with Conley's (2014) fourth key of transitional skills. Most graduates described a lack of adult guidance, or adult guidance that was misaligned with their skills, interests, and abilities. Although adult guidance is considered an important factor in getting children engaged

with college and career readiness, misinformed guidance, although delivered with good intentions, can create barriers to the development of self-awareness and the development of career outcome expectations aligned to individual interest and abilities (Fleming, 2016; Lent & Brown, 2013).

4.5 STORIES OF THE GRADUATES

The stories of the 10 GSHS graduates, although each different, shared similar themes of CCR engagement and struggle which were highlighted in this chapter. Each graduate was presented with the same questions from the interview protocol that lead to statements connecting to each of the inquiry questions. However, each individual story tended to align with one inquiry question more than the others. Some stories focused more on engagement in CCR development, others focused heavily on the programs at GSHS and their time in high school, while others focused on their struggles beyond high school.

By answering questions about their experiences in high school, their transition to live after high school, and their people and programs that helped or hindered their efforts along the way, the participating graduates provided a wealth of information related to how individuals engage with CCR skills, develop their self and career identities, and overcome struggles associated with making their career development. The following chapters provide details on each of the graduates and their stories as they relate to the inquiry questions that guided the study and the discussions; and the themes that emerged from all the graduate interviews.

5.0 ENGAGING WITH CCR: THE STORIES OF LORI, KATIE, ADAM, & MATT

The stories of Lori, Matt, Adam, and Katie highlight the following themes of engagement with CCR development as they emerged from the stories of all 10 GSHS graduates: 1) interactions with adult mentors, 2) autonomous learning experiences with high expectations, and 3) hands-on career or workplace experiences.

5.1 INTERACTIONS WITH ADULT MENTORS

At the time of the interview, Lori was a fourth year student at a large state university studying education, and student teaching at an elementary school. Lori credits much of her decision making and career identity with her family and a teacher who became her mentor while in high school. Lori stated that her decision to get into education was in part because of growing up with a mother who was an educator.

> **Lori:** *My mom is also a teacher, so it's kind of just always been something that I've been around and something that I've always uh, appreciated.*

Lori's teacher mentor played a key role in helping her make decisions, and reflecting on her experiences throughout high school. The teacher she grew close to in high school encouraged her to pursue teaching as a career.

Lori: *She definitely influenced me too to become a teacher. I felt like she was somebody in the school that I could really trust and count on always, so that definitely influenced my high school and my life just knowing that there was one teacher at least that I could always go to for anything that I needed.*

When asked if she thought of any other options other than college after high school, Lori responded:

Lori: *My parents would support me no matter what I did or what I chose, but I think they would definitely try and sway me in the direction of education just because that, that was what was expected of me even whenever I was, I mean from, for as long as I can remember, my parents have said, "You're going to go to college." But, I'm lucky because I actually wanted to go to college.*

The influence of family on Lori was even evident in how she decided on a college to attend.

Lori: *I chose [the university] mostly because uh, my sister went here I guess, honestly.*

Although Lori said she was certain she made the right decisions, she was aware that what she would do after high school, what she would study, and even where she would study were greatly influenced by her family and her mentor's guidance.

Like Lori, Katie also credits a supportive family for helping her make decisions and transition to life after high school. However, unlike Lori, Katie's interactions with her family were more exploratory in nature. Katie was a fourth year nursing student at a private catholic university in an urban setting. She stated that she always knew she wanted to get into nursing.

Katie: *I've honestly wanted to be a nurse since I was a little girl. I've always wanted to do like labor and delivery, or something in maternity, whether it's like the NICU, or the nursery or something. I think that sparked when I was little, and you saw that through me*

playing with baby dolls all the time, and caring for my younger siblings and then my cousins. I've just always kind of had that like caring personality, and then as I got older, it just sort of evolved into wanting to care for other people, so that when it came time to really decide what I wanted to be, I was like, "You know, I think I'm really meant to be a nurse." I've always, always thought I should be a nurse, and I don't regret it.

Katie stated later that it was family connections that had her thinking about a career in nursing.

Katie: *My grandmother was a nurse, but she passed away when I was two, so I didn't really get to see her as a nurse, but I think knowing she was a nurse and hearing about that kind of planted the idea in my mind.*

Katie's knowledge of what her grandmother's career, and her interactions with siblings strengthened her career identity at a young age. When it came time to make postsecondary decisions, her family played an integral role in engaging her behaviorally and cognitively about where she would attend school, but Katie did not indicate that they pushed her in the direction of nursing.

Katie: *Even I think in junior year, we did a lot of school visits, where we would go, like, Penn State we went up to, and they would tour all the facilities with me. And then in addition to that, my parents and I set up a time to meet with someone individually, and then we did the same with Duquesne.*

Katie's parents and family contributed to her decisions to choose a pathway that was best for her. Katie explained that her family, "*bled Penn State blue and white*" (Katie), but because they initiated visits to many different schools, she realized that Penn State would not be the best choice for her.

Katie: *I chose Duquesne because of the clinical opportunities with all of the hospitals in Pittsburgh, from UPMC which is world-renowned, I mean people come from all over the country, all over the world just to come to UPMC Hospital, and Alleghany Health Network, which is really also very good. That's what kind of made me choose there, because I wanted to be in all of those hospitals.*

Katie and Lori had families that guided their career plans and decisions making. Unfortunately, not all of graduates had families as knowledgeable, or with the resources to support the development of CCR skills. Adam connected with the trades, like his father, but he described that he was mostly influenced by his teacher, friend, and mentor.

At the time of his interview, Adam was a third year apprentice in the bricklayers and allied craftworkers union. Adam was the only graduate interviewed who attended the career and technical education program offered at GSHS. Adam spent all four of his high school years in the program, and studies bricklaying and masonry work. Although he credits his parents for his work ethic, Adam stated that the person responsible for getting him to believe in his abilities was his career and technical education teacher in masonry.

Adam: *It was the end of my first year down there. That is when he told me that I was really good. He said I was the second best student he ever had, and I was only a freshman. I still talk to him to this day. I do side jobs with him and stuff like that if he needs help up around his house or something. I still talk to him a lot, and he helps me a lot.*

Adam's teacher, now a friend and close mentor, shaped what he thought about himself, and guided him into the bricklayers and allied craftworkers union.

Like Adam, Matt stated that his teachers helped him understand what he wanted to do with his life after high school, and helped provide a guiding hand in navigating the processes for seeking, applying, and paying for postsecondary education.

Matt was a student at a small private college studying computer information science and cyber security. He also started his own software engineering business, helping small businesses build cloud based security systems for data management. Matt was looking to complete his degree in the semester following the interview, but attributed all of his success to his education at GSHS, and the guidance he received from a number of his teachers at GSHS. Matt relied on the GSHS faculty for guidance and help, and when asked who he could attribute his successes in where he is now in his life he said,

> **Matt:** *Pretty much, the big proponents of that would definitely be ... there's a couple of big names at the GSHS faculty. Each of the relationships that go along with it is again because they treated me as an equal. That's pretty much all that I've ever wanted because I remember from early childhood being treated differently because of my age. That doesn't mean that I'm not capable of understanding what you're talking about. That was always a struggle, but definitely certain faculty members helped me.*

All the graduates in the study indicated some adult that helped guide their college and career identities and decision making. Who and individual interacts with, and the nature of those interactions has an influence on their career identity, and their subsequent career related decisions (Keller & Whiston, 2008; Schultheiss, Kress, Manzi, & Glasscock, 2001).

5.2 AUTONOMOUS LEARNING EXPERIENCES

Adam's learning experiences in high school differed greatly from that of his peers. As a participant in the career and technical education program, Adam was exposed to independent work, set in an environment like that of the bricklaying and masonry workplace. The hands-on learning, and independent projects allowed Adam to see that he was good at what he was doing, and that he genuinely enjoyed it.

> **Adam:** *I went to competitions when I was there. I went to districts, regionals, and states. I guess I was pretty good*.

Adam's experiences, and his success with them solidified his belief that masonry was the right career path for him.

Identification of his strengths and interests in masonry contributed to Adam's engagement in content knowledge necessary for getting better as a bricklayer. He indicated that math is very important in the trade, and he tried harder to learn math because of that.

> **Adam:** *Math was a big thing for me. I usually got straight A's in math. Being honest with you, it was probably the only class I ever got A's in. I had to know it*. *I used it at tech, and I use it now.*

Like Adam, Matt also attributes his career pathway and engagement to the independent learning, and high expectations set in his high school computer programming courses.

> **Matt:** *I mean, that class was, just having the freedom was, it's a move at your own pace course. Some people would eventually get past others, but it didn't matter. We all would present content relatable to what we're all working on. That definitely translated into other courses. I think that just having that freedom is what motivated me.*

Matt's maturity and willingness to embrace an independent learning environment early in his high school career translated into more engagement with his career preparations and postsecondary planning.

> **Matt:** *I knew that after my first programming course at Greensburg Salem, I knew pretty much that I needed to be working with computers and software. I knew that's where I was going to end up.*

The more Matt connected with his programming course, the more he was able to see how the content could translate into other curricular areas on his own, which continued to build upon his career awareness, content knowledge, and other skills that would benefit him in his postsecondary pathway.

> **Matt:** *Someone in the class, they would have considered to be the best physicist in there, we compared it. There was a question about circuits, and I wrote a program that would make circuits with series and parallel things. If you put in the inputs, it would tell you what the overall output would be, or at each stop. My program got it right, over the best classmate in Physics.*

Matt's classroom experiences and successes can be attributed to his ability to connect his interests and abilities to other content areas, allowing him to continually engage with the acquisition of CCR skills.

Katie's experiences in the classroom were like those of Matt's. Because she had a strong career identity from early childhood of becoming a nurse, Katie made scheduling decisions that matched those interests.

> **Katie:** *I did everything science. I did as many science classes as I could, because I knew, especially once I decided on Duquesne, and there your schedule is set from day one to*

the last day, so you really can't change it too much, so I knew exactly what classes I would have to take. Because of that, I was looking at the classes we could take here, and figuring out, "Okay, so I should try to take these, so then when I go to Duquesne and take them, I'll have a better idea." Yeah, I took all the sciences, like bio, I took the advanced bios, AP whatever.

Katie's early career identity led her to take sciences and other courses that would prepare her academically for the coursework associated with a postsecondary nursing program. Those courses would continue to engage her in the process of building CCR skills. This engagement led to Katie making her own connections to the nursing career in classroom activities that might not have a direct connection to that field.

Katie: *Biology class. We did dissections in that class, and that was really cool to see, because it kind of got my mind thinking about, I mean, it was an animal body, but the human body, and actual organs and systems and everything, and that I think helped me think about, "Okay, if this is a person, then I would be a nurse taking care of a person who has all of these systems going on and all that stuff." I think that was freshman year I had that class. We dissected a pig, I believe. That was a good experience. It kind of confirmed that I still wanted to be a nurse.*

Katie's engagement with CCR skills extended from her coursework to actual career exploratory experiences. She credits several job shadows in not only confirming what she wanted to do, but even with providing her with the insight into what it would take to succeed within that field. She also credits one class for going the extra mile in that it provided job shadow opportunities as part of the curriculum.

Katie: *That class undoubtedly prepared me the most, because she got us ... We went to Alleghany General Hospital, we saw open heart surgery, we went to Westmoreland Hospital, went to see the heart catheterizations, and that class was awesome.*

Like the other graduates, Lori also attributed hands-on career experiences to her engagement in her transition plans to become an educator.

Lori: *So whenever I was a senior, I did community service, and I was in a kindergarten classroom at one of the elementary schools. I didn't really know if I wanted to be a teacher before that, but then after I was in that classroom, I just fell in love with it. So I decided to that I wanted to be a teacher.*

Lori did not identify with a career identity as early as Katie, Matt, or Adam. As a result, Lori was not always motivated to challenge herself, or make connections between content areas like her peers did. When asked about the difference between classwork in high school and college, Lori said,

Lori: *I knew in high school if I didn't succeed by myself, there were a thousand people there to, help me. So I didn't always try my absolute best the first time around. In college, academically I think was definitely a learning curve when I was a freshman. I had some, a lot of breakdowns about my education.*

Her disconnect with her career identity led to a disengagement in CCR skills across the curriculum. Lori admitted that that lack of focus in high school led to her initial struggle with academics in the first year at college.

5.3 CCR ENGAGEMENT: OVERVIEW

The stories of Lori, Katie, Adam, and Matt provided evidence of adult interactions and learning experiences, contributing to the engagement in, and development of cognitive strategies, content knowledge, learning skills, and transition knowledge associated with CCR (R. Lent & Brown, 2013). All the graduates described how their interactions with family, friends, and mentors contributed to their CCR development. Of Conley's (2014) Four Keys to CCR, graduates described situations where adult interactions supported engagement with learning skills and transition knowledge. Whereas, learning experiences tended to support engagement in cognitive strategies and content knowledge.

However, all of the graduates indicated that their engagement with adults such as family members, teachers, or peers influenced their learning experiences. They also indicated that the learning experiences they engaged in led to conversations and interactions with adults. The combination of knowledgeable adult support and guidance, along with learning experiences connecting to interests and abilities, can engage an individual in their development of CCR skills and career identity (R. Lent & Brown, 2013).

6.0 GSHS COLLEGE AND CAREER PROGRAMMING: THE STORIES OF BILL, STEPH, & JULIE

The stories of Bill, Steph and Julie highlight how the participating graduates described the college and career programming at GSHS. The themes that emerged from the descriptions of the programs were: 1) some beneficial individualized career experiences are in place, and 2) structures supporting consistent college and career engagement are missing. Bill, Steph, and Julie are much like Lori, Katie, Adam, and Matt in that they described adult interactions which influenced their career development. They also described their coursework and learning experiences. Their descriptions of the GSHS career awareness program, which consists of a freshman seminar, a sophomore career day, junior job shadow, provide insight into the collective thoughts of all participating graduates.

6.1 GSHS BENEFICIAL CAREER EXPERIENCES

Two of the components of the career awareness program at GSHS were discussed by the participants more than any others. Those two components were the junior job shadow and the senior project. It should be noted that both the junior job shadow and senior project are independent projects, guided by teacher mentors and outside community members associated

with the career field of interest. The participating graduates described the benefits of those guided, yet independent, career-related learning experiences.

Steph was in her fourth year of a five-year physician assistant program at a private urban university. Steph admitted that she did not get fully connected with her career choice until midway through her junior year. She described the importance of the junior job shadow in helping her discover what she was interested in doing.

> **Steph:** *I actually shadowed my pediatrician, who I actually am hoping to have a rotation with next year as far as my pediatrics rotation. The shadow was a lot of independent work and then to come back and kind of present what you did, I definitely felt prepared through that experience we did in high school. That was the middle of junior year. I probably started looking into places and going on tours and visit after that.*

Steph also indicated that the senior project contributed to her development of learning techniques and also contributed to her career identity and problem solving skills, essential for transitioning to postsecondary pathways.

> **Steph:** *My senior project I did like a youth cheerleading…I was a youth cheerleading coach volunteer for six years throughout school, so middle school and high school. For my senior project I gave those girls like a little almost like a camp on safety because I knew I was hoping to do some sort of pediatric medicine. I did like a little safety camp for them as far as common sports injuries and just how to deal with those and safety while you are kind of playing or working out in those kind of ways.*

Steph's experiences with the job shadow and senior project were positive in that they contributed to her understanding of what she wanted to do after high school. However, she indicated that her

mentorship with a close teacher was the ultimate factor helping her connect her interests, abilities, and potential postsecondary pathways.

> **Steph:** *I was going in there almost every day and being like, "I don't know what I'm going to do. I don't know what I want to do. Do you think I'll be a good PA or do you think I'd be a good pediatrician or should I go into business or I want to do that?" He was very good with kind of telling me, "You need to think about what you actually want to do and what your skillset is." He almost made it a very logical idea for me where I guess nobody else had ever done that.*

It is important to note that Steph's experience with her a teacher, who she described as a mentor, and the time they took to discuss her experiences, interests, and abilities were essential for making the job shadow and senior project tasks beneficial in her career development.

Bill also indicated that his senior project helped him discover more about his career options beyond high school. Bill was a cadet at the community college municipal police academy. He originally attended the community college with an interest in studying biology, but transferred into criminal justice shortly after his first term. He now holds an associate degree in criminal justice and was looking to complete his police academy training and start working for the county sheriff's department. Bill described his senior project as something that helped him understand how his interest in biology and law enforcement could come together in the same career.

> **Bill:** *For my senior project I actually did an internship with the Pennsylvania Game Commission. The job seemed really, really cool. For the internship we went to a bear's den, and got to handle the cubs, tranquilize the mother, and do all that. And that was really cool. And then it's still a branch of law enforcement so I was like that's a cool thing*

to get into. But it wasn't until after I graduated beginning in college when I was looking into jobs and like what I may or may not want to do.

Bill's experience with the senior project was beneficial because he was able to work on something that involved his interests in biology and law enforcement. Although Bill enjoyed biology, once he was out of high school, he realized that his interest in the subject did not match with his abilities or interest to keep up with the rigorous demands of studying biology at the collegiate level.

Bill: *I really liked the biology classes here, and I figured it would kind of transfer over. But, it turned out to be a whole lot tougher than I really expected. And then just the requirements for the degree in biology and the class I had to take. I realized I was doing too much of a workload for me, and there was just things in there that I realized I wasn't gonna have the time to really pick up on. I was having a tough enough time alone in the intro classes. So I liked what I did with law enforcement, so I just switched over*. (Bill)

Unlike Steph, Bill's discussions with his teachers centered on academic achievement rather than how his interests, abilities, and opportunities could help him identify his career pathway. However, Bill's exposure to law enforcement, through the senior project, helped him make the decision to enter criminal justice when biology was no longer a viable option.

Julie also stated that the job shadow and senior project experiences helped her in her college and career readiness and decision making; but, she was also the only participating graduate to mention the freshman seminar component of the career awareness program. Julie was a fourth year education student at a local state university, and was completing her student teaching experience. Julie stated that her interest in education started when she was a freshman.

Julie: *I'm thinking about the classes that you had to take for the job exploration and the mentorship program. I think those were very good indicators of maybe researching different schools and different programs that you could go into, because I really didn't know anything about what college I wanted to go to, or what I wanted to study, but I remember researching different colleges and programs, and I was able to see which schools I wanted to tour, which schools I didn't even need to look at because I didn't like the programs that they had. I can't remember the name of that class but I remember it being very helpful in getting me to see that I liked education, and what schools I could possible go to.*

Julie recognized that the freshman seminar program had benefits of career exploration. It should be noted that the absence of any discussion of the freshman seminar program by the other nine participants indicates that freshman seminar may not have the impact on student career engagement that it was theoretically designed for. However, freshman seminar provided a time and place for Julie to search for career options early in her high school experience. It could be that other graduates also benefited, but did not remember the experience.

Julie, a highly-motivated student at GSHS, took school and learning very seriously. When asked who she credits for her educational successes Julie replied,

Julie: *Would it be selfish to say myself? I don't know. I feel like I have definitely worked the hardest.*

Julie understands how her engagement contributed to her successes, and how she was able to make something out of her opportunities that some of her classmates may not have. When asked about her experience with the senior project, Julie compared her thoughts to what she observed in many of her peers.

Julie: *I know a lot of people dislike it, so much work. I don't know, but I feel like if you pick the right project, it shouldn't be that much work. It should be related to what you want to do. But I feel like some people take it and just don't relate it to their future and don't really see the point of it.*

Julie's motivation to do well in school is not the norm. She recognized that not all of her classmates connected to their learning experiences the way she did. Julie described things she did on her own to get ready for college and career that many of her peers did not. Her reflections indicated many insufficiencies in the career awareness program that the other participating graduates also recognized, and were even affected by.

6.2 INCONSISTENT COLLEGE AND CAREER PROGRAMMING STRUCTURES

The limitations of this study indicated that all of the other participating graduates were connected in some way to the GSHS system and culture, allowing them to take advantage of career awareness programs like the job shadow and senior project, and helping develop readiness for postsecondary pathways. They're engagement in school also meant they noticed the aspects of career engagement they took responsibility for when the system did not provide much guidance. These stories highlight the missing structures that could make the career awareness program stronger for all students at GSHS. Steph, Bill and Julie provided descriptions of the inconsistencies in college and career readiness programs at GSHS.

As a concerned student, Julie spent many hours in the guidance office searching for scholarship opportunities and learning about application processes, and looking for anything that would help her get to college, study education, and pursue a career as a teacher. Not all of Julie's

classmates were as motivated to take on this responsibility, or even know they should be doing it. However, when asked what she would do if education were no longer an option, Julie was unsure about what that would be.

> **Julie:** *I think that I spent most of my time just looking at education classes and at the time. If someone would have said what would your backup plan be? That probably would have made me look at something else, too. I think I put, in all of those questionnaires that they make you do, that I wanted to be a teacher and maybe an early childhood teacher. Then when they said, "what's your backup plan?" I said a high school teacher. Well, that's not really much of a backup plan. Maybe if someone would have said to me what you just said, if education doesn't work at all, something that's drastically different, maybe I would have looked into that a little bit more, too*.

Julie brings up a flaw in the mentoring and reflection process for students trying to identify with a career pathway. If students are asked to search for career of interest in their freshman year, and never consider secondary options, will they be able to truly align their interests, abilities, and realistic career and educational opportunities? We know that Bill had the problem of going to college, studying biology, only to find that biology was not a good fit for him. His interests, abilities, and educational demands did not match, and he decision to move on to another career. It is hard to say if he would have made those decisions without the senior project experience associated with law enforcement.

Bill described a frustration that most of the participating graduates also indicated. Bill and his peers described their lack of knowledge and understanding with key transition skills related to financial literacy.

Bill: *I mean there was economics class where we talked about money like a little bit. Like the stock market and everything, but there's nothing that really prepared you for like, going out and buying your first car. Like, how to apply for a loan and house financing work and interest and such. I mean yeah, you get how interest works but it was a whole lot different like when it's applied to real-world things. Thankfully I had my dad to help me out with that and do the process and everything but there's no way I'd be able to go out and do that on my own the first time.*

Steph also described her difficulties in navigating the financial landscape she was in at college.

Steph: *It's funny because I feel like I have a very good skill set as far as things that I've been taught in school. As far as outside knowledge I feel like I'm almost not prepared for life. I don't even know how to do half of the things financially. I barely know how to set up my own bank account. It's definitely going to be…that's going to be a big culture shock almost graduating from college. Hopefully my parents and hopefully financial aid at Duquesne might be able to tell me how to do that.*

Many of the graduates indicated that they wished they could have been exposed to transition knowledge and skills related to financial independence, and procedures for selecting, applying to, and communicating with post-secondary educational institutions. Although Steph was satisfied with her collegiate decision she wishes more guided assistance was available for helping her and her classmates prepare for admissions processes, scholarship applications, and timelines associated with such procedures.

Steph: *In terms of knowing when to start applications, I wish they would have almost said something like maybe midway through junior year like "Oh, some colleges are going to start really early. If you have a specialized program in mind or something you really*

want to do, you need to keep up on it or you should go and visit those colleges earlier." I didn't really realize that people had started applying by the end of junior year.

Julie was one of those classmates applying by her junior year, but it was her own persistence, not any structured guidance that helped her get a head start on her peers.

Julie: *Applying for college was probably mostly at home, using my parents and my brother, who had already done that process. But, I also remember being in the guidance office quite a bit my junior and senior year. And I know they have a lot of scholarship applications in there. That was very helpful. But I went there on my own.*

Although there were independent learning programs in place in the junior job shadow and senior project, graduates seemed to think the lack of structured supports beyond the freshman seminar resulted in them getting behind in their postsecondary planning.

The lack of goal setting and follow up discussions for students throughout their high school career contributed to many students getting involved in their postsecondary planning late in the junior or senior year. Only Julie and Katie indicated that they started their postsecondary planning before their junior year of high school. Many others seemed to be caught off guard by the thought of moving past graduation.

Steph: *I would say by junior year, by the middle of junior year I started looking into places, going on visits and tours. I didn't even start applying to colleges until September of my senior year. I guess I didn't realize how soon the application process would have started to go to some different schools.*

Steph, Bill, and Julie each pointed to structures that helped them navigate their college and career decisions, but they also identified several concerns. Most importantly, the lack of

structures that would help navigating transitions associated with application procedures, financial literacy, and overall processes for moving from high school to postsecondary pathways.

6.3 GSHS CCR PROGRAM DESCRIPTION: OVERVIEW

The stories of Bill, Steph and Julie highlight how the participating graduates described the college and career programming at GSHS. The themes that emerged from the descriptions of the programs were: 1) some beneficial individualized career experiences are in place, and 2) structures supporting consistent college and career engagement are missing. Bill, Steph, and Julie are much like Lori, Katie, Adam, and Matt in that they described adult interactions which influenced their career development. They also described their coursework and learning experiences. Their descriptions of the GSHS career awareness program, which consists of a freshman seminar, a sophomore career day, junior job shadow, provide insight into the collective thoughts of all participating graduates.

Career exploration programs like the freshman seminar are important in helping students discover their career identity, and start making sense of how their education connects to their individual college and career pursuits (Fleming, 2016). However, the graduates uncovered a significant flaw in the career awareness program. A lack of structured supports, like the freshman seminar, after the freshman year are missing. Only Julie described her experience with the freshman seminar. Although that time is important for self-exploration and career discovery (Fleming, 2016), there was no other structured times for college and career related goal setting or reflection. Graduates indicated that such structures would have benefited them. Instead, the graduates were left to search for such college and career guidance on their own in their later high

school years. Julie was one such graduate who was fortunate to have a supportive family and an older brother who had gone through the high school to post-secondary transition process to help her out. Along with knowing what to ask, she also took it upon herself to contact others for help.

Most graduates seemed confident in their development of cognitive strategies, content knowledge, and learning skills; but, almost all of them indicated some form of gap in transition knowledge and skills associated with admissions processes, institutional choice, financial awareness, and postsecondary lifestyles and norms. Several graduates indicated that a structure like the freshman seminar could help students develop the knowledge and understandings associated with these transition skills.

Although the system lacked structured support beyond the freshman year, the independent learning requirements of the junior job shadow and senior project were deemed to be beneficial in the descriptions of all the participating graduates. Bill's experience with the senior project allowed him to shift his college and career decisions seamlessly at the post-secondary level, in large part due to the experiences he had with the senior project. Several graduates also indicated that and individual must take a serious approach to the job shadow and senior project experiences for both to have a greater individual impact on future career and education decisions.

7.0 CCR STRUGGLES: THE STORIES OF JOHN, NADINE, & CHRIS

All of the graduates in the study indicated areas of struggle upon graduating from high school and transitioning to their postsecondary pathway. For instance, Lori stated an initial struggle with cognitive strategies and content knowledge when she entered her freshman year of college. Bill described difficulty in adjusting to the increased academic rigor in biology, a subject he enjoyed hands-on experiences with, but not the academic rigor associated with the collegiate program for biology. Although each graduate experienced different individual struggles, all the graduates described a collective struggle with Conley's (2014) fourth key to CCR, key transition knowledge and skills.

The stories of John, Nadine, and Chris will highlight the common struggles graduates described upon transitioning to their postsecondary pathways. Three themes of struggle emerged from the descriptions of the graduates: 1) difficulty adapting to postsecondary norms, 2) lacking knowledge of various career pathways and options, and 3) disconnect between interests, abilities, and realistic career options.

7.1 DIFFICULTY ADAPTING TO POSTSECONDARY NORMS

John, Nadine, and Chris went in three different directions after high school. John attended the United States Air Force Academy and was planning on getting a job placement in the field of

management. Nadine originally attended a state university, studying Spanish, but transferred to a college closer to home a few semesters into her collegiate experience. Chris originally attended a large urban university, but left after one semester and was in his third year of an apprenticeship with the local pipefitters union at the time of the interview. All three, described struggles in adapting to life after high school, and one of the struggles was the newfound independence they had.

> **Nadine:** *I think the overwhelming sense of freedom you get right away at college is something a lot of people struggle with. You go to stay away at a school, your parents leave, and you are responsible for yourself and only yourself. You don't have to answer, necessarily, to anyone. That can be a good or a bad thing.*
>
> **Chris:** *We don't really realize how good you have it until you go to school and then you have to wake yourself up every day, and you have to go out and shop for basic necessities, and stuff you wouldn't even think about. You know, your parents go to the store and get stuff like toothbrushes, toothpaste, whatever, personal care stuff, and stuff you don't even think about. You know you have to do your own laundry? It's very different.*
>
> **John:** *I came halfway across the country, and I didn't know how to do my own laundry. You know, kinda overwhelming when you know your mom's not there to help you out, or you don't get what you get at home.*

John, Nadine, and Chris all realized the struggle they faced when living on their own. Gaps in how they would fend for themselves and take care of personal living responsibilities was something they were not prepared for. For most of the participating graduates, they were lucky enough to have supportive families to help them figure out how to navigate living on their own.

Along with independent living, the graduates also had to figure out new rules for academic learning, and a new academic structure. For some, the size of the institution, and lack of individual academic attention was something they were not prepared for.

> **Chris:** *One of the biggest struggles was first of all dealing with how many students I had to see every day as opposed to what I saw here. It was almost culture shock. I mean you come from a school, a relatively smaller school, graduating like three hundred some student, and then you walk into a lecture that has the same amount of kids that you graduated with.*
>
> **Nadine:** *I think Greensburg Salem was a relatively small school, and I thrived there. I was pretty social and involved. I felt very confident that I found a school that worked for me. I was at a school that was known for its Spanish program. But, I found out quickly that I wasn't getting the one-on-one attention I needed, and I had to transfer.*

The lack of transitional knowledge associated with postsecondary contexts of school size had negative consequences for Chris and Nadine. John's experience with the military academy was also a culture shock, but in a much different sense.

> **John:** *The academy takes it to the next level. Not only do you have these, you know world class education program classes, but you also have these military briefs, and you have military duties that you have to complete throughout the day. I mean it kinda takes away from your study time. You know your free time, time to recuperate? So I think if it was just the classes at the academy, like everyone would be fine. I think the reason many a lot of people can't make it here is because it's just so overwhelming.*

While Chris and Nadine struggled with the increase in time available to them, John struggled with the time constraints handed to him that were quite different than what he experienced in high school.

The unfamiliarity of postsecondary structures had financial consequences for Chris.

Chris: *I realized that wasn't for me. But I have to, you know, I have to pay it back. I have to eat fifteen thousand dollars, and there is nothing I can do about it. You want to talk about a shock to your system. It was a slap in my face.*

Unfortunately for Chris and the other graduates, they indicated a lack in financial literacy and planning to help prepare them for the financial independence and landscape of life after high school.

John: *I think one thing I wish would have happened in high school would have been like a life skills class. Something like learning how to make a paycheck last, or even how to figure out to buy things on your own. Big things, like a house or a car. I'm going to be finishing up here at the academy, and on my own, but I'm not sure what I'll do. Luckily I'll have my family to talk to about that stuff.*

Nadine: *It's an everyday struggle for my situation. It's very expensive, and I'm sitting at like $30,000 at least in debt, and that is with scholarship money. Six months after I graduate, I have to figure out how to pay for it with a job that I won't know if I want to do. It is hard to figure out such financial problems when you presented with a $2,300 bill for the next semester.*

John and Nadine described their anxiety of trying to figure out how to balance finances now and after their postsecondary graduations. All of the graduates indicated that they lacked financial guidance during high school. Many stated that their family is who they relied on for this

knowledge and understanding, but they stated if it were not for family, they would not know what to do.

> **Chris:** *I don't remember having too much training or information when I was in high school. I remember faculty talking about scholarships and loans, but I don't remember learning too much about it. You know, how to go about getting a loan. I don't remember getting any preparation to learn how to do stuff like that. It's amazing how fast your paycheck disappears after you pay all the bills. It's incredible, and you know, it's not something you are prepared for, and I got to pay all this stuff back.*

Transitional knowledge of postsecondary norms such as financial literacy, cultural understanding, and independence was a shock for most of the participating graduates.

7.2 LACKING CAREER PATHWAY KNOWLEDGE AND OPTIONS

All of the graduates described their confidence in their decisions of what to do following high school graduation, except for Chris. Chris seemed to know upon entering college that he was not making the right decision.

> **Chris:** *I fought a heck of an internal battle wondering whether or not it really was the right choice. I knew deep down, I didn't really want to admit it, but I knew deep down that I hated the courses I was going to have to study to be an engineer. You know like math and physics, and I wasn't a really big fan of chemistry. I thought it was going to be tough, and I would just get through it. It just didn't work out that way*.

Chris placed part of the blame for taking the wrong postsecondary pathway on the limited guidance provided about postsecondary pathways while he was in high school.

Chris: *That's something that we've always had beaten into our heads. For thirteen years, from kindergarten all the way up to twelfth grade, you need to go to college to be successful. I don't buy into that now, knowing what I know and what I've been through, I don't buy it. But I believed it.*

Chris is not the only graduate who identified a struggle with understanding what postsecondary pathways and options were available after graduation.

John attended the United States Air Force Academy and was approached by the academy because of his wrestling abilities. When asked what he would have done, had the academy not worked out, John only had one other option, and was also for wrestling. John described being lucky to be where he was, and he was not sure how he would have decided what to do if the academy did not approach him.

John: *I didn't know about all of the options available to me in high school. I think I'm in the best place I can be in. But, I feel like I could have gotten more advice on my options. I'm sure I ever got that advice from people in high school if that makes sense.*

Nadine also experienced difficulties in deciding what to after high school. Although she thought she was making the right postsecondary decision upon high school graduation, she quickly discovered that she could have learned more prior graduating that would have put her in a better position for success. Although she knew she had a strong interest in Spanish, she did not know what she could do with it other than study it in college.

Nadine: *With a major such as Spanish, or an interest such as Spanish, there's so many different fields you can get into; but, I don't even know those. Maybe if I would have started out in high school exploring some of those fields, I could be closer to what I*

ultimately want to do, and narrowed it down quicker. Whereas, now I'm just starting to narrow it down.

The graduates all indicated that they have learned much more about what options are available to them since graduating from high school, but many stated that it would have helped to have more knowledge about what to do while they were in high school.

7.3 INTERESTS, ABILITIES, AND OPTIONS DISCONNECT

Many of the graduates interviewed for this study discovered their career interests early. Others understood their abilities. However, many of the graduates struggled in understanding how their interests and abilities had to come together with realistic options to see that their decisions would lead the start of a career with as little difficulty as possible. Although Nadine knew her interests and abilities were in Spanish, she continued to struggle with what she could do with it.

Nadine: *I felt very confident that I found something that worked for me. I was at a school that was known for their Spanish program, but I learned that you can't just do Spanish. You have to pair it with something. When I studied abroad I came back feeling kind of lost and more confused with I wanted to do with Spanish. I'd say I'm less confident now than when I was in high school, and that led me to transferring.*

Nadine is in a good place in that she knows what she likes, and what she is good at, but there has been little guidance as far as what she realistic career options are available to her. Her search for guidance led to her school transfer, but has also led her to believe her career exploration is solely on her.

Nadine: *I didn't feel like I was getting the support at [the first college], so I looked into schools that were closer to home. I wanted to go to a school that would ultimately help me try to figure out what I can do with my skills and interests. But, I'm learning now that it's definitely on my shoulders.*

Although he knows he will land a realist career upon graduating from the Air Force Academy, even John is not certain that his career placement will be a match of his interests and abilities.

John: *So in a couple of months I'll be picking my job for the Air Force. I believe it's about four or five references, then based on order of merit and my rank in class, I'll get racket stacked. They'll find the job for me. It will be a management job of some kind. I'm not too concerned. I guess it will all just fall into place.*

John's statement that it will fall into place could be true, or like Chris, it could end up not working out.

Chris, now in a trade union as apprentice, was convinced that a college education would define success for him. However, Chris's experiences since high school display how a mismatch between interests, abilities, and realistic options can land an individual on a career pathway that may not lead to happiness.

Chris was part of the gifted education program at GSHS. His academic abilities were impressive, but they did not always match with his interests.

Chris: *Everyone had seen my performance over the years and told me I'd make a great engineer. Well, the problem is you have to actually enjoy the classes you study or you're not going to want to go to class. You probably won't be a good engineer either. I didn't enjoy stuff like calculus or physics, but I passed them. The courses I did enjoy were extra-curricular stuff like arts, languages, you know.*

Unfortunately for Chris, because of his involvement in the gifted program, his high school career was included course work that followed the traditional high school to college route, and limited his opportunities to explore other pathways that could have been a match between his interests and abilities.

> **Chris:** *If I'd have known I was going this route, I absolutely would have gone to tech. But the problem with that was with the course load I had in school. You know, it was all advanced courses, and I was in the gifted program, or whatever you want to call it. So, you really have to take certain courses, and a lot of times that doesn't leave room for some other courses, or if you want to try tech.*

Chris's frustrations with his situation were evident throughout the interview. However, he could find a match between his interests and abilities, which landed him in a career option that is satisfying and lucrative for him. Unfortunately, Chris's semester at college, which he knew would not work out, cost him financially. The misalignment of Chris's interests and abilities had a financial impact on him. Time will tell if other graduates fall into similar situations like Chris's.

7.4 CCR STRUGGLES: OVERVIEW

The stories of John, Nadine, and Chris highlight the struggles graduates had in their transition from high school to their postsecondary pathways. Some graduates identified a struggle with academic transitions associated with Conley's (2014) keys to CCR in cognitive strategies, content knowledge, and learning skills. However, those struggles were individual. The themes of struggle that were consistent across the participant group centered on the fourth key of

transition knowledge and skills. Such knowledge and skills include procedural knowledge such as institutional choice and admissions processes, while others are culturally centered on navigating postsecondary landscapes. Struggles with independent living and financial literacy emerged from many of the conversations. The stories of John, Nadine, and Chris also described the struggles associated with self-awareness of interests, abilities, and realistic career options.

Frustrations stemmed from graduates not possessing knowledge and understandings prior to their graduation from high school. Many suggested the need for structured courses in areas such as financial literacy, independent living, and the postsecondary landscape. It should be noted that GSHS does offer such courses, but they are not mandatory.

Graduates such as Chris and Nadine suggested that they learned about career options only after they ran into difficulties and were exposed to some difficult experiences after high school. They suggested that limitations or poor advice and guidance in high school contributed to their postsecondary struggles. On the other hand, John is trusting the system he is in to place him in to a career field that fits. Many of the other graduates were moving through their postsecondary experiences similar to John. Time will tell if all of the graduates are able to identify and match their interests and abilities to realist career outcomes.

8.0 CONCLUSIONS

This purpose of this study was to understand how students engage in acquiring the cognitive strategies, content knowledge, learning skills, and transition knowledge associated with CCR; and, to uncover what skills students struggle with upon transitioning from high school to postsecondary settings of work or school. The interview study focused on ten graduates, four years removed from their high school experience, from the same secondary school and graduating class. Detailed stories of each graduate's current life situation, reflections on scholastic and extracurricular events, and struggles they have encountered since leaving high school, provided data which was analyzed and compared with literature on CCR acquisition and development.

From the analysis of each interview and inquiry question, four conclusions were made: 1) interactions with trusting adults shape how students acquire cognitive strategies, content knowledge, learning styles, and transitions skills associated with CCR; 2) learning experiences connected to career identity and hands-on practice, help students build self-efficacy and career goals; 3) students struggle with transition knowledge and skills more than any of the other three keys to CCR; and 4) emerging themes across the data indicate a need for further study and understanding of how individuals acquire college and career readiness skills, understandings, and behaviors.

This chapter provides statements of understanding based on the inquiry data and the literature associated with CCR acquisition and development for each the three inquiry questions that guided this research:

1) *How do high school graduates describe their engagement in acquiring the skills, knowledge, and behaviors for post high school transitions; including who they engage with to help prepare for their transition?*
2) *How do high school graduates describe the value of secondary college and career development programs based on their experience?*
3) *How do high school graduates describe their struggles when transitioning beyond high school; and, what college and career skills and behaviors do they describe to be lacking in the most?*

8.1 HOW STUDENTS ENGAGE WITH & ACQUIRE CCR SKILLS

8.1.1 How do high school graduates describe their engagement in acquiring the skills, knowledge, and behaviors for post high school transitions; including who they engage with to help prepare for their transition?

Literature on social cognitive career theory indicates that adult interactions and guidance have a significant influence on an individual's career development (Flores, Robitschek, Celebi, Andersen, & Hoang, 2010; Lent & Brown, 2013; Lent et al., 1994). What adults say and how they guide students can significantly influence their self-awareness, career identity, and decisions related to the development of such a career (Keller & Whiston, 2008; Schultheiss et al., 2001).

Literature also supports the idea that learning experiences, both good and bad, have an influence on an individual's career development (Flores et al., 2010; Lent & Brown, 2013; Lent et al., 1994). How an individual is engaged with learning is important to the connections that individual makes with what they are learning, and how that influences their future interactions with similar content or tasks (Almarode, 2014).

All the graduates in the study identified adult interactions which helped them engage in the development of CCR skills and understandings, and their career identities. Graduates such as Katie were influenced by parents and teachers in ways that positively influenced the development of cognitive strategies, learning skills, and transitions skills. Katie's parents were supportive in providing college and career guidance by helping Katie engage with and attend multiple job shadows and college visits. Her family's transitional support allowed for exposure to career exploration that solidified Katie's career identity as a future nurse.

On the other hand, Adam and Chris indicated that adult supports often led students to think college was the pathway to success. Chris's teachers, parents, and peers all contributed to his career outcome expectation of an engineer, which led him to college, and a pathway that did not fit his own interests. Adam was lucky to have an adult mentor at the career and technology center that contradicted the college for all philosophy being stated by other adults. Adam's mentor helped guide his career outcome expectations according to his interest and ability with bricklaying. Therefore, relational influences were a strong factor in the engagement with and development of CCR skills and knowledge (Lent et al., 1994; Schultheiss et al., 2001).

Learning experiences also contribute to individual engagement with and development of CCR skills and knowledge (Lent et al., 1994; Thompson & Dahling, 2012; Tokar, Thompson, Plaufcan, & Williams, 2007). For instance, although Lori had strong connections with family

and mentors, her learning experiences were not as rich with career experiences until her senior year. The missing element of high expectation for herself in the learning environment created a gap in her development of career identity, goal setting, and outcome expectations. Although she made it through high school, and now college, Lori admitted to an early academic struggle in college. The combination of knowledgeable adult support and guidance, along with learning experiences connecting to interests and abilities can further engage an individual in their development of CCR skills and career identity (Lent & Brown, 2013)

8.2 DESCRIPTIONS OF GSHS CAREER PROGRAMMING

8.2.1 How do high school graduates describe the value of secondary college and career development programs based on their experience?

There is a growing understanding that skills other than academic knowledge, such as individual thinking skills, learning skills, and knowledge of career pathways and norms, are critical for individual success beyond high school (Hooker & Brand, 2010). Therefore, elementary and secondary schools are working to build programs aimed at developing skills associated with college and career readiness (Bangser, 2008). However, programs aimed at developing postsecondary skills are not proving to be adequate in preparing students for their future (Bridgstock, 2009).

The participating graduates in this study described their experiences with the GSHS career program during their time in high school. Although there were many positive statements about the program's junior job shadow and senior project, many of the graduates indicated that a

consistent refection on college and career pathways and processes was missing. The graduates indicated the lack of reflective educational structures about college and career beyond the freshman year resulted in them having to figure out the processes on their own, with their families, or while they were in the transition period after high school.

A well designed career program is not one that stands alone in the general education curriculum (Bangser, 2008). Instead it is one that is infused within all courses, where students are asked to connect content and learning to their own career identities and future goals (Bangser, 2008). Building such a program is a systemic effort centered on all stakeholders being engaged in college and career pathways and opportunities, and adults being able to connect curricular content and learning to different pathways and postsecondary options.

8.3 STRUGGLES WITH POSTSECONDARY TRANSITIONS

8.3.1 How do high school graduates describe their struggles when transitioning beyond high school; and, what college and career skills and behaviors do they describe to be lacking in the most?

The participating graduates described struggles with academic transitions associated with cognitive strategies, content knowledge, and learning skills. Many of those struggles were individual. The themes of struggle that were consistent across the participant group centered on the fourth of Conley's keys to CCR, transition knowledge and skills. Such knowledge and skills include procedural knowledge such as institutional choice and admissions processes, while others are culturally centered on navigating postsecondary landscapes.

Struggles with independent living and financial literacy emerged from the conversations. Overall, the struggles that emerged from this study are similar to the transitional skills and knowledge considered to be lacking in most secondary schools in the United States. Those skills and knowledge include postsecondary contextual knowledge, procedural knowledge, cultural awareness, and self-awareness of career identity and procedures (Conley, 2014). For many reasons, the United States secondary and postsecondary institutions for higher learning were developed and governed completely separately from one another, making it even more difficult for students and systems to transition between one another (Conley, 2014).

The struggle to navigate the postsecondary landscape can be attributed to a system that places more emphasis on standardized academic preparation, rather than individualized career plans and pathways (Bangser, 2008). Greensburg Salem graduates acknowledged an emphasis on career exploration and supports from adults, but upon their transition, they were not prepared for the cultural norms of their postsecondary pathways, and they also struggled with moving into a lifestyle that provided them with far more independence than they were accustomed to in high school. Even with school systems focusing on CCR through political agendas and rhetoric, the system is not doing enough to make sure students are prepared with the transitional knowledge and skills necessary for successful high school to postsecondary transitions (Barnes & Slate, 2013). The graduates in this study rely heavily on parents and other family members to help them with their transitions, while students lacking these supports are left even farther behind.

Along with transitional struggles, the graduates in this study indicated that they struggled to make connections between their interests, abilities, and career outcomes. For some, it led to a wrong postsecondary pathway. Others indicated that they think they are in the right place for them, but time will tell if that is the case. Most of the graduates stated that they did not start their

transitional planning until the middle to end of their junior year. More needs to be done to engage students in career related discussions throughout their secondary school experience so that students can have a better understanding of their interest, abilities, and what they can do with them. The graduates from GSHS indicated that they encountered the college for all rhetoric that contributes to a misalignment in interests, abilities, and outcomes (Fleming, 2016). The college for all rhetoric needs to change to postsecondary education for all, which could change how educators, parents, and mentors talk to children about their futures.

8.4 EMERGING THEMES FOR DISCUSSION

Several themes emerged from the interview data that are significant for discussion and further study in the area of college and career readiness.

Although all the graduates mentioned adult interactions influencing their development of CCR skills, knowledge, and understandings, only one of the graduates mentioned school counselors. During her interview, Julie stated that she visited the guidance office often to look over scholarship applications, college visitations, and other postsecondary planning activities. She also stated that this would not have occurred without the advice of her parents and older brother, who had already gone through the high school to postsecondary transition himself. Julie took it upon herself to interact with the school counselors, but none of the other graduates made mention of a relationship with the school counselors.

The absence of school counselors from the discussions of the graduates should be looked into further. It should be noted that based on enrollment data for the end of the 2012-2013 school-year, the counselor to student ratio at Greensburg Salem was 1:459. School counselors

are central to the preparedness of students for college and career, but with ratios such as 1:459, demands of state testing requirements, attentiveness to student mental health issues, and day to day functions, do school counselors have the time and resources to appropriately meet the needs of students in their schools?

Another emerging theme from the study was the difficulty in connecting with graduates once they leave the institution. Only three years removed from the high school, it was rather difficult contacting and connecting with ten graduates from a class of over 200. Although their stories provided a great deal of information that can help direct district decisions, how much data and information is being lost because of the lack of connectedness to district alumni? Following up with graduates in a more structured manner could provide schools with better information about practices, polices, and procedures that influence how students perform beyond high school graduation. What data might these same graduates be able to provide three to four years from this study? Better systems of communicating and connecting with alumni should be explored to better understand how the school system is and is not meeting the needs of its children.

Individuality is something that should also be noted. Each of the ten graduates explained stories, experiences, relationships, and unplanned life events that were individual and unique to them alone. Educators, community leaders, parents, and other stakeholders must look at each child as an individual with unique circumstance, interests, abilities, life experiences, and opportunities that do not fit with the one-size-fits-all approach schools have traditionally focused on when building systems for student learning and assessment. If each student is unique in their experiences, interests, and abilities, how they engage with learning has to become more individualized. This includes how they learn and engage with college and career readiness skills and understandings, and their own self-identity.

Two models provided a framework for this study, the Four Keys to College and Career Readiness Model provided a detailed description of the concrete knowledge and skills associated with college and career readiness, while the Model for Career Self-management focused on the cognitive processes associated with obtaining knowledge, skills, and behaviors for college and career readiness and decision making. The two models alone do not provide clear guidance on policy and practice for helping all students acquire the knowledge and skills necessary for college and career.

Looking at the Four Keys to College and Career Readiness Model in isolation provides details to what stakeholders should focus on when making decisions about what children should be learning, and we should be assessing in their learning. However, how we approach instruction and assessment for CCR skills and understandings cannot continue to be built with a one-size-fits-all approach that has dominated the educational landscape for the last century and a half (Schwahn & McGarvey, 2012). If we instruct and assess the skills and knowledge stated in the model with a traditional one-size-fits-all approach, we will not be able to address the individual needs and experiences each child brings to the learning environment.

The Model for Career Self-management (Lent & Brown, 2013) organizes influencing factors for how individuals begin to construct their career identities. Factors such as race, gender, socioeconomic situations, experiences, and contextual factors all influence how an individual becomes self-aware, and how they establish their own career identity. Knowing this alone would indicate that providing financial support, becoming culturally and gender responsive, and making sure all students have adult mentors would ensure solid career development for our children. However, that is not necessarily true either. Processes, experiences, contextual environments

and interactions cannot help guide students if the direction is not grounded in solid knowledge and skills frameworks that direct what the focus of such experiences and interactions should be.

Focusing solely on the knowledge and skills of CCR without looking into how individuals process and develop skills would be inadequate in providing all children with what it takes to become college and career ready. Likewise, providing access to adult mentors, financial stability, and hands on career learning experiences that are not focused on instruction and assessment of key CCR skills and understanding would also fall short of providing all children with what it takes to become college and career ready. A blend of the concrete knowledge and skills, such as those described in the four keys, and understanding of processes and environments described in the Model for Career Self-management is necessary to construct better policies and practices conducive for building learning environments focused on college and career readiness for each individual child.

Regardless of how well schools prepare to meet the needs of each individual, they cannot fully prepare for circumstances and life events which make planning for any individual's future difficult at best. The happenstance and uncertainty of life for each individual make planning for the future a difficult and uncertain task. However, aligning process structures and environments that support individual growth and development with focused skills, knowledge, and understanding for college and career success can provide for a more strategic development of individual career identities and pathways.

8.5 CONCLUSION

A greater understanding of the inquiry questions was generated through this study. Three concluding understandings can be made from the inquiry: 1) interactions with trusting adults shape how students acquire cognitive strategies, content knowledge, learning styles, and transitions skills associated with CCR; 2) learning experiences connected to career identity and hands-on practice, help students build self-efficacy and career goals; and 3) students struggle with transition knowledge and skills more than any of the other three keys to CCR.

It is known that students engage with career identity, self-awareness, and build self-efficacy skills through interactions and associations with those around them, particularly adults (Lent & Brown, 2013). The graduates in this study emphasized how adult interactions influenced their career identities and decision making. It is also known that learning experiences contribute to how an individual builds self-efficacy skills, and how they set individual career goals and outcomes for themselves (Lent & Brown, 2013).

The graduates in this study indicated gaps indicated gaps in transitional skills and knowledge upon high school graduation. Even with a career program in place, graduates described struggles with postsecondary transitions with cultural, contextual, and personal struggles. Many graduates were comfortable with their academic transition, but struggled with making connections to their career identity. A more effective college and career ready program would ensure adult mentors are knowledgeable in career pathways and outcomes, and that learning experiences that provide reflection on career pathways and outcomes should be carried out across the educational system and curriculum (Haase, Poulin, & Heckhausen, 2012).

9.0 RECOMMENDATIONS

Based on the evidence found in this study and in the literature, three recommendations have emerged. The first recommendation is for educator, parent, and community career awareness programs to be put in place to connect all stakeholders to changes in economic and workforce demands, as well as options for postsecondary pathways that would lead to realistic career opportunities based on workforce needs. The second recommendation is to build workforce connections into the general education curriculum so that students can reflect on individual interests and abilities as they relate to content material and its connection to workforce needs. The third recommendation is for secondary schools to provide college and career exploration opportunities for all children so that every child can build a better understanding of postsecondary pathways and transitional knowledge.

9.1 EDUCATOR & PARENT CAREER PATHWAY AWARENESS

Based on the evidence of the study, and current literature on college and career readiness and workforce development, it is recommended that all Greensburg Salem educators take part in ongoing discussions and professional development focused on local economic and workforce needs, as well as postsecondary pathways that contribute to those workforce needs. Parental support groups such as parent teacher associations and parent teacher organizations should also

be provided with similar learning opportunities. Contextual supports such as adult relationships and guidance contribute to how an individual builds their career identity, and how they begin to construct their career goals and outcomes (Lent & Brown, 2013). Therefore, it is critical that adults interacting with children are knowledgeable about the state of the local economy and workforce, and what skills, knowledge, and understandings are necessary for success in that workforce.

School systems of today are built to support economies of the past (Schwahn & McGarvey, 2012). Because educators and parents were products of that system, they will need focused learning opportunities to build their own understanding of how that system must change, and how their conversations with children and other community members must change to support a new economy. Guiding students for academic success alone, and a mentality that one must go to college to be successful must change to better guide children to make connections between their interests, abilities, and realistic postsecondary and workforce options (Fleming, 2016).

Adults have to understand what skills, knowledge, and understandings are most important for the development of CCR with all children. They also have to understand the contexts that contribute to, or detract from an individual developing the knowledge and skills necessary for postsecondary success and self-fulfillment. Finding a balance between the concrete skills and understandings described in the Four Keys to College and Career Readiness model and the processes and influences that contribute to individual development in the Model for Career Self-management should be explored further.

9.2 CURRICULUM & WORKFORCE CONNECTIONS

Evidence from this study resulted in the recommendation that workforce connections be built into the general education curriculum so that students can reflect on individual interests and abilities as they relate to content material and its connection to workforce needs. Courses and course selections should reflect current workforce needs, skills, knowledge, and understandings (Galles & Lenz, 2013). Student learning experiences should not solely be focused on academic content. Instead academic content must connect with realistic career outcomes to provide children with connections to career identities, interests, and abilities across the curriculum (Fleming, 2016). Combining educator awareness of current economic and workforce needs with curriculum planning can help all educators hold discussions with students of varying vocational interests and abilities. Learning experiences contribute to how an individual develops their career identity, and how they begin to construct their career goals and outcomes (Lent & Brown, 2013). When learning experiences and contextual supports such as adult mentors are aligned with workforce needs and options, all children will be afforded the support for building their college and career readiness skills.

9.3 POSTSECONDARY EXPLORATION FOR ALL CHILDREN

A final recommendation from this study is for secondary schools to build career exploration supports for all children. Many of the graduates in this study were fortunate to have families and financial supports necessary for providing college and career exploration events such as job shadows, college visits, and even support with transitional processes such as applications and

admissions. Still, others were not as fortunate, and as a result they encountered more struggles and stresses associated with high school to postsecondary transitions than their peers who had the support. It cannot go unnoticed that socioeconomic status contributes to an individual access to knowledgeable contextual supports, and learning experiences that can help with self-efficacy skills, and college and career awareness (Thompson & Dahling, 2012).

Schools and communities must come together to support all children in their exploration of careers and postsecondary options for learning and training within those careers. If schools are truly committed to making sure all children are prepared for college and career, they must provide structures and financial supports to see that all children can visit multiple colleges, universities, training centers and employers so every child can understand how their interests and abilities can translate into a real career, and so they know how they can get there.

The cognitive strategies, content knowledge, learning skills, and transitional knowledge associated with college and career readiness should not be limited to those with financial and social supports. All children deserve an education that prepares them for their future, in the workforce of their time. To do that, adults need to be knowledgeable of the economic and workforce landscape, and available pathways to learning to be successful within that economy and workforce. And, all children should be afforded with college and career opportunities regardless of their economic standing.

10.0 AFTERWORD: PRACTITIONER REFLECTION

A few weeks after the interviews were conducted, and the data analysis and conclusions were made, I had an experience that resonated with me. The experience, combined with the learning experiences I had while conducting this research had me thinking about how I, along with all educators, need to think about how we approach our practice. The experience I had involved my son Beau, and a late night trip to the emergency room.

As first time parents, my wife and I were prone to overreacting to situations we were unfamiliar with. One night, we were awakened by Beau, not yet a year old, crying with a fever. He had been diagnosed with an ear infection earlier that day; however, at 1:30 in the morning, and with a temperature over 104 degrees, my wife and I decided to take Beau to the emergency room.

Upon our arrival, the nurses and staff calmly took Beau's temperature, weight, heartrate, and other vital statistics. He was placed on a heart monitor to track his vitals. With a temperature over 104 degrees, and a steady heartrate of 180 beats per minute, my wife and I were concerned. We hoped for immediate attention and decisions from the emergency room doctor, but what we received was quiet different. Instead of hurrying to administer medications, or rush into a procedure, the doctor stated he needed a few minutes to ask some questions that would allow him to get to know Beau a little more.

It was obvious that Beau was in discomfort. As a parent not aware of medical procedures or best practices, taking the time to ask and answer questions had me a bit anxious. However, the doctor proceeded with questions concerning past medical experiences, behaviors, interactions with other people, and even drug and alcohol use. After fielding nearly 5 minutes of questions, the doctor said he would have the nurses administer some Motrin for the fever. However, he wanted to get a throat culture and blood sample so that could see the whole picture of what could be ailing Beau. Although he thought it could just be the ear infection, he wanted to gather more data to ensure it was not something more serious.

We watched and waited two hours as the medical staff attempted to draw blood from Beau and get a throat culture. Four attempts by three different nurses resulted in no blood sample, a scared and angry Beau, and two parents who were sorry about what they just put their child through. The doctor looked over Beau's vitals and saw the temperature decline to 98.7 degrees, and the heartrate lower to a normal resting rate. He explained that he wanted to get the blood to have more certainty about Beau's condition. However, he understood that doing so was not in the best interest for Beau at that time. We were instructed to monitor Beau over the next two days, and to contact the doctor regardless of how Beau was feeling. We never did get the blood sample, and Beau was feeling better in the matter of two days. But, what does this have to do with my growth as an educational practitioner and this research study?

Too often, educators are forced to make decisions, provide answers, and react to situations immediately without taking time to look over the entire organization and big picture. Answers are needed on the spot, and time for research and reflection are not often available. However, the quick to decide, quick to move, and quick to have a solution process is not working to solve the very complex issues and dilemmas associated with education.

Education is a human activity. It cannot be managed the same way people and products are managed on an assembly line. The problems in education are multifaceted, and complex. Therefore, decisions concerning those problems need more time and care. For instance, in this study, I was trying to gain a better understanding of how graduates from a school I am associated with were prepared for life after high school. Too often we make decisions that we think will help children be prepared for life after high school, but we do not take the time to research what is known, what has been done, what works, and what does not. Although we often have opinions and thoughts about what works and does not, we tend to manage rather than learn and lead.

This inquiry study and the learning process associated with it changed how I look at my role as an educational leader. It is my responsibility to take the time to learn, research, test, and reflect. I also have to lead by example, and show others how to approach the practice of education as a practitioner, not as a manager of time and space. Like the emergency room doctor, educational leaders have to slow down, look at the big picture, search for data, and make the best decisions grounded by the data. I know it was not easy for the doctor to slow down in the face of two concerned parents and a sick child. However, he knew that getting the right information about the patient as a whole, could make the difference in making a good or bad decision.

As an educational leader, it is my responsibility to look at the whole picture of each individual, school, and community. It is also my responsibility to guide other stakeholders so they too can engage in inquiry to understand the bigger picture. I'm sure the emergency room doctor encounters situations where decisions have to be made on the spot. As educators we also encounter situations that require quick decisions. However, the more we engage in inquiry, and

lead others to join us in the process, the more knowledgeable we will be as a learning community.

APPENDIX A

INTERVIEW PROTOCOL 1

College and Career Readiness: Interview Protocol 1

Interviews will be conducted with 10-12 recent high school graduates from various backgrounds and post high school educational paths. Careful detail should be taken to select graduates from varying socio-economic and cultural backgrounds. It is understood that individual schools will vary in the socioeconomic and cultural diversity within.

Short Introduction:

- Thank you for taking the time to talk about your experiences since you graduated from _____ High School.
- Let me first take some time to discuss what the purpose of the research is, and why I am asking if you could participate in the process. The research being conducted is focused on student preparedness for college and career beyond high school. I am looking to learn about how you were prepared for life after high school graduation, what helped you prepare for life after graduation, and what could have been done to better prepare you.
- I want to express that as adults we try to do what is best for children to be prepared for their postgraduate world, but we are often wrong about what we do.
- Learning from your story and the stories of your peers will help _____ School District better prepare future graduates for life after graduation.
- Our interview will take approximately 45 minutes.
- Is it OK if we record the audio from our discussion today?
- *Once permission is granted to record*: My name is _____ and I will conducting today's interview with (name of interviewee). (Name of interviewee), are you Ok with us recording the audio of today's interview?
- Do you have any questions before we begin?

Topic #1: Post High School Pathway

1 Why don't you start by telling me about what you are doing right now?

2 What plans did you have upon graduating from _____ high school?

a. PROBE: Did you follow through with your plans?
b. PROBE: Why did you think that choice was the best choice for you?
c. PROBE: How did you learn about the (school, workplace, institution, etc.)?

3 Did you consider doing any other post high school options?

a. PROBE: Why did you decide against this/these options?
b. PROBE: Did anyone or anything help decide between the options?

4 When did you get serious about thinking and planning for what you would do after high school?

a. PROBE: Was there anything that prompted you or motivated you to start looking at your post highs school plans?
b. PROBE: Why was _____ a motivator for you to start looking at options?

5 Explain how confident you were that you were making the right post high school decision at the time you graduated?

a. PROBE: Reflecting on where you are now, was that confidence accurate?

6 How do feel about the college and career decisions you made about after graduating high school?

Topic #2: Post High School Learning & Work

7 Describe how prepared you were for your post high school graduation plans?

a. PROBE: (If not prepared): What could have helped you become more prepared?
b. PROBE: (If prepared): What do you attribute your preparedness to?

8 What experiences, school or extracurricular, helped you transition into your post high school education or workplace?

a. PROBE: Were there any classes, or classroom experiences that prepared you for your post high school plans?

Topic #3: Post High School Transitions

10 What was the biggest struggle you faced in your transition to _____ after high school?

a. PROBE: Why do you think you struggled/did not struggle when making your post high school transition?

11 Did you have any financial difficulties after high school? Can you explain?

a. PROBE: While you were in high school, who or what helped you build an understanding of issues associated with money and financial burdens you might face after high school?
    i. In hind sight, what would have helped you to better understand post high school money and financial issues while you were in high school?
b. PROBE: If you are working, are there additional certifications or education available that would help you advance or grow in your career?

Topic #4: Self Knowledge

12 What were your strengths in high school?

a. PROBE: How did you know these were your strengths?
b. PROBE: Did your strengths contribute to your post high school decision making?

13 What did you struggle with while you were in high school?

a. How did your struggles influence your post highs school decision making?

14 What goals do you have for yourself right now?

a. PROBE: What steps are you taking to help you reach your goals?
b. PROBE: Who or what is helping or has helped you reach your goals?

Closing:

15 Do you have any final thoughts you would like to share?

I want to personally thank you for your time and willingness to share your story with me. I will be in touch to let you know how the research process goes. If you have any questions or concerns about the process, or this interview, please contact me.

APPENDIX B

INTERVIEW PROTOCOL 2

College and Career Readiness: Interview Protocol 2

Second phase interviews will be conducted with the same 10-12 recent high school graduates from various backgrounds and post high school educational paths that were interviewed earlier using protocol #1. The purpose of the second phase interview is to develop a deeper understanding of the struggles graduates had in their transition after high school, and their satisfaction or dissatisfaction with where they are now. Stories and anecdotes from interview #2 will help develop a better understanding of research question #3: *How do high school graduates describe their transitioning beyond high school; and, what college and career readiness skills and behaviors do they describe to be lacking in the most*?

Short Introduction: If second phase interview is done in separate session:

- Thank you once again for taking the time to talk about your experiences since you graduated from _____ High School.
- Before we get back into our discussion, is it OK that we record the audio from today's discussion?
- *Once permission is granted to record*: My name is _____ and I will conducting today's interview with (name of interviewee). (Name of interviewee), are you Ok with us recording the audio of today's interview?
- The last time we talked, we focused on your times at _____ School District, and your transition from high school to *(the learning or career destination of the graduate beyond high school as indicated in the first interview)*.
- I want to talk to you today about where you are now; and, I want to again express that as adults we try to do what is best for children to be prepared for their postgraduate world, but we are often wrong about what we do and say. You have lived it, so I think your voice can provide help us as adults to better inform children about live after high school.
- Our interview will take approximately 30 minutes.
- Do you have any questions before we begin?

Current career trajectories

9 The first time we talked you said you are currently _____. Talk to me about this experience.
   a. PROBE: What do you like most about what you are doing right now?

b. PROBE: What do you dislike about what you are doing right now?

10 Did you make the decision to go where you did after high school because it was you wanted to do, or because it was what you thought you should do?

i. PROBE: Did anyone influence your decision? Who was it and why?

11 Looking back now, was it the right decision for you?

a. PROBE: What do you wish you would have done differently?

12 Were you given any misguided advice about your post high school path?

a. PROBE: Why do think the advice was misguided?

13 Do you credit anyone or anything for where you are right now? Explain.

14 Are you satisfied with your current education and/or career? Explain.

Closing:

15 Do you have any final thoughts you would like to share?

APPENDIX C

IRB APPROVAL

University of Pittsburgh
Institutional Review Board

3500 Fifth Avenue
Pittsburgh, PA 15213
(412) 383-1480
(412) 383-1508 (fax)
http://www.irb.pitt.edu

Memorandum

To: Kenneth Bissell
From: IRB Office
Date: 12/19/2016
IRB#: PRO16110454
Subject: Secondary School Contributions to Graduate College and Career Readiness Skills and Understandings

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The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section

45 CFR 46.101(b)(2)

Please note the following information:

- Investigators should consult with the IRB whenever questions arise about whether planned changes to an exempt study might alter the exempt status. Use the "**Send Comments to IRB Staff**" link displayed on study workspace to request a review to ensure it continues to meet the exempt category.
- It is important to close your study when finished by using the "**Study Completed**" link displayed on the study workspace.
- Exempt studies will be archived after 3 years unless you choose to extend the study. If your study is archived, you can continue conducting research activities as the IRB has made the determination that your project met one of the required exempt categories. The only caveat is that no changes can be made to the application. If a change is needed, you will need to submit a NEW Exempt application.

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.

Figure 6. IRB Approval Letter

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