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Pepperdine University
Graduate School of Education and Psychology

EFFECTIVE PRACTICES OF HIGH SCHOOL PRINCIPALS' LEADERSHIP IN
DEVELOPING TRADITIONALLY UNDERREPRESENTED STUDENTS'
HIGHER EDUCATION AND FUTURE CAREER READINESS

A dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Education in Organizational Leadership

by

Vernita Lynn Adkins-Barlow

October, 2017

Farzin Madjidi, Ed.D. – Dissertation Chairperson

This dissertation, written by

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DOCTOR OF EDUCATION

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DEDICATION

Dedication of this dissertation is to someone who loves me endlessly and tirelessly. He provides everything I need and does not mind giving the things I want. He never denies my company and loves to be with me, never leaving me at any time. It is to Him that I dedicate this dissertation because He was there when I felt alone. He was there when I could not think or write. He was there to provide direction and enlightenment. He was there. He thinks I am worth the effort and always takes the time. He loves me so much that I have His full acceptance, all the time. There is nothing impossible with Him and success is in His hand. He loves me so much and the little I can do is to return to Him that which He has given to me. I dedicate this dissertation to:

My Big Daddy God and Big Brother, my Lord and Savior Jesus Christ.

Also, passionate are the hearts of those who undertake the responsibility of teaching our children. Dedication of this dissertation is also to my research participants, administrators who passionately work with underrepresented student populations towards their success in higher education and future careers. Let the little children come unto me for such...is our future.

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VITA

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Principal Administrator

Plan, direct, assign and supervise the educational program within multiple school sites. Facilitate Individual Education Program (IEP) meetings for students. Oversee, review and participate in the development of curriculum. Coordinate programs with a variety of outside agencies, school districts and other programs.

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Presenter, “Oh the places you’ll go: the community college stepping stone to higher education and beyond. *International Organization of Social Sciences and Behavioral Research* (August 2016) ***Best Paper Award***

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ABSTRACT

Political initiatives in response to government reports have focused on students' preparation for higher education and their future careers, and students fall short. School districts and school programs give attention to the application of instructional practices to ensure students' college and career preparation, providing professional development in various instructional methods that address Language Arts and Math skills development, and students fall short. Teachers work tirelessly to use instructional strategies that develop students' critical and computational thinking, communication, collaboration, and creative skills, and students fall short as research indicates that students entering higher education continue to require remedial classes before beginning their college degree programs. This qualitative study design's purpose was to analyze the effective practices that early college high school principals employ that influence the academic achievement of students traditionally underrepresented in higher education. Thirteen (13) research participants' responses to leadership style, challenges, and solutions in program planning, development, and implementation with their recommendations yielded sixty themes of practices and strategies employed by early college high school principals. This study's results corroborate the literature on effective educational leadership practices that affect student achievement and inform educational leadership practice for underrepresented student populations in higher education. Implications for further research address the academic needs of other underrepresented student populations in higher education, including students with moderate to severe educational needs, foster youth and homeless youth.

Chapter 1: Introduction

Background

The 21st century has seen a greater political impact on educational policy in American society than at any other time in history (Tichnor-Wagner & Socol, 2016). This political influence has contributed to defining the educational system's role. Through the *No Child Left Behind* [(NCLB), United States Department of Education, 2001) and *Race to the Top Act* [(RTTT) United States 112th Congress House of Representatives, 2011) initiatives, President Bush and President Obama, respectively, influenced the direction of school instruction. For the public and private benefit, NCLB (U.S. DOE, 2001) and RTTT (U. S. DOE, 2011) emphasized goals of (a) equal treatment and access, (b) workforce production, and (c) personal competitive advantage and mobility. Tichnor-Wagner and Socol (2016) state that these goals “advocate for an American education system built to bolster the American economy and personal economic success” (p. 10), connecting education with job preparation and national workforce development to promote America's global competitiveness. In this context, President Bush and President Obama placed emphasis on students' preparation for college and career.

The last reauthorization of the *Elementary and Secondary Education Act* [(ESEA) United States Department of Education, 1965] by President Obama was termed the *Every Student Succeeds Act* [(ESSA) United States Office of Education, 2016]. Since established by President Lyndon Johnson, the ESEA, and its subsequent reauthorizations, is designed to provide equitable educational access to all students for individual educational success. Also intended to ensure all students' educational success, President Obama's ESSA gave States the responsibility to determine the standards by which to hold school districts accountable for equitable access to all students. Particular emphasis focuses on student subgroup populations of racial minorities,

especially Black and Hispanic males, students classified as having special educational needs, English language learners, and those of low socioeconomic status, underrepresented in higher education (Swail, Redd, & Perna, 2003). The ESSA expects that the educational standards implemented by the states coincide with the entrance requirements for credit-bearing coursework at institutions of higher education and that all students are prepared to pursue postsecondary college and future career goals. President Obama's *National Education Technology Plan* (U. S. DOE Office of Education Technology, 2016) aligns with Title IV-A of the ESSA to support States implementation through technology use in K-12 schools.

Title IV of the ESSA specifically addresses student success by improving schools' educational environment and technology use towards students' maximum achievement of digital literacy and academic content. Title IV of the ESSA correlates with the NETP's (U.S. DOE, 2016) focus on creating learning environments, instructional practices, and assessment tools that are technology enabled, which augments learning and pupil engagement with the objective of students receiving a well-rounded education. Through equitable access to academic content, rigor, and digital literacy development, all students will access opportunities to prepare successfully for postsecondary college and future 21st century careers. The NETP (U.S. DOE, 2016), also, connects goals of President Obama's ESSA to future ready learning activities to diminish significant equity and accessibility gaps by tailoring all students' educational experiences using technology-enabled instruction to meeting their individual educational needs.

Expectations for future ready learning practices implemented today are to equip pupils for postsecondary options for college, higher education, and future careers. Readiness for college and career refers to a student's ability to succeed in postsecondary courses without remediation or an entry-level work position with prerequisite skills and foundational knowledge

for success (Conley, 2010). On its website, the Moore County Schools District (n.d.) describes future skills readiness as a student's personal and academic acumen in using technology towards future success. Moore County Schools indicate the areas of skillful personal and educational use of technology involve collaboration with others, creative and critical thinking in solving problems, and global competence interacting with others from varied backgrounds. Also included in Moore County Schools' ideal of personal and academic success is the student's acquisition of financial literacy gained through economic, business or entrepreneurial courses or experiences and civic literacy in relation to personal citizenship responsibilities in a global community. Within the context of 21st century higher education and career readiness towards college and future career success, students must be skillful in using technology.

President Bush and President Obama, respectively, emphasized the importance of developing literacy and critical thinking skills through rigorous academic instruction in math, engineering, science, and technology (STEM) towards preparation for and access to completion of higher education (NCLB, 2001; RTTT, 2011). As a result, States include college and career readiness within their educational objectives for K-12 instruction through Common Core; districts focus curriculum instruction on meeting goals for equipping students for higher education through their *Local Control and Accountability Plan (LCAP)*, and schools develop instructional goals and objectives towards students' college and career development. This emphasis on the American education system's preparation of pupils for college and future careers for the 21st century global economy has produced changes in the instructional content and delivery, the instructional environment and the instructional leadership at the K-12 level (Henke, 2007).

Instructional content. Academic content and instructional practices within the K-12

classroom are to be rigorous in preparation for students' access to higher education and success in future careers. Rigorous instruction underlies a student's capacity to understand, synthesize and apply personally and emotionally challenging concepts (Silver & Perini, 2010). A meta-analysis conducted by numerous researchers identified instructional strategies that promote students' transfer of content knowledge from a surface to a deeper level of learning (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013; Frey, Fisher, & Hattie, 2016; Hattie, 2013; Hattie, Biggs & Purdie, 1996; Lavery, 2008). These strategies include accessing students' prior knowledge, developing vocabulary and comprehension skills for surface content understanding to concept mapping, discussion and questioning, and reciprocal teaching and metacognitive strategies to promote deeper learning. The transfer of content knowledge learning occurs in problem-based projects of inquiry that solve a relevant problem with reading and writing in the academic content discipline to represent formal reasoning, argumentation, and critique. Marzano and Toth (2014) also lists 13 essential instructional strategies that promote rigorous classroom instruction that involve students' processing, elaborating, recording, representing, responding to and reviewing content knowledge.

The core skills also include other competencies. Students must know how to examine similarities and differences, which requires the ability to reason and revise thinking to engage in challenging tasks, mastering skills, strategies, and processes. Currently implemented in the K-12 classroom, these research-based instructional strategies corroborate the focus of K-12 academic content instruction towards students' preparation for higher education and future careers through Common Core and STEM.

Released by the National Governors Association (NGA) and the Council Chief State School Officers (CCSSO) in 2010, the final version of the *Common Core State Standards*

(CCSS) developed consistent standards for all students' preparation for higher education and future careers. Based upon the report, *Benchmarking for success: Ensuring U.S. students receive a world-class education* (2008; Jerald, 2009), CCSS implementation was to "meet the realities of the 21st-century global economy and maintain America's competitive edge" (p. 1). Developed in two phases, the first area of focus was standards for higher education and career readiness; the second area was standards for K-12 instruction in Math and Language Arts that also incorporated the higher education and career readiness standards towards students' preparation for college and future careers (CCSS, 2010). Another critical component of the Common Core Standards in equipping students for higher education and future careers is the development of literacy skills within all academic core content domains of Math, Science, Language Arts and Social Science. Development of literacy skills within all academic content areas facilitates and deepens students' learning towards preparation for higher education and success in future careers (American Diploma Project (ADP), 2004; Hattie & Yates, 2013; Marzano & Toth, 2014). Other skills for students' preparation for higher education and future careers develop through STEM content instruction.

In their individual initiatives, NCLB (U.S. DOE, 2001) and RTTT (U.S. DOE, 2011), both President Bush and President Obama considered STEM content and instruction a means to which students prepare for higher education and future careers for the 21st-century global economy. STEM content instruction in Math, Science, Engineering, and Technology focuses development of critical thinking and innovative, creative skills necessary to fulfill the job positions in the future. The National Research Council (NRC) of the National Research Academies' report, *Successful K-12 STEM Education* (2011), indicates that effective STEM instruction uses students' early experiences and builds on previous knowledge to provide them

with new experiences that engage and sustains their interest in practices of STEM. As a result, the goal of STEM content and instruction is students' provision of a strong foundation in STEM practices of critical thinking, problem-solving scientific method, and engineering design as the basis for future learning in 21st-century employment positions that require such knowledge (English & King, 2015). STEAM incorporates the arts into STEM, adding creativity into the engineering design and redesign of solutions to real-life problems engaged in by students and executed using science, math, and technology. Innovative future ready learning environments that incorporate STEAM instruction promote experiential learning and increase development of critical thinking (Boy, 2013; Lynch, Smith, & Howarth, 2016; McAuliffe, 2016).

Instructional delivery methods advance 21st-century skills developed through Common Core, STEM, and STEAM instruction ("*Benchmarking for Success*," 2009; Boy, 2013; Doe, 2016; English & King, 2015; Jerald, 2008; NRC, 2011). The skills addressed through Common Core, STEM, and STEAM instruction, are critical/computational thinking, communication, collaboration, and creativity. Expectations are that with the implementation of these instructional practices in the K-12 public educational system, teachers encourage and students begin to develop higher-order thinking skills (HOTS), to equip them for the rigor required for postsecondary education that will lead to success in students' future careers. Students' preparation for higher education and future careers should occur through innovative future ready learning strategies that incorporate academic content instruction in a manner in which they typically access information in the world. Current students usually access information in their world through technology where the learning process occurs within and outside of the formal school classroom (Voogt, Erstad, Dede, & Mishra, 2013).

Instructional delivery. Depending on the instructor's comfort level, knowledge, and

expertise, he or she integrates Web 2.0 applications within the classroom at various levels (Buabeng-Andoh, 2012; Davidson, Richardson, & Jones, 2014; Kayalar, 2016; Kumar, Rose, & D'Silva, 2008). Within some classrooms, teachers use technology in a manner that provides web-based content for lectures, reading assignments, or technologically enhanced worksheets coupled with some presentations and demonstrations; students use technology to develop presentations or create writing products. Standard tools are digital projectors and desktop computers (Davidson et al., 2014). Within other classrooms, teachers use technology to support students' engagement with the academic content. Web 2.0 applications allow students to text, blog, and research with peers, mentors, and other experts in their community to problem-solve answers to questions developed through academic content instruction and discussion. The first example presents the teacher in the traditional role of the information deliverer and the student as the knowledge recipient (Koros-Mikis, 2001; McLoughlin & Lee, 2008). The latter example presents the teacher as coach and advisor to assist students in the deeper learning of the academic content. The former manner of instruction, more appropriate for teaching in the 20th century where the teacher has access to greater knowledge than students, is insufficient for 21st century students (International Education Advisory Board, n.d.)

Called Millennials, students currently within the 21st -century classroom were born between 1980 and 2000 (Redecker, 2009). In its report, *Learning in the 21st century: Teaching today's students on their terms*, the International Education Advisory Board (IEAB) presents Millennials as having characteristics that reflect their constant access to and saturation with information through technology. Millennials prefer having control, making choices, being group oriented, social and inclusive. Always exposed to technology, they are able users and like to communicate using technology. They are risk takers and enjoy use of their own time; they take

time off and live, as they want. Educating Millennials, differing in characteristics from the majority of those who teach them, requires current teachers to employ innovative instructional practices in students' preparation for higher education and future careers [International Education Advisory Board (IEAB), n.d.].

Redecker (2009) examined practices and reported the value of using Web 2.0 and ICT's in Europe's educational environment. Findings indicated that 21st-century students think non-linearly and visually, preferring multimedia environments and requiring many types of stimuli. Consider their engagement with video games; they process learning by what they see, and they can see in many directions, simultaneously. Students prefer being social and connected with their peers. They use learning resources that suit their individual needs for the moment, and they will construct personal meaning from information, testing and gathering and trying new ideas to satisfy their personal goals.

Instruction delivery within the 21st-century K-12 classrooms must address the needs of students for 21st-century careers; they think differently (Prensky, 2001a). According to the literature, students in the 21st century require learning to be relevant to the practical application of the information that they are receiving and as information is readily available, they are not interested in learning everything at once (International Education Advisory Board, n.d.; Pacific Policy Research Center, 2010). Therefore, 21st century classroom instruction must include technology use. Additionally, the presentation of academic content must be personalized and experienced as relevant and useful within a social context. Whereas innovative instructional practices include project-based learning, gaming, Maker Lab and blended learning flipped classrooms, the *Common Core State Standards* are the foundation of content upon which to build competencies in innovative future ready learning towards students' preparation for future

careers.

The *Common Core State Standards* place emphasis on instruction in two specific core content areas, Math and English, and literacy development in all academic subjects (English, Math, Science and Social Science). The English/Language Arts standards focus on development of reading, writing, listening and speaking skills; Mathematics standards emphasize skill development in the demonstration and explanation of the processes of problem solving. Within *Common Core* instruction, students critically analyze academic content, verbally and in written form, using content vocabulary; within STEM and STEAM education, students develop critical thinking in the application of solving personally significant problems. Common Core, STEM, and STEAM instructional content promote the development of needed skills and knowledge for 21st-century higher education and future careers [Partnership for 21st Century Learning – (P21.org), 2007]. Facilitated and enhanced through technology use, Common Core, STEM and STEAM content instruction uses technology in the familiar ways students acquire and access information, and learn outside of the current classroom environment (Trilling & Fadel, 2009). Information and communication technologies (ICT's), Web 2.0 and emerging Web 3.0 technologies' usage continue to affect the 21st century classroom environment for greater student engagement and interactivity. Within an interactive and engaging environment, the student actively participates in learning and the teacher becomes the instructional coach, which are the foundational aspects of innovative future ready learning pedagogy.

Literature suggests that some view innovative teaching as instruction that uses information technology in participatory and collaborative ways. Innovative instructional practices engage students in learning, creating and communicating knowledge in the real world outside of the classroom (Koros-Mikis, 2001; McLoughlin & Lee, 2008: McLoughlin & Lee,

2012). Innovative instruction provides students with immediate feedback from the teacher coach, creating an atmosphere of student engagement and participation and facilitating interactive collaboration and product development, necessary skills for students' preparation for college and career.

As students receive academic instruction that engages the use of technology for 21st century learning, changes within the school environment also provide students with more academic content options in preparation for college and career. Currently, innovative pedagogy affects the K-12 instructional environment through the blended learning classroom, flipped classroom and Maker Lab. President Obama's NETP (U.S. DOE, 2016) is a national effort to ensure students' future career readiness through future ready learning through technology (U.S. DOE, 2016).

Addressed to anyone involved in education including teachers, administrators, policy-makers, and others who impact the educational process of students' future ready learning through technology, the U.S. NETP (2016) proposes that technology provides the means for students to learn anywhere and at all times. Therefore, the U.S. NETP (2016) supports innovation in "learning and teaching... providing greater equity and accessibility" (p. 1). The U.S. NETP (2016) transforms learning towards students' future career readiness through technology within a robust learning environment.

School instructional environment. Another change in the educational landscape is the opportunity students have in making a choice regarding the environment in which they learn. Options of the school environment in the 20th century included a public school for most and private schools for the few. Today's school environment options include a multitude of learning environments from private to public and home-schooling (Egalite & Wolfe, 2016). A significant

change in public school choice is the emergence of the charter school as an alternative to the traditional private and public school options (Convertino, 2016).

The report, *A Nation at Risk* (U.S. DOE, 1983), recommended restructuring schools by providing a professional teaching environment that allowed schools to decide how to “best meet state and local goals for children” (United States National Commission on Excellence in Education, 1983, p.3) while maintaining their accountability for students’ academic progress. As a response, the idea for charter schools developed and by 1991, Minnesota established the first charter law and opened the first charter school. Major characteristics that distinguish charter schools from traditional public schools include a greater level of autonomy, an alternative governance structure and an established accountability, contingent with the authorizing school district (Convertino, 2016). Charter schools can be private, independent of or interdependent on its authorizing agency. Due to its structure, charter schools have more autonomy to use innovative future ready instructional practices to prepare students for higher education and future careers.

Two types of charter schools that work directly with the local community college towards students’ access to higher education and future career readiness are college high schools and dual enrollment high schools. Early college high schools are one type of charter school that directly develops collaboration between the local community college and high school for students’ successful preparation to enter college. The dual enrollment high schools are public charter schools or district high schools, in which secondary school students can earn college credits towards completion of an associate’s degree in a community college prior to high school graduation (California Department of Education, 2017; Jobs for the Future, n.d.). Despite the type of school in which a student receives instruction, the instructional leader, the administrative

executive or the school principal significantly affects students' successful preparation for higher education and future careers (Alvoid & Black, 2014).

K-12 school leadership. School leadership in the 21st century school system can take many forms. A chief executive officer/administrator or school principal is not the only option in the 21st century school environment. Another type of school leadership is the teacher-led school that gives executive decision-making authority to a group of teachers. However, regardless of the form of school administration, the school principal or entity acting in that position holds the responsibility for the quality and implementation of the school's instructional program (Alvoid & Black, 2014).

Due to current changes in instructional content, instructional delivery using technology, instructional accountability, and school environment options that adequately prepare students for success in college and efficient acquisition of a career, school leadership in the K-12 education system carries tremendous responsibility (Richardson, Specker, Hollis, & McLeod, 2016). As President Bush and President Obama indicated in their respective initiatives, NCLB (U.S. DOE, 2001) and RTTT (U.S., 2011), the expectation of the education system is to prepare students for access to 21st century skills for individual benefit and for national workforce development to increase America's global competitiveness. In this context, principals must ensure students' equal access towards entering the workforce with a competitive advantage and mobility ability U.S. NETP (2016). Therefore, school administrators are not only required to maintain ongoing school operations of the educational program they supervise. As the instructional leader, they also need to be forward thinking in their instructional program administration to ensure students have access to instructional content and delivery within a school environment that successfully prepares students for the subsequent level of instruction and their future college and career

choices.

According to Pierce and Fenwick (2002), a school principal is required to wear multiple hats and fulfill various roles. In the performance of their responsibilities as the school instructional leader, school administrators must have and maintain the school's vision, be a servant leader and instructional leader. They must advocate for the needs of the students while negotiating needs of teachers and politicking with community leaders. They must also work with the school and neighbor communities to ensure that resources are appropriately monitored and allocated towards student instruction. Among these responsibilities is ensuring students' ability to graduate secondary education with the prerequisite skills required for college and career.

With these multiple school leadership roles, the school instructional leader/principal must continue to focus on the vision of ensuring students' preparation for postsecondary higher education towards future careers. The school principal must ensure that the instructional program contains the required content and proper implementation of innovative instructional practices towards students' preparation for higher education and future careers. The school principal must also determine which type of educational program would best prepare students for higher education and future 21st century careers. Despite numerous duties, the ultimate responsibility of the school leader is to prepare students for the next level in life, be it higher education or an immediate career (Alvoid & Black, 2014; Hitt & Tucker, 2016; Painter & Wetzel, 2005; Richardson et. al, 2016).

There are many expectations of a school instructional leader, the school principal administrator. His or her ultimate responsibility is the education of students on his or her campus to ensure academic success towards future goals in college and career (O'Donnell & White, 2005; Sergiovanni, 1998). Despite the challenges of choosing the appropriate

instructional curriculum and implementing effective instructional strategies, private schools, public schools, and charter schools are closing gaps in students' preparation for higher education and future careers. With available resources, instructional leaders focus on preparing all students, underrepresented students, first-generation students, and students from low-income families, students with exceptional learning needs and learners of the English language, to enter college on pathways to preferred careers after high school graduation. Within the school environment, innovative instructional strategies and pedagogy provide instructional access to address the needs of underrepresented student populations in preparation for higher education and future careers (Baber, Castro, & Bragg, 2010; Jones & Weigel, 2014). Within the educational setting, there are leadership characteristics that best equip teachers and staff in implementing instruction within the school environment that prepares students for higher education and future jobs (O'Donnell & White, 2005; Schrum & Levin, 2016). Explored in the context of this study are ways in which school principal leadership styles influence the implementation of best practices towards students' preparation for higher education and future careers.

Statement of the Problem

Although improvements made, the current implementation of K-12 public instruction has not significantly produced the results indicated by the goals stated in recent presidential initiatives. The intent of these initiatives was to produce students who are knowledgeable and skilled in preparation for college and career towards becoming successful leaders in the current global economy. The National Governors' Association report, *Benchmarking for success: Ensuring U. S. students receive a world-class education* (NRC, 2011), states that nations are racing to develop economies based on knowledge generated innovation. As a result,

globalization connects student success to the ability to contend with others in the knowledge-based 21st century world economy. Additionally, the *American Diploma Project* report (Achieve, 2004) indicates students graduating from high school are ill prepared with the mathematical ability essential to succeed in college and career (Cohen, 2008) and personal abilities to successfully engage life after graduation from high school, whether in college or through college into a career (Hitt & Tucker, 2016; O'Donnell & White, 2005; Johnston & Williamson, 1998).

Finally, the Secretary of Labor's Commission on Achieving Necessary Skills (SCANS, 1991) report determined that half of the students leaving secondary school did not have the knowledge and expertise to "find and keep a good job" (p. i). Validation of government initiatives addressing K-12 education instructional practices that ensure student success has not occurred. The United States Census Bureau data (United States Patent and Trademark Office, 2012) indicate a significant increase in job earnings of those who complete a college or professional degree as compared to their peers who only complete a high school education. However, improved use of research-based instructional practices have not resulted in the overall success of students' preparation for postsecondary endeavors.

Organizational reports, *A nation at risk: The imperative for educational reform* (Gardner, Larsen, Baker, Campbell, & Crosby, 1983), and the *SCANS report* (United States Department of Labor. Secretary's Commission on Achieving Necessary Skills, 1991), have focused attention on inadequacies in the United States public K-12 instruction, in students' preparation for college and career. Government initiatives, NCLB (U.S. DOE, 2001) and RTTT (U.S. DOE, 2011), have provided direction and support in addressing and alleviating these deficiencies. However, significant changes in the K-12 public education instructional content, instructional delivery

using technology and school environment have not ensured students' equal access towards entering the workforce with a competitive advantage and mobility for students traditionally underrepresented in higher education. The Partnership for 21st Century Skills report, *The Intellectual and Policy Foundations of the 21st Century Skills Framework, 2007*, references the *SCANS* (U.S. Department of Labor, 1991) report in stating that schools have made efforts in response to research data and government initiatives to prepare students for postsecondary endeavors. However, schools continue to use instructional practices and delivery methods implemented over 100 years ago due to the absence of consistent and clear guidance (Partnership for 21st Century Skills, 2007). In the 21st century, students' need for postsecondary skill development is much different from that of the past. Additionally, through their respective LCAP, schools face a higher accountability for students' individual success in graduating high school and entering college towards preparation for a career (Bae & Darling-Hammond, 2014).

Purpose Statement

Current students require academic instruction using current technologies that emphasize their preparation for college and personal career opportunities, towards mobility in today's global economy. Inconsistencies exist in instructional content, delivery, and school environment that do not prepare all students for college and future careers, especially those from the under-represented group in higher education (U.S. NETP, 2016; Marzano & Toth, 2014; Conley, 2007). One area of inconsistency exists in teachers' lack of preparation and professional development in the effective use of educational technology. Another is the district support given to teachers' implementation of technology-enriched instruction. A third is the amount of instructional rigor given to students in preparation for higher education and future career readiness. A fourth is the focus given to developing the academic, technological, and personal

abilities students require for higher education and future career preparation. The school principal, as the primary instructional leader in America's K-12 education system, is responsible for the school's instructional program, content delivery and school environment that prepare students for college and career (O'Donnell & White, 2005). Accordingly, this study's purpose is to determine:

- The best practices and strategies high school principals employ, ensuring students' college and future career preparation.
- The challenges high school principals face in implementing effective college and future career readiness programs.
- How high school principals measure success in programs for students' preparation for college and future career.
- Recommendations high school principals have for implementing college and future-career readiness programs.

Research Questions

Addressed in this study are the following research questions.

Research Question 1: What best practices and strategies do high school principals employ to determine students' college and future career preparation?

Research Question 2: What challenges do high school principals face in implementing effective college and future-career readiness programs?

Research Question 3: How do high school principals measure success in college and future-career readiness programs?

Research Question 4: What recommendations do high school principals have for implementing college and future-career readiness programs?

Significance of the Study

Compulsory education for students in the United States ends in high school. (Compulsory Education Laws, 2013). Therefore, the secondary campus is the last environment of formal education required within the American school system that may influence a student's postsecondary college and future career preparation and success. Subsequently, the secondary school principal, as a student's last compulsory education leader, positively or negatively affects a student's educational direction towards higher education and future careers. Only second to teachers' direct influence on student academic achievement, the school administrator can indirectly affect instruction that provides the high school pupil with the academic competencies and personal abilities to successfully engage life after graduation from high school, whether in college or through college into a career (Hitt & Tucker, 2016; O'Donnell & White, 2005; Johnston & Williamson, 1998.).

Students' preparation for college and career is a right to an education that prepares them for future employment as implied by the 14th Amendment to the Constitution. The 14th Amendment provides everyone equal protection under the law that includes the pursuit of opportunities for life, liberty and property [League of Women Voters, (LWV), 2011] and is a vital aspect of the education system in America since its beginnings (Labaree, 2014). Students' college and future career readiness, also, affects America's ability to compete in the current global environment with a skilled and educated workforce (NCLB, 2001; U.S. NETP, 2016; RTTT, 2011). Subsequently, expectations for this study's findings are to determine the best practices in high school principal leadership styles that affect instructional program implementation to yield a successful pathway for students' preparation for postsecondary education and transition into a future career.

21st century policy affects education through school objectives and goals that focus on students' knowledge acquisition and skills development for postsecondary college and future career readiness (NCLB, 2001; U.S. NETP, 2016; RTTT, 2011). However, usually exhibited by a one-size-fits-all implementation, the practices that develop students' college and career readiness on the secondary school campus is often lacking due to a "one-size-fits-all college readiness agenda" (Barnes & Slate, 2013, p. 2). A one-size-fits-all way of addressing students' college and career readiness skills and knowledge development supports students from households with incomes that fall within the middle and upper-middle range and who obtain high scores on standardized tests (Barnes & Slate, 2013) and are prepared to attend college at a four-year university. However, students from households with low socioeconomic status (SES) and of diverse backgrounds perform inadequately compared to their more advantaged peers on standardized tests and lack similar preparation for college and career. Therefore, students from low SES and of diverse backgrounds are more disadvantaged and less prepared for entrance into college or quality employment (Barnes & Slate, 2013).

Students from special education, low SES, of different cultural backgrounds and without a family history of college are those considered disadvantaged and underrepresented within higher education student populations (Aud, Fox, & KewalRamani, 2010; Engle & Tinto, 2008). The one-size-fits-all manner of addressing these students' college and career preparation is not a viable solution as is implemented on the current high school campus with the focus on standardized test scores as a basis for college entrance (Barnes & Slate, 2013). Students from diverse backgrounds and of low SES require options for postsecondary success in college and career following a pathway that may not immediately access entrance into a four-year university as the current focus of college and career programs based upon results of standardized test scores

and reflective of middle to upper SES. There is a disparity between high school instruction in affluent areas and poorer neighborhoods in students' preparation for college and career readiness (Venezia & Laeger, 2013).

On current secondary school campuses, there is a focus on students' college readiness through NCLB (U.S. DOE, 2001) and RTTT (U.S. DOE, 2011). Students prepared with the personal skills and academic knowledge to matriculate to a four-year university have the support to transition to postsecondary college and careers successfully. However, required is the consideration of the individual needs of traditionally under-represented student populations' successful postsecondary transition to college as it informs their future-career choices. Under-represented student populations who have personal aspirations for college and career require "more clearly-focused pathways to their chosen career" (Barnes & Slate, 2013, p. 7) with the completion of desired goals that may require taking a different route than immediately going to a four-year university. As a result, current research has left a gap in addressing the college to career needs of under-represented student populations' and the school leadership's role in their preparation for postsecondary education.

There are many opportunities in handling the issues of under-represented students in preparation for postsecondary education and future-career. First, there is an opportunity to develop curriculum to address how to provide a succinct and focused pathway to under-represented student populations for college and career access that meets their individual needs. Second, there is also the possibility to write a book on best practices and implementation of these towards under-represented student populations' college and career preparation. Next further research may inform the specific instructional and environmental factors that affect students' college and future career readiness. Additionally, in recognition of the needs of under-

represented students' preparation for postsecondary education and future careers, there is an opportunity to assist school districts in professional development training for current school leadership in effective practices. Finally, it would benefit the cause of under-represented students' success in preparation for higher education and future careers through teaching within teacher and administrative educational programs. Current programs do not emphasize development of teachers and administrators' knowledge and implementation of best practices in preparation for students' higher education and future career success, particularly for under-represented student groups, as one-size does not fit all.

Assumptions

The key assumptions of this study are:

1. Charter schools demonstrate the best practices in implementation of programs towards all students' preparation for college and career.
2. Charter schools have a greater success rate in students' preparation for college and career.
3. High school principals ensure the instructional content; instructional delivery and a school environment prepare students for college and career.
4. A specific school environment exhibits certain instructional practices that promote students' college and career readiness.

Limitations

This study's key limitations are:

1. Affiliated with the Early College High School program, the purposeful sample is comprised of charter high school principals located in California.
2. This study does not include any other charter schools located in California.

3. Generalizability of the findings is limited.
4. Research participants will be intentionally selected which may not reflect the interpretation of results to a larger population (Brancheau, Janz & Wetherbe, 1996).
5. The researcher possesses professional and personal experience as an administrator in K-12 education.

Definition of Terms

- *Andragogy* refers to how an adult student learns as reflected in adult student learning (Knowles, 1973).
- *Authentic learning* refers to the large variety of educational and instructional practices that make learning relevant by connecting student learning to making applications and solving problems within the context of real life issues (Glossary of Education Reform, 2013).
- *21st century skills* refer to the key set of skills of communication, critical thinking, creativity and collaboration (Soule & Warrick, 2015).
- *Best practice* refers to the extensive range of activities, practices and policies that may or may not be research based that produce positive outcomes in student attitude and academic behavior. (Educational Opportunity Association (EOA) National Best Practices Center, 2016)
- *Charter school* refers to a public school that functions under contract (charter) between the school and its authorizing agency, state or school district. [United States Department of Education, (NCES), 2016b]
- *College and career* refers to the ability of a student to succeed in postsecondary courses

without remediation or an entry-level work position with the prerequisite abilities and knowledge to be successful (Conley, 2010).

- *Common core* refers to high-quality measures in mathematics instruction and academic literacy acquisition (National Governors Association Center for Best Practices & Council of Chief State School Officers. *Common Core State Standards*. Washington, DC: Authors, 2010).
- *Connectivism* refers to the process of creating networks of collaboration for purposes of fostering communication and dialogue (McLoughlin & Lee, 2008).
- *Early college high school* refers to an independent school site that blends secondary school and the first two years of college into a comprehensive and coherent educational program (Jobs for the Future, n.d.).
- *First generation college student* refers to one whose parents have less than a secondary school education (Pascarella, Pierson, Wolniak, & Terenzini, 2004).
- *Future ready learning* refers to technology-enabled educational instruction, teaching practices and assessment tools (United States Department of Education Office of Education Technology, National Education Technology Plan, 2016).
- *Future ready skills* refer to those personal and academic skills required to be successful in future individual endeavors. (Moore County School District, n.d.)
- *Globalization* refers to the interconnectedness and interdependence of world economic systems in regards to commerce, the transfer of capital, goods, and services (Schiller, 2013).
- *Heutagogy* refers to an instructional approach in which the student directs his/her learning (Hase & Kenyon, 2007)

- *Innovative pedagogy* refers to an instructional approach that creates innovation in the manner of knowledge assimilation, production and usage (Kairisto-Mertanen, Rasanen, Lehtonen, & Lappalainen, 2012).
- *Information and communication technology (ICT)* refers to technologies that fulfill communications functions through information processing (Kivunja, 2014).
- *Linked learning* refers to a programming language also used as a philosophy of education (Papert, 1999).
- *Pedagogy* refers to instruction that is teacher centered (Smith, 2002).
- *Pedagogy 2.0* refers to an instructional practice that connects learning outcomes to use of Web 2.0 and information and communication technology (McLoughlin & Lee, 2010).
- *Project Based Learning* refers to any program or instructional approach that engages students in multilayered projects as central to their academic education (Glossary of Education Reform, 2013).
- *Rigor* refers to the ability to use higher order critical thinking skills to solve complex problems (Marzano, 2014)
- *Soft Skills* refers to personal and interpersonal skills that enable someone to communicate effectively interact harmoniously with other people. (Greenberg & Nilssen, 2015)
- *STEAM* is an acronym for instructional focus in the sciences, computer technologies, engineering practices, artistic applications and math functions. (Education Week, 2014)
- *STEM* is the acronym for the applied and integrated focus of instruction in the areas of science, technology, engineering and math (Education Week, 2014)
- *Web 2.0 or social computing* refers to ways in which technology uses to collaborate, share and interact with others (Redecker, 2009).

Organization of the Chapters

This study's organization is in five chapters. Chapter 1 introduces the study's topic and problem, presents the purpose of the study and identifies the four research questions. Additionally, this chapter reviews the significance of the study, including assumptions and limitations with the principle terms defined. Chapter 2 examines the relevant literature of the study. The literature review includes the development of research-based 21st century instructional practices, instructional delivery methods, and school environments that support students' college and career preparation. The literature review also analyzes the type of school legal structure that facilitates the opportunity to implement instructional practices for college and career readiness. Also, Chapter 2 examines the leadership style of high school administrators that promotes students' preparation for college and career. Chapter 3 restates the research questions and the research design and approach, with a description of the population, data gathering procedures, plans for IRB approval, and the data analysis process. Chapter 4 analyzes the study's findings, and Chapter 5 summarizes the study based on the findings, including recommendations for next steps and future implementation.

Summary

The school principal is essential to the outcome of students' readiness for college and career as indirectly responsible for students' achievement, second only to the classroom teacher (Hitt & Tucker, 2016). The principal, as the instructional leader, ensures that instructional practices in content and delivery within the school environment best addresses the educational needs of all students' academic development, providing them with the opportunities to gain experiences that successfully prepare them for college and career. As focus continues on students' preparation for jobs in the 21st century, towards being globally skilled, the demands on

the school administrator increase. The 21st century school administrator is to ensure students' equitable access to instructional content and practices towards skills development that prepare them for college and entry into a career that provides an opportunity for mobility in the global economy. Preparing students for college and career requires more than just providing academic instruction. Preparation for students' college and career readiness requires the implementation of instructional practices as determined by the principal leadership that will also develop the soft skills, organization, time management skills, etc. needed for students' success after graduating from high school. The school principal's failure to ensure all students' equitable access and successful entry into a college and a career can negatively affect the students' lives economically and socially, especially for currently underrepresented student populations in higher education. Students' lack of preparation for college and career also affects American society in total in a lack of a skilled and educated workforce to meet the job demands expected in the years ahead. It is critical to recognize the best practices in school principals' leadership in the programs that they implement in preparing students for college and career, not only graduation from high school.

Chapter 2: Literature Review

Since the inception of the United States as a nation, one primary focus of its development was “an educated citizenry to protect liberty and the general welfare of the people” (League of Women Voters [LWV], 2011, p. 1). Although the United States Constitution does not explicitly state that the federal government is responsible for education, the “general welfare” segment in Article I, Section 8 of the Constitution grants authority to Congress to aggregate taxes to support education. Additionally, the 14th Amendment deprives no person of life, liberty, and property and equal protection of the law for all citizens (LWV, 2011).

The states and local government, specifically, received the responsibility for the public education of the people of the United States. State and local government have the responsibility of starting schools and colleges, forming curriculum and deciding enrollment and graduation requirements (United States Department of Education, 2016a). Therefore, since the beginning, American government involvement ensured the success of the education of its citizens through the avenue of instructional practices used in its public school system. Historically, the American government has also used the school system in ways that ensured its stability and growth (Labaree, 2012). Political and economic societal factors have influenced the direction of instruction within the American system. Therefore, there exists the balancing of two objectives: the education of its citizens and the maintenance of its national stability and growth.

Early History

There were three periods of school growth in the development of the American education system. The education policies implemented during these three periods focused on developing a balance between two goals: the education of its citizens and the perseverance of the American

government. The early stages of education development in the American school system were the Common Period, the Progressive Period and the Modern Period (Labaree, 2012).

The Common School Period (1840-1880) consisted of students taught by an individual having received a formal education in the instruction of children. Considered as a qualified teacher, this individual instructed students in a small, single, community classroom, called the one-room schoolhouse. According to Labaree (2012), the one-room schoolhouse or the common school played a critical role in “institution building” (p. 145), facilitating America’s continued growth and establishing the basic structure of American education with the political rationale for its existence during the Common School period. The Common School “inducted the populace into the new social order” (p. 146), to “construct a new citizen for the republic” (p. 145). The Common Schools provided public education for the national welfare, a continuing theme in America’s school system development.

Significantly influenced by business practices of the era was the next period of public education, the Progressive Period (1880-1920) [University of Notre Dame, 2004]. This period consisted of schools operating like well-operated factories of the Industrial Revolution. Teachers were factory workers; students were the raw material. During this time, the instruction also focused on assimilating a large number of immigrants entering the country to the language and social expectations with the objective of becoming productive citizens (University of Notre Dame, 2004).

As immigrants entered the country, they required the skills necessary for employment in the factories that existed and were growing. They needed instruction in learning the English language to understand the process needed to obtain and keep a job. They also required education in what were the societal norms for living in the United States. Therefore, the

educational system, which included the K-12 and the adult community colleges, focused on ensuring their students were successfully prepared to work as new citizens of their new country (University of Notre Dame, 2004). According to Labaree (2012), with the influx of immigrants from Eastern and Southern Europe, the government had the challenge of addressing problems that included a growing corporate economy, increasing inequality, irate labor relations and accelerated city growth. The school system assisted in helping address these problems by providing skills development in reading, writing, and general knowledge about the physical and social world. During these early periods of America's education system development, the school was the most accessible means of a shared experience of learning.

Modern Period

The Modern period of education (1920-present) consists of numerous educational reforms that have increased the involvement of the federal government in public school education. These changes include federal aid to schools through a variety of legislative acts. These laws were the *Elementary and Secondary Education Act* (U.S. DOE, 1965), the *Education of All Handicapped Children Act* (United States National Education Association, 1978), *A Nation at Risk: The Imperative for Educational Reform* (United States National Commission on Excellence in Education, 1983), and *Goals 2000: Educate America Act* (United States Department of Education, 1994). Every four years, reauthorization of the ESEA by Congress intends to address the needs of under-represented individuals in the education system. In December 2015, President Obama signed its most recent reauthorization, the *Every Student Succeeds Act* [(ESSA) U.S. DOE, n.d]. In its last update in 1994, Congress also reviewed PL 94-142 which attends to meeting the educational program needs of students with disabilities. Finally, *A Nation at Risk* (U.S. National Commission on Excellence, 1983), with focused

attention on teaching and learning in America's public and private schools as compared to schools in other nations, studied the correlation between high school and postsecondary college success. The study also examined the degree to which current societal and educational changes affect student achievement. *A Nation at Risk* (U.S. National Commission on Excellence, 1983), also, defined the problems to overcome to pursue the course of excellence in education and continues to be used as the foundational report that focuses current reforms in education such as *No Child Left Behind* (2001) and *Race to the Top* (U.S. House of Representatives, 2011). These Modern Period changes continue as the foundation of current federal policies that directly influence the United States institution of public education, especially at the K-12 level.

Recent History

The United States government has increased its involvement in the American education system by developing initiatives that directly influence policy and practice within the K-12 public school system to prepare students for postsecondary life, career, and citizenship (Kivunja, 2014). Subsequently, statistical evidence shows government interventions have progressively improved the quality of K-12 public school instruction, overall [(NCES) U.S. DOE, 2016b]. However, Soule (2015) states that our present system has addressed “the needs of an industrial economy operating on an agrarian calendar” (p. 178); it “must be redesigned to support the global, information-centric, and technology-infused reality of the 21st century” (p. 178). Implementation of instructional practices that develop students' higher education and future career readiness in academic and social skills for use in a global economy has not occurred at a pace required to keep up with global changes (United States. Department of Labor. Secretary's Commission on Achieving Necessary Skills, SCANS, 1991; Soule & Warrick, 2015). Subsequently, the concerns shown by most recent presidential initiatives led to the development

of comprehensive programs to ensure student success through instructional practices implemented in the K-12 public school system.

The *Condition in Education Report* by the National Center for Education Statistics (US. DOE, 2015) reports that during the 2011-2012 school year, high school graduation rates improved to 81% among the 50 million students in the K-12 system. Also, the dropout rate for secondary school students declined from 11% in 2000 to 7% in 2013; postsecondary education undergraduate enrollment was 17 million and graduate level enrollment was 3 million (NCES, 2015). See Figure 1.

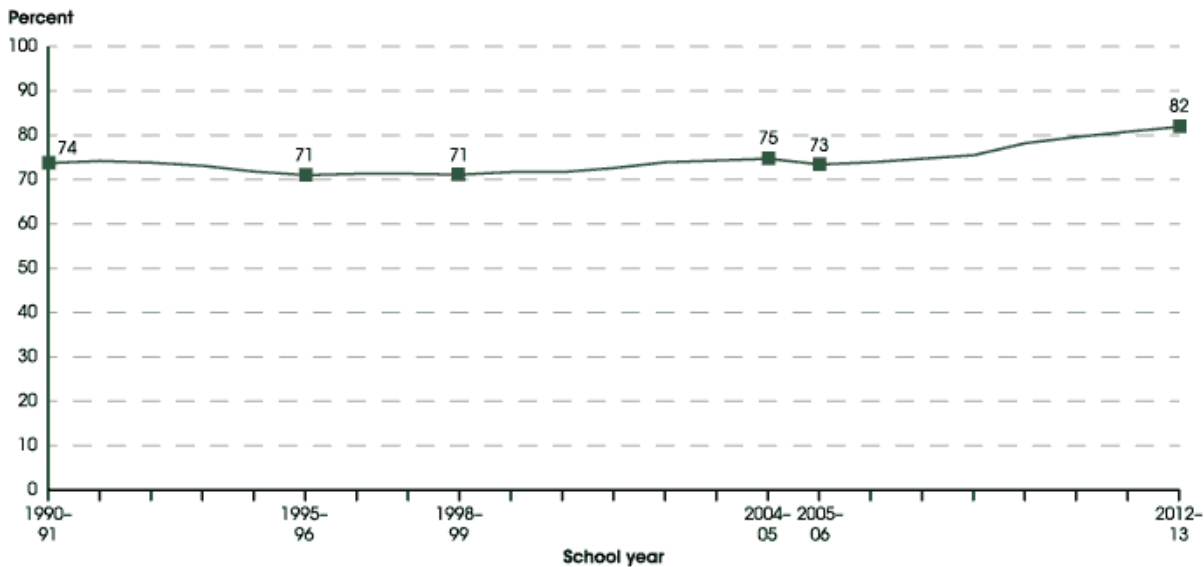


Figure 1. Secondary school completion data.

Source: U.S. Department of Education., National Center for Education Statistics, Common Core of Data (CCD), "State Non-fiscal Survey of Public Elementary/Secondary Education," 1986-1987 through 2009-10; "State Dropout and Completion Data File," 2005-06 through 2012-13; Public School Graduates and Dropouts From the Common Core of Data, 2007-08 and 2008-09. See Digest of Education Statistics 2015, table 219.10.

There are improvements in K-12 public education as evidenced by decreased secondary student dropout rates and increased graduation rates. However, students are significantly under-qualified with the necessary skills for success in the rigor required in postsecondary higher

education classes or an entry-level work position (Conley, 2010; Venezia & Jaeger, 2013).

Subsequently, there is a consistent pattern of focus on the instruction of students by government followed by financial resources to implement necessary changes to ensure student success.

The United States ranks as one country with the largest amount of money provided per student's education in the K-12 public system (National Center for Educational Statistics, 2016). The Department of Education reports \$621 billion spent on K-12 public education during the 2011-2012 school year (NCES, 2015) with \$11,841 spent per elementary and secondary student in the United States. This figure is 35% greater than the average amount of \$8,789 spent on education per pupil by other countries as reported by the Organization for Economic Cooperation and Development (OECD, 2014). See Figure 2.

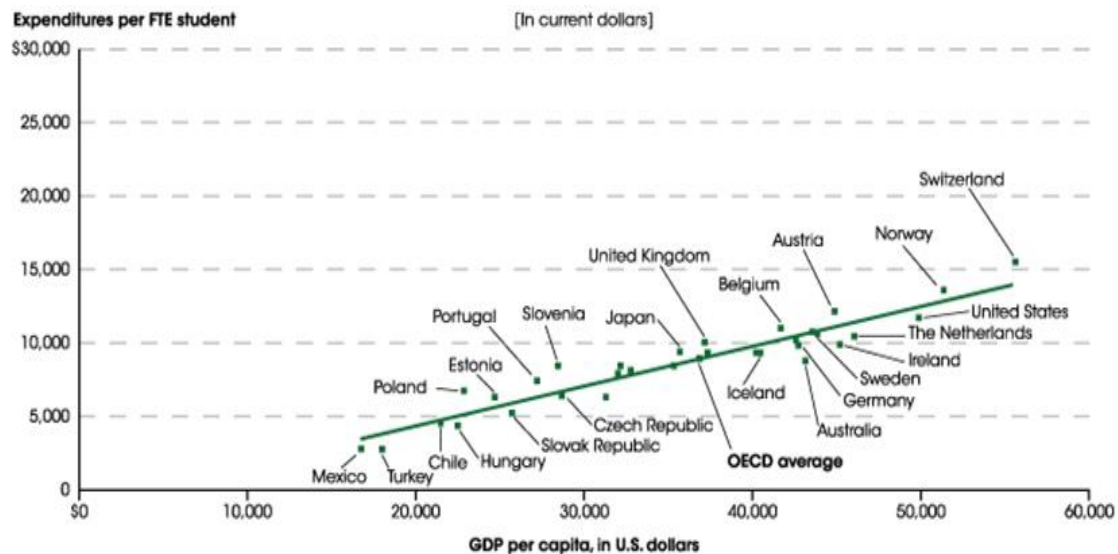


Figure 2. Expenditure per student.

Source: Organization for Economic Cooperation and Development (OECD), Education at a Glance, 2015. See Digest of Education Statistics 2015, Table 605.10.

However, the current implementation of K-12 public instruction has not produced the results indicated by the goals stated in recent presidential initiatives. Students continue to lack

the knowledge, skills, and experience needed for successful leadership in higher education and future careers in the current global economy (Bromberg & Theokas, 2016; Conley, 2010).

Therefore, the government continues to establish policies that influence the success of the public school system in its students' instruction.

The *Benchmarking for Success: Ensuring U.S. Students Receive a World-Class Education* (2008) report states that nations are racing to develop “knowledge fueled” (p. 5) economies based on innovation. The effects of globalization have connected student success to their ability to contend with others in the knowledge-based 21st century world economy. In addition, the American Diploma Project (Achieve, 2004) indicates students graduating from high school are ill prepared with the academic ability in mathematics essential to success in college and career. Finally, the *Secretary of Labor’s Commission on Achieving Necessary Skills* report, (SCANS, 1991), concluded that half of the students leaving high school did not have the knowledge and expertise to “find and keep a good job” (p. i). United States Census Bureau data (U.S. Patent and Trademark Office, 2012) indicate those who obtain a college or professional degree have a significant increase in employment earnings as compared to peers who only complete a high school education. See Figure 3.

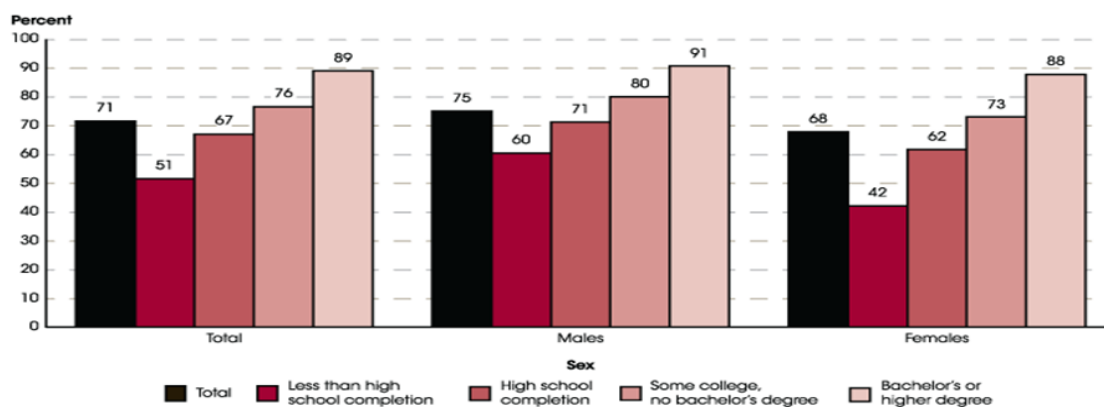


Figure 3. Unpublished annual average data from the current population survey (CPS), 2015. Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics. See Digest of Education Statistics 2015, Tables 501.50, 501.60, and 501.70.

Organizational reports, *A Nation at Risk* (U.S. National Commission on Excellence, 1983) and *SCANS* (U. S. Department of Labor, 1991), focus on inadequacies in the United States public K-12 instruction, in students' preparation for higher education and future careers. Government initiatives, *NCLB* (U.S. DOE, 2001) and *RTTT* (U.S. DOE, 2011), have provided direction and support in addressing and alleviating these deficiencies. However, significant changes in K-12 public education instruction have not occurred. According to *SCANS* (U.S. Department of Labor, 1991), schools have made efforts in response to research data and government initiatives to prepare students for postsecondary endeavors. However, due to "inconsistencies and lack of clear guidance" (p.4) schools resort to using instructional practices and methods implemented over 100 years ago (*Partnership for 21st Century Skills*, 2007). Students' current needs for postsecondary college and career preparation are very different from those of the past, especially for those students currently underrepresented on campuses of higher education.

The last two presidential administrations have directly involved the federal government in policies and practices affecting public K-12 education. President Bush enacted *NCLB* (U.S. DOE, 2001) to ensure students would reach a level of proficiency in numeracy and literacy before graduating high school. The objective of President Obama's *Race to the Top* (U.S. DOE, 2011) was to affirm, financially, schools that use innovative instructional strategies. Use of creative teaching strategies expected to result in an increase in school capacity for implementation of educational practices for improved academic outcomes towards students' successful preparation for higher education and future careers. Additionally, President Obama's *U.S. NETP* (2016) encourages the use of technology for student instruction and assessment providing equity of access for college and future careers preparation. Technology use is

mandatory as the foundation of innovative instructional practice within America's schools in the 21st century in students', especially those disproportionately represented in higher education, preparation for college and future careers.

Current Implications for First Generation College Students

Conley (2014) indicates that those who are first in their families to attend college and under-represented student populations would benefit from the particular academic expertise and experiential skills required for college and career preparation. The first-generation college student who enters college without the experiences of others in their families having done so are at a significant disadvantage in three areas (Pascarella et. al., 2004). First, students who are first in their families to attend college lack basic knowledge of higher education costs, degree areas, course expectations and academic preparation. Second, they have not developed the transition skills required to overcome feelings associated with going to college, which may involve African American and Hispanic ancestry have a disproportionate likelihood of failure in degree completion [National Center for Education Statistics (NCES), 2010; National Postsecondary Student Aid Study (NPSAS), 2012)]. Students under-represented in higher education require innovative instructional pedagogy enhanced through technology for preparation for college and future careers.

Technology

Technology development. Web 2.0 and information and communication technology (ICT) have resulted in a global economy generated by technology in which knowledge and information are developed and exchanged at increasing rates (Anderson, 2007; Redecker, 2009). These technologies have changed how people create, communicate, and share knowledge and have become tools that facilitate collaboration and participatory practices in the sharing and

communication of knowledge, affecting everyday life in some manner. These technologies have also influenced the exchange, communication, and development of knowledge in various ways within the educational system (Anderson, 2007; Kaylar, 2016; Kumar, Che Rose, & D'Silva, 2008; Redecker, 2009).

The educational impact of technology. With increasing globalization and use of technology since the 1990s, the United States educational system should have significantly closed the gap that exists in students' K-12 education between increased graduation rates and decreased preparedness for college and career success (Hooley, Marriot, & Sampson, 2011). Soule (2015) also states that, based on an agrarian calendar, the present economic system of industrialization met our needs and must now be regenerated to support the technology-infused, information-centric global reality of the 21st century.

Development of the academic and personal skills required for use in a global economy, through implementation of innovative future ready instructional pedagogy that develops students' college and future career readiness, has not kept pace with global changes (U.S. Department of Labor, 1991; Soule & Warrick, 2015). As innovations in ICT, Web 2.0 and developing Web 3.0 technologies continue, these technologies have the propensity to affect the interchange, communication, and development of knowledge in various ways within the educational system (Kumar et. al, 2008; Redecker, 2009). However, technology uses' impact in the classroom is diminutive in comparison to its use outside of the classroom (U.S. NETP, 2016).

The United States K-12 public system of education is one of the largest in the world. There are 50.1 million students in 13,500 school districts receiving instruction from 3.1 million teachers in the United States K-12 educational system (United States Dept. of Education, 2015).

Additionally, government involvement has increased in developing initiatives that directly influence policy and practice within the United States K-12 public school education system to prepare students for postsecondary life, career, and citizenship (Kivunja, 2014). Subsequently, statistical evidence shows government interventions have progressively improved the quality of K-12 public school instruction, overall (NCES, 2015). However, the concerns shown by most recent presidential initiatives led to the development of comprehensive programs to ensure student success through instructional practices implemented in the K-12 public school system. The *Condition in Education Report* by The National Center for Education Statistics (U.S. DOE, 2015) reports that during the 2011-2012 school year, improvements made in high school graduation rates were at 81% among the 50 million students in the K-12 system. The rate of secondary school student dropouts, also, declined from 11% in 2000 to 7% in 2013. Next, post-secondary education undergraduate enrollment was 17 million; graduate level enrollment was 3 million. Subsequently, there is a consistent pattern of focus on the instruction of students by government followed by financial resources to implement necessary changes to ensure student success.

The United States Department of Education reports \$621 billion spent on K-12 public education during the 2011-2012 school year (2017) with \$11,841 spent per elementary and secondary student. This figure is 35% greater than the average amount of \$8,789 spent on education per pupil in other countries, as reported by the Organization for Economic Cooperation and Development (OECD, 2014). Evidences of improvements in K-12 public education are decreased secondary student dropout rates and increased graduation rates. However, regarding success concerning postsecondary higher education and career readiness of students taking the Academic College Test in 2013 (Adams, 2013), 33% of students are not

initially prepared to participate in the rigor required of academic postsecondary classes or obtain an entry-level work position with the necessary skills to be successful (Conley, 2010; NCEE, 2013; Venezia, 2013).

Students in the current global economy learn in a manner facilitated by use of technology; they learn technological skills that cause them to be successful outside the classroom environment (International Education Advisory Board Whitepaper, n.d.). According to current research, technology skills acquisition, within the classroom environment, will facilitate students' preparation for higher education and future careers (U.S. NETP, 2016; Redecker, 2009). Through utilization of innovative instructional practices enhanced by the technology used in a manner in which students learn, students develop the skills needed for college and future career readiness and become equipped as lifelong learners. Developing the current K-12 pupil, as a lifelong learner, prepared for the rigor of higher education and future careers, will support continuing changes within K-12 schools towards using innovative instructional pedagogy. As a result, innovative instruction pedagogy will continue to alter the educational environment for students' college and future career readiness. Students' preparation for college and future careers, also, develops self-determined learning skills that can affect the society, community and the global economy in which students live. Innovative instructional pedagogy may have an impact on addressing issues of the underrepresented student populations in higher education: English language learners, first-generation students, students from low SES and culturally different backgrounds and students in special education.

The current implementation of K-12 public instruction has not produced the results indicated by the goals stated in recent presidential initiatives to produce students who are knowledgeable and skilled in becoming successful leaders in the current global economy. The

Benchmarking for Success: Ensuring U. S. Students Receive a World-Class Education report (2008) states that nations consider the creation of “knowledge fueled innovation economies” (p. 5) of primary importance. Due to globalization, student success connects to the ability to contend with others in the knowledge based 21st century world economy. The America Diploma Project (2005) also, indicates that students graduating from high school are ill prepared with the academic ability in mathematics essential to success in college and career. Finally, the *Secretary of Labor’s Commission on Achieving Necessary Skills* report, (SCANS), concluded that, upon leaving high school, half of the students lacked the knowledge and expertise to locate and retain favorable employment.

Government initiatives addressing K-12 education instructional practices that ensure student success have not resulted in the overall success of students’ preparation for college and career life after high school in the current global economy. United States Census Bureau data report (U.S. Patent and Trademark Office, 2012) those who obtain a degree by completing a college or professional program receive a significant increase in job earnings as compared to their peers who only complete a high school education.

Organizational reports, *A Nation at Risk* (United States National Commission on Excellence, 1983) and *SCANS* (U.S. Department of Labor, 1991) have given attention to inadequacies in the United States public K-12 instruction in students’ preparation for college and career. Government initiatives, *No Child Left Behind* and *Race to the Top*, have provided direction and support in addressing and alleviating these deficiencies. However, significant changes in K-12 public education instruction have not occurred. According to SCANS, schools have made efforts in response to research data and government initiatives to prepare students for postsecondary endeavors. However, the public K-12 educational system, at large, has not fully

implemented the use of technology to the extent that it would foster students' 21st century skills development of collaboration, communication, creativity and critical thinking (Greenhow, Robelia, & Hughes, 2009; Tinio, 2010). Due to poor leadership practices and inequitable distribution of financial resources, school teachers resort to using instructional methods that were implemented over 100 years ago (P21, 2007). One example is how teachers use computer technology to present power-point notes to students during whole group instruction. This continues to mirror the lecture, teacher as expert, experiences of instruction in the 20th century. Another example is how students use computer technology to write class papers, mirroring the use of the typewriter. However, students' current needs for postsecondary college and career are very different from those of the past. Students require effective implementation of educational technology as part of today's instructional practices.

Educational technology. Since 2010, understanding and expectations for educational technology use have improved in many ways (U.S. NETP, 2016). There is no longer an issue about whether technology use is beneficial to student instruction. Currently, technology use encourages students to personalize learning to organize and direct their life-long learning; assessments are, also, adapted to individual students' learning needs. Provided to educators are professional development opportunities to encourage technology use to increase students' use of technology within instruction. Schools have high-speed connectivity in classrooms and greater access to software and devices as educational tools at an inexpensive cost. Finally, changes in the learning environment have changed how students receive instruction in the context of their relationship to other students and teachers. As a result, there are two questions requiring answers. The first is how to use technology optimally in creating experiences of exceptional learning for access by all students. The second is how to address discrepancies in innovative

instructional pedagogy through technology use in the classroom that is diminutive in comparison to its use by students outside of the classroom. A difference exists in how students interact with the world outside the classroom and how they are taught in the educational institution of the school room, widening the digital divide” as defined as the inequitable access to information through technology use (Hilbert, 2013).

The digital use divide exists for five specific reasons. First, some schools lack access to high-speed interconnectivity and use of consistent instructional practices using technology. This factor reflects the school district's' inability to provide sufficient technology at the schools and in the classroom (Mason & Dodds, 2005). Second, some schools have not adopted formal guidelines linking informal instructional methods to formal instructional methods using technology. Acceptable use of technology policies, created by districts, has limited use of personal technology devices on K-12 campuses at the level of students' personal use of technology (Murphy, 2012). Although students frequently use technology, personally, there is little allowance made for the same access to technology within the school and classroom environment (Van Broekhuizen, 2016). Instruction in the effective use of technology on some school campuses limits access to knowledge and skills for higher education and future careers (Delgado, Wardlow, McKnight, & O'Malley, 2015). Third, due to limited access to technology at home, students lack access to use of educational technology for enriched learning to occur in the classroom (Mason & Dodds, 2005). An example of innovative instruction that couples educational technology use at home and school type is the flipped classroom. Within the flipped classroom, students are required to access a portion of their lesson online before the next day's activity or discussion in class (Brown, 2016; Nwosisi, Fere, Rosenberg, & Walsh, 2016). Lack of access to innovative technology pedagogy significantly affects underrepresented students in

higher education in college and future career readiness (Mason & Dodds, 2005; Van Roekel, 2015). Finally, a divide exists in teachers' comfort level in using educational technology. Some teachers are confident and competent in the use of educational technology and some are not (U.S. NETP, 2016). Some K-12 classroom teachers continue to supplement lecture style non-digital instructional practices with web-based content, videos or reading assignments (Davidson et al., 2014; Kayalar, 2016; Kumar et al., 2008; U.S. NETP, 2016). Teachers may also encourage students' use of technology in presenting reports or completing projects. However, this type of educational technology use does not adequately prepare students for the rigor of higher education and future careers.

Inequalities of access to technology in any form result in students lacking adequate preparation for the rigor of higher education and future career possibilities. Any environment that does not foster learning using innovative instructional pedagogy perpetuates an environment that is not engaging and in which students function as knowledge recipients and teachers as information deliverers (Koros-Mikis, 2001; McLoughlin, 2008). Limitations arise when some students have access and use of technology within the context of innovative instructional pedagogy in active, creative ways and other students' exposure to technology occurs in passive ways in which instruction is limited towards content consumption (U.S. NETP, 2016).

Innovative technology use within the classroom environment can extend to its creative use outside the classroom. However, its passive implementation in the classroom can create a divide in which students' use of technology disconnects from its use for personal growth and life-long learning. The extent of technology implementation within the classroom and its integration with students' personal lives determines how prepared students become in acquiring the academic content knowledge and personal skills towards preparation for college and future careers

(Sampson et. al, 2011).

Instruction in the 21st century classroom requires efficient use of educational technology. Instruction for students' preparation for higher education and future career must be engaging, and presentation through relevant digital content is important (U.S. NETP, 2016). The U.S. NETP developed a "common vision and action plan" that ensures all learners have "opportunities for personal growth and prosperity and remain competitive in a global economy" (p. 6).

Classroom instruction in the K-12 school environment requires innovative future ready learning pedagogy, and the instructional practices enhanced by 21st century technological advances (Voogt et al, 2013). Creative use of ICT's and Web 2.0 technologies can significantly influence instructional outcomes (Mason & Dodds, 2005). Literature suggests that instructional use of ICT and Web 2.0 facilitates communication and collaboration between users (Greenhow et al, 2009; Kennedy et al., 2007; Rollett, Lux, Strohmaier, Dosinger, & Tochtermann, 2007). Collaboration and communication skills development are two of the four skills required for preparation for college and future careers (P21, 2007). Use of technology-enhanced instructional practices and innovative pedagogy, towards future ready learning, had its early beginnings in LOGO, a programming language tied to a philosophy of education in which students participate in learning using the LOGO computer program (Papert, 1999).

Innovative Future-Ready Learning Pedagogy

Innovative pedagogy and LOGO. LOGO is a programming language linked to a philosophy of teaching that posits students' active participation in the learning process by discovering and constructing meaning using the LOGO program (Papert, 1999). Students engage in opportunities and experiences in which students and their teachers build and create

meaning through the learning process. The LOGO philosophy of education proposes students as capable of learning how to program at an early age. Educators and students are active participants in learning to develop learning skills and practices, fundamental to innovative instructional pedagogy. Innovative teaching instruction is participatory and collaborative and engages students in learning, creating, and communicating knowledge in the real world outside of the classroom with information technology (Koros-Mikis, 2001; McLoughlin, 2008; McLoughlin & Lee, 2012). This study, also, discussed examples of innovative teaching throughout the world as samples of best practices as technology use impacts the educational systems, respectively.

Innovative pedagogy and technology. *Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe* (2008) examined practices and reported the value of Web 2.0 and ICT's, also named "social computing" (p. 5), use in the educational environment in Europe. As part of other research investigations, this study assessed the impact of social computing on informal and formal learning environments through review of current practice of Web 2.0 initiatives using case studies to identify best practices. The report's purpose was to determine how social computing use could promote innovation in primary through postsecondary classrooms. The study concludes with a discussion on how to use Web 2.0 and ICT in innovative practices to support at-risk populations, ethnic minorities and dropouts, developing avenues for further research and policymaking.

A compilation of available studies, statistics, and reports from primary to secondary, vocational and higher education classrooms created the data source. Researchers interviewed stakeholder groups. Finally, a database of 200 learning projects comprised of innovative practices located in Europe documented best practices in the use of social computing for

innovative instructional practices. This study reports and corroborates many similar studies' findings. First, learners in the current educational system are different from other students from previous generations. Current students are technologically literate and think non-linearly. They think visually and prefer multimedia environments, needing many types of stimuli to avoid being distracted. They are social, engaged, and connected to their peers. As independent learners, they use learning resources and choose learning strategies to suit their individual needs. When given the opportunity, they will, naturally, construct personal meaning from given information, testing, gathering, and trying new ideas to suit their personal goals (International Education Advisory Board, n.d.).

Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe (2008), also, describes four dimensions of the learning processes that are collaborative and supported by social computing technologies. As one theory of learning, the first aspect of a collaborative learning process is connectivism. Connectivism refers to how learning is a multistep process of making internal and external connections through networking to create personal relevance. The learning process proceeds from awareness or receptivity, contribution/involvement, meaning making, co-creation, communication, personalization to implementation (Siemens, 2006). The second aspect of a collaborative learning process is that of the learning community.

Learning communities consist of people who form groups for acquiring new knowledge through collaboration and cooperation within a social context (Redecker, 2009). People within the same social context or environment share a history, are easily identifiable and are likely to come into contact with each other over time and in the future (Kester, Kirschner, & Van Merriënboer, 2006; Wenger, McDermott, & Snyder, 2002). The continuation of the learning

community depends upon boundaries and rules kept by members that promote defend against outsiders for the community good. The third aspect of a collaborative learning process is that of the community of inquiry.

The *Community of Inquiry Framework* (Garrison, Anderson, & Archer, 2000; Garrison & Arbaugh, 2007) analyzes the effectiveness of the process of online instruction in higher education. The study looks at the social aspects necessary for a community of learners to engage effectively in the process of online learning. The framework identifies three elements required for practical use of social computing in the educational setting.

The first element is a social presence, the ability of students to consider the online learning situation as authentic for learners as face-to-face interaction. The second element is a cognitive presence that reflects the pupil being able to maintain a level of reflection and discussion to create personal meaning within the use of social computing technology. The third element is an integration of a student's social presence with cognitive presence. Literature by Garrison and Arbaugh (2007) suggests a student's lack of social connection and cognitive connection through a shared purpose will impede learning at the level of exploration, hindering integration, inhibiting a deeper level of learning. Garrison and Arbaugh (2007) also indicate that by teaching presence, through an effective design of direct instruction that facilitates discussion, a student will realize personal and meaningful educational outcomes. The educational outcome reflects the final aspect of the collaborative learning process, the collaborative content production.

Collaborative Content Production reflects the nature of social computing as a cooperative way of producing content, called "produsage" (Bruns, 2006, p. 1). There are five components of collaborative content production, produsage (Bruns, 2006). The five

characteristics are (a) material content that is user-led, (b) engagement that is collaborative, (c) development that is iterative and evolutionary, (d) an alternative to intellectual property, and (e) formed by community structures. The first three features of produsage, as reflected in connectivism, directly relate to innovative instructional pedagogy (Bruns, 2006). The first characteristic is that of the user of information as, also, the producer of new content and ideas. The next characteristic is that of producing information through collaboration with others and being a user of other's information. The third characteristic is that of the evolution of the information content through the iterative process, motivating others to improve upon the content. The various aspects of collaborative learning, characteristic of connectivism and produsage, reflect upon practices of innovative pedagogy that can present instruction to students in the manner in which they have become accustomed to learning. For students' preparation for higher education and future careers, current learning must be collaborative, relevant and student-centered; as an active participant in learning, students' must create, author, comment and evaluate their work production. In preparation for students' higher education and future careers development, Redecker's (2009) study reinforces that students' ability to use digital skills in a manner in which they are comfortable is an important skill for instruction.

Within the study, *Review of Learning 2.0 Practices* (Redecker, 2009), social computing applications are a means to generate collaboration in the 21st Century, K-12 educational context. Social computing tools are Web 2.0 technologies used for communication in the transfer of knowledge (Rollett et al., 2007). Characterized by their function, the Web 2.0 social computing applications are methods of "online reflection, social space, online collaboration, social bookmarking, and repository" (Hew & Cheung, 2013, p. 48).

The Web 2.0, social computing tools possibly used in the K-12 educational setting

include wikis, blogs, podcasts/vodcasts and virtual worlds (Hew & Cheung, 2013; Rollett et al., 2007). Wikis are a means of online collaboration in which numerous participants share and contribute to online content; one example is Wikipedia. Blogs are a means by which an individual may reflect on one's thinking process over time. Podcasts/vodcasts allow future use of content through use of an audio or video file; YouTube is such a repository of video and audio content. Virtual worlds are "online interactive environments" (Hew & Cheung, 2013, p. 49). Characteristics of a virtual world are an illusionary 3-D space, used by many simultaneously to communicate and interact. Finally, Facebook and Twitter are means by which others can join a group and share information. Use of these social computing tools in the K-12 educational environment can mimic their use by students, for the same purposes, personally.

Hew and Cheung (2013) report statistically significant findings for social computing technology usage in the K-12 setting. Social computing technology facilitates collaboration and communication in the K-12 environment in building knowledge and meeting individual learners' needs. The student can personalize learning, developing a voice in communicating that knowledge in collaboration with others (Hew & Cheung, 2013; Redecker, 2008). Students can blog their reflections on the academic content they learned. They can contribute to their acquired knowledge on a wiki. They can stream, video/podcast educational content in teaching their peers. These social computing tools, also, provide the user with the means to exchange knowledge in ways in which they are familiar, in preparation for future careers in the 21st century global economy.

Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe study (2008) proposes innovative social computing affects the learning environment in distinct ways. Use of social computing in creative ways in the learning

environment affects student outcomes as increased motivation and participation. Actively engaged in their learning, students develop communication skills as they share knowledge and creative ways of learning. Social computing in innovative ways in the learning environment promotes self-directed learning. The student becomes independent and autonomous through the learning process. Students increase their networking and collaboration skills during the learning process using social computing, needed skills for higher education and future career readiness in the current knowledge-based global economy. Social computing in innovative ways in the learning environment integrates students' learning outside the classroom environment, in their neighborhoods, communities, state, nation or globally. Finally, social computing in innovative ways in the learning environment makes education accessible to all by diversifying and simplifying instruction. *Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe* (2008) concludes on the effects of social computing technologies.

Social computing technologies focus on the student as an active participant in learning, in which learning is a process of knowledge, developed through networking, in a relationship with others, and connected to real life is the premise of innovative pedagogy (Redecker, 2008; Rollett et al., 2007). As a result, there are many advantages to using social computing as an innovative instructional practice pedagogy in the K-12 school system. The study also concludes with some disadvantages including students' use of technology for cyber bullying, self-destructive behavior, and infringement of copyright (Redecker, 2008).

Innovative pedagogy and instructional practices. Web 2.0, ICT's, social computing in its various forms have impacted the K-12 educational system as it supports something new being used for instruction and produced by instruction through innovative pedagogy (Hew &

Cheung, 2013). The literature states that innovative education requires participation, personalization and productivity (Kairisto-Mertanen et al., 2012; Koros-Mikis, 2001; Papert, 1999; McLoughlin et al., 2008). McLoughlin and Lee focus this research on the development of a framework, which they have termed “Pedagogy 2.0,” (p. 15) for student learning outcomes in three areas: through students’ participation, personalization, and productivity (McLoughlin & Lee, 2008).

Participation in innovative pedagogy looks different from the traditional classroom form of instruction. The teacher is not the director of learning as the expert in knowledge; the teacher becomes a co-learner with the student in the learning process. The teacher in a traditional classroom is the expert, presenting information to students in a lecture format, even when assisted by presentation slides or videos; the student is the passive recipient of the information. Within a non-traditional classroom environment, students engage in solving a problem with the teacher providing information or asking questions to facilitate learning; learning is student centered, and the teacher acts as a facilitator. Students’ learning is personalized, and they become responsible for their learning in collaboration with peers, and local community and global experts (Kairisto-Mertanen et al., 2012; McLoughlin et al., 2008).

Personalization in innovative pedagogy requires that students connect their academic learning to solving problems of personal interest with an individual, community or global basis. Students become active participants in the learning process by addressing issues of their choice in which they have a personal connection (McLoughlin et al., 2008). The student can decide the individual learning outcome, the direction of the learning process and the product that will be the example of having achieved the learning outcome. In this manner, personalization in innovative pedagogy becomes student centered, student directed and student determined, learning. The

result of students' participation in the learning process through academic content connected to personal interests in solving a problem results in student productivity. Productivity in innovative pedagogy is a process of "creating and generating ideas, concepts and knowledge" (p. 17) shared with others (McLoughlin & Lee, 2008). Completed assignments/projects are student work products. Examples of technology generated work products include e-portfolios and personal publishing.

Contributing factors to innovative pedagogy. There are other components of best practice in innovative pedagogy addressed in the literature. First, knowledge creation, not learning, is the primary objective use of innovative teaching (Paavola, Lipponen, & Hakkarainen, 2004). As a result, the student remains connected to networks engaged in learning, socially, in a holistic learning approach of knowledge creation (Paavola et al., 2004; Punie, 2007; Redecker, 2009). The social process of knowledge creation develops a social learning network in which the communication and exchange of ideas and knowledge may continue throughout the learner's lifetime. As a result, a holistic learning approach in which the student remains connected to networks engaged in learning, socially, is knowledge creation (Paavola et al., 2004; Punie, 2007; Redecker, 2009). Another aspect of innovative pedagogy, creating a system as a process of learning and exchange of knowledge is connectivism (McLoughlin et. al., 2008).

Innovative pedagogy and connectivism. In the era of Web 2.0, ICT's and social computing, connectivism is a process of creating a network consisting of multiple types of personal knowledge sources which foster communication and dialogue in the creation and exchange of ideas (McLoughlin et al., 2008; Redecker, 2009). In connectivism, the learning process derives from social interaction, communication, and collaboration through internal and external networks. How the mind connects knowledge in producing meaning by developing and

creating patterns is an individual's internal network. An individual's external network consists of people, books, organizations, web- sites, etc. as sources of information to acquire, create, exchange and connect new knowledge (Redecker, 2009).

Connectivism proposes that learning and knowledge creation derives from a varied number of sources of opinions and ideas. It also proposes that prior knowledge is less important than the current knowledge and information known. Connectivism integrates an individual's mind and emotions in making meaning in the acquisition and creation of knowledge. In connectivism, connecting the dots, being able to use knowledge in making decisions about learning and its products, becomes a critical skill (McLoughlin et al., 2009). Connectivism personalizes learning as it creates knowledge through a personal network of information sources. Therefore, connectivism, in the context of innovative pedagogy, personalizes learning, as it is not limited to the school or classroom environment. Using Web 2.0, ICT's and social computing technologies, learners take an active role in knowledge creation and communication that is self-directed. Heutagogy is the aspect of creating knowledge in innovative pedagogy that is self-directed (Hase & Kenyon, 2001; Hase & Kenyon, 2007; Kenyon & Hase, 2001).

Innovative pedagogy and heutagogy. Contrary to pedagogy and andragogy, the definition of heutagogy is a student's self-directed, self-determined learning (Hase & Kenyon, 2001; Hase & Kenyon, 2007; Kenyon & Hase, 2001). Pedagogical instruction is entirely teacher directed and based upon a predetermined curriculum as the manner of information dissemination, as within the K-12 educational system. Andragogy instruction continues to be teacher directed and centered in an individual's personal interests, as in higher education, at the graduate level. Knowles (1970) contributed to the development of andragogy in approaches used to improve educational methodology. One perspective found in the literature views heutagogy as a natural

progression from a teacher-centered instruction of pedagogy to the adult-directed learning of andragogy, offering a student-centered and directed method in innovative educational practices along a continuum from pedagogy to andragogy to heutagogy (Blaschke, 2012).

In the literature, Blaschke (2012) agrees that current pedagogical and andragogical instructional practices do not adequately develop capable and competent learners who can maintain the pace of change within the workplace. However, as a holistic approach, the heutagogical instructional environment can extend the practices of andragogy to produce learners that are competent in their abilities to acquire content knowledge and applicable skills and capabilities, “characterized by learner confidence in his or her competency” (p. 59). Common to both andragogy and heutagogy is the learner’s self-directed learning. However, Blaschke (2012) describes andragogy as “single-loop learning” and heutagogy as “double-loop learning” (p. 59). Single-loop learning does not require reflection by the learner in the process of learning. Double-loop learning encourages learner reflection through active engagement in learning as a transformative process in the student’s beliefs, lifestyle or perceptions. Heutagogical practices, also, extend from andragogical practices within instructional focus, design and approach, and instructor/student roles.

Heutagogy is an extension of andragogy along an instructional continuum, according to Blaschke (2012). Andragogy develops knowledge and skill competency; heutagogy, also, develops the learner’s capability and confidence in using the knowledge and expertise. Andragogy is a linear style of instruction that continues to be content oriented and instructor directed, although learner influenced. Heutagogy is a linear educational design and approach in which the learner directs the curriculum content and assessment process towards a greater

understanding of learning how they learn. Proposing another view of heutagogy is the research literature of Hase and Kenyon (2001).

Hase and Kenyon (2001) propose the emergence of heutagogy as a means to address deficiencies in pedagogical and andragogical approaches in education. The web, ICT's and social computing have created an environment in which information is readily available and accessible. The pace, at which changes occur, also, results in information becoming obsolete, quickly. Next, the learning process requires flexibility due to personal time constraints. Finally, learning is valued when tied to what an individual does and not for the acquisition of knowledge itself. The innovative educational practices offered by heutagogy provide an environment that affords limitless opportunities for learning given the current world in which the learner exists. However, the methods of heutagogy practices are not new.

Innovative educational practices in heutagogy have foundations in various humanistic principles (Hase & Kenyon, 2001). Emery and Emery (1974) ties heutagogy to the humanistic philosophy of Heider in that within the learning process, people continuously learn through interaction with their environment throughout their lifespan. Rogers (2011) ties heutagogy to phenomenology in that others facilitate the learning process; people want to learn what is personally relevant; experiences involve change through assimilation; and significant learning occurs when an individual is relaxed, not threatened. Emery and Trist (1965) connect heutagogy to systems thinking. Argyris and Schon (1996) link heutagogy to the learning process through the value placed on learning experiences that are unorganized and include reflection. Long (1990) and Kemmis and McTaggart (1998) connect heutagogy to the learning process in that the student manages his/her learning as an active process throughout life. Kemmis and McTaggart (1998) also suggest that the teacher and students participate together in the learning process.

Stephenson (1992) links heutagogy to capability in that the learning process provides a creative and more holistic opportunity for individuals to experience a higher level of self-efficacy in applying knowledge to new situations and working well with others. These approaches to learning within innovative heutagogical practices emphasize the desire of moving away from amassing knowledge and skills to a holistic learning experience. The comprehensive learning experience develops the student's independent capabilities of questioning personal assumptions and values (Argyris & Schon, 1996) within the context of the student's environment. Heutagogy is a manner of future-oriented learning in which students are the "primary agents in their own learning" (p. 112), to keep up with the rate of information change in the current world environment and produce capable people who work in productive environments (Graves, 1993; Stephenson, 1992; Hase & Kenyon, 2007).

Hase and Kenyon (2001) emphasize aspects of heutagogy that reflect the focus of learning for the student of the global economy. First, the heutagogical approach to the learning process is student directed, not teacher directed. Second, the heutagogical approach promotes self-worth and capabilities in self-determined learning. Third, the approach acknowledges the interface between education and the environment in which the learning occurs. Finally, heutagogy, in the school system, stresses learning how to learn as a means for individuals to adapt to changes that are always taking place in the current global economy. Innovative heutagogy as an instructional process of learning addresses the needs of the student in the K-12 educational system in preparation for college and career. Heutagogical instructional practices support development of students' autonomy in self-determined learning and transformative behaviors, developing competent and capable learners in postsecondary higher education and future-careers.

Innovative pedagogy and higher education and future career readiness. As a result of technological advancements of the Web 2.0, ICT's and social computing, information is created, disseminated, and changed at an increasing rate in the current knowledge economy. Therefore, the demands on those graduating from high school and entering the workforce or higher education after secondary education require students are equipped to be successful in using these same technologies for higher education and future career success. Postsecondary higher education and future career readiness skills development ensure students' preparation for the challenge of college courses or entry level work position by exhibiting creativity, communication, collaboration, and critical thinking skills (Conley, 2010; Mueller & Gozali-Lee, 2013). However, instructors of entry-level courses in Math and Language Arts have reported that students are ill prepared for college and require remediation in these areas before taking graduate level courses [National Center on Education and the Economy (NCEE), 2013].

Secondary school graduates do not have the academic skills required of postsecondary institutions or the military. The National Cooperative of Education Statistics (NCES, 2013) report indicates that 20% of first-time students, as first-generation students, enter higher education requiring remedial coursework. The Education Trust report on students taking the Armed Services Vocational Aptitude Battery in 2010 indicated 20% did not pass the academic portion. In the Education Trust current report, "*Meandering toward graduation,*" (2016), nearly 50% of graduates from high school do not complete a career or college course sequence of classes and only 8% a full college and career course sequence. To address the lack of preparedness of high school graduates in college and career readiness skills requires looking at what is career and college readiness and how to employ innovative pedagogical practices to ensure students' college and career readiness.

The *Framework for 21st Century Learning* identifies four categories of skills that students must master for college and career readiness as a solution to integrate learning for work, life and citizenship (P21, 2009). The foundation category includes the fundamental academic skills of reading, writing, and numeracy. Another category is the Learning and Innovations Skills (LIS) domain with emphasis on the 21st century skills, the 4C's of creativity, critical thinking, collaboration and communication. Two other areas are the Digital Literacies Skills (DLS) and Career and Life Skills (CLS) domains. The DLS field focuses on skills needed to live in the current Web 2.0, ICT's and social computing global knowledge economy. The CLS field focuses on the development of the intangible skills needed to work and live well with others, the soft skills. Soft skills include interpersonal communication and relationship skills, body language, group dynamics, interpersonal etiquette, teamwork, presentation and selling skills, and confidence building (Sharma & Sharma, 2010). These skill categories coincide with David Conley's *Four Keys to College and Career Readiness* (2014) in which he developed four keys for preparation for higher education and future career, "think, know, act, and go" (p. 18). The think path includes the student's ability to hypothesize and strategize a problem, identify and collect research, analyze and evaluate research, organize and construct information for communication and monitor and confirm findings for accuracy. The know course includes ways the student structures knowledge by identifying key terms and information by linking ideas and organizing concepts. This area, also, focuses on the student's values, effort, challenge level and attribution abilities and specific technical knowledge and skill readiness. The act approach determines the student's ability to set goals, persist, seek help, be motivated, progress monitor, be self-aware and exhibit self-efficacy, manage time, test take, note take, recall, read, collaborate and have technology skills. The final key, go, focuses on the student's understanding

of personal aspirations, norms and culture, institution choice and admissions process, tuition and self-advocacy. Literature has identified the categories (P21, 2009) and keys (Conley, 2014) to the knowledge required of students for college and career development. However, there is a gap in the literature in how to prepare students for higher education and future careers successfully. The current literature does not provide a comprehensive method of best practices in developing students' career and college readiness skills in the K-12 public school environment.

A review of the literature by Kivunja (2014) indicates there is a need for a learning paradigm shift from that of the Industrial Age to that of essential skills for 21st century learning. The instructional model of the Industrial Revolution emphasized acquiring skills that increased profits and productivity, in which compartmentalization, memorization, and specialization were necessary. The relevant 21st century skills are those that produce individual success as citizens and workers in the current global environment. Kivunja (2014) states that the LIS domain requires students to process the application of learned knowledge to solving real- life problems. He references McCain (2005) who proposes a four- step process for students to engage, enabling them to learn to solve real- life problems.

McCain terms the four essential steps of problem solving as the *4DS of Problem Solving* (2005). These steps are to define the problem, to design a plan for the solution, to do the plan, and to debrief the results of the plan (Jukes & McCain, 2001). McCain states that students learning these skills will assist them in being successful in school as well as in life after school. McCain also proposes that students must be adept in process skills of project design and management, time management, research, and teamwork. These process skills are also required learning in the CLS domain.

The CLS field requires students to learn to be collaborative, flexible and self-reliant. There are five areas of development indicated in the literature by Trilling and Fadel (2009). The area of flexibility and adaptability skills instruction occurs by having students change roles, responsibilities, contexts and priorities in working on assignments. The area of initiative and self-direction skills instruction occurs by having students manage their goals and time in working independently as a means of being self-directed. The area of social and cross-cultural skills instruction occurs by having students learn to collaborate with others in diverse teams. Students learn productivity and accountability through project management, demonstrating attributes of multitasking, active participation, collaboration, and cooperative learning. Finally, leadership and responsibility skills instruction occurs by having students lead others by acting responsibly and with empathy. Trilling and Fadel (2009) have also indicated how to teach these skills within the DLS domain.

Trilling and Fadel (2009) state that curriculum and instructional practices embed digital technologies. Students can learn to access and evaluate information, use information accurately, and understand the ethical and legal aspects of using media. Kivunja (2014) states that teachers, of students who are digital natives, “should embed digital technologies in our teaching, learning and assessment” (p. 88). According to Siemens (2006), it is no longer required for students to know how or what. Students need knowledge of where to access the information necessary for a particular situation. In collaboration with others, students develop a connectivist approach that facilitates learning within a community context and not a do it alone model (Kivunja, 2014). Promoting use of the current learning style of digital natives, through technology, will ensure students acquire the experience, knowledge, and skills needed for higher education and future career readiness.

Prensky (2001b) and Tapscott (2009) provide other areas of focus in the educational system that addresses the instruction of students who are digital natives. They attribute the failure of the current educational system in preparing students for college and future careers as the result of instructional practices that do not reflect how digital natives acquire knowledge. They propose that the school system use methods of instruction that digital natives are accustomed to using outside the classroom, for instruction within the classroom. These instructional practices include the use of terminology in which digital natives are familiar, use of technology and digitally embedded content, and use of programs that engage digital natives such as educational gaming applications. Tapscott (2009) advocates that the education system becomes student focused; that the teacher listens to, converses and interacts with the student; that the teacher teaches critical thinking skills and assists the student in self-directed, self-determined discovery with the instruction that fits the student's learning style. Additionally, Kelly, McCain and Jukes (2009) suggest that as teachers use the same tools that digital natives use for interacting with the real world, instruction within the classroom becomes more relevant as students' engagement in the learning process becomes less passive and more active. Implementation of the aforementioned instructional practices of innovative pedagogy, theories of connectivism and heutagogy will promote the use of best practices for higher education and future career readiness for students who are digital natives.

The advantages of elements of the instructional practice of innovative pedagogy, coupled with the theories of connectivism and heutagogy, work together with 21st century skills development for successful higher education and career readiness. Innovative instruction facilitates the development of college and career readiness with instructional practices using Web 2.0, ICT's and social computing. Connectivism through innovative teaching promotes the

development of higher education and future career-readiness skills through the utilization of a student's personal network of sources of information on potential colleges and work jobs in the creation of knowledge. Blaschke (2102) proposes heutagogical approaches to student instruction allows them to determine and direct their instructional path resulting in active participation in learning. Web 2.0 and social computing technologies provide a platform for self-determined learning activities supporting the heutagogical learning approach. These learning activities include active engagement with instructors and peers in the learning process, group collaboration, learner-generated content development and reflective practice. Reflective learning, an important aspect of heutagogical instruction, keeps students connected to their peers and motivated to learn. Development of the collaboration, reflective and self-determined learning skills foster preparation for postsecondary college and career. With its benefits, the application of innovative pedagogy as an instructional practice also has its challenges.

Challenges to innovative pedagogy instruction. McLoughlin and Lee (2008) state that problems in innovative pedagogy occur when student-produced knowledge is not reliable and validated. For teachers to ensure validity and reliability of student-generated content requires that they closely collaborate with learners to edit and examine the students' work content. Instructors may also use peer editing and review to ascertain what knowledge is reliable and validated as a learning process for students. The process of learning to create knowledge that is reliable and validated forms the students' personal and unique knowledge framework.

Another challenge addresses the issue of what is original as opposed to plagiarized knowledge creation. Students, who have grown up with technology, as digital natives, are comfortable using existing knowledge and creating something new of it to present to their peers. However, problems arise with copyright infringements, without citation of an original work. In

this case, the students' instructor assists the student to facilitate acknowledgment of sources of information that are reliable, current and objective in nature and that do not infringe on copyright laws. Student instruction as a collaborative process with a focus on using appropriate sources of information contributes to the instructional practice of innovative pedagogy, even as a process of addressing the challenges of its use. Use of the instructional practice of innovative pedagogy takes numerous forms and uses multiple strategies.

Future ready learning through innovative pedagogy strategies. A guidebook by Prakash Nair (2004) provides a model for instruction in students' preparation for higher education and future career success in the current 21st century. The handbook addresses discrepancies that exist between data collected for instructional practices as opposed to the actual results of instructional practices; instructional objectives as opposed to outcomes; and instructional policy as opposed to instructional realities. The principles proposed in the model encompass tenets of innovative pedagogy as personalization, project- based learning, leadership and attention to cultural diversity in 21st century student preparation for higher education and future careers.

Personalization is the belief that classroom instruction should not be a process of mass production with students considered as products. Personalized student education consists of knowing what the student needs to learn in the context of how he/she learns. One outcome of individualized education is that the student becomes successful in using strengths in overcoming challenges and weaknesses to becoming productive society members. Understanding personal areas of strengths and weaknesses is necessary for effective leadership.

Observations on student involvement and leadership on college and university campuses (Washington, University of New Orleans, Fordham University, Oregon State, Xavier, and

Sacramento State) have emphasized the development of leadership skills as part of a learning initiative. The leadership initiative develops competencies in the areas of self-awareness, vision, and strategy, communication, valuing others, ethics and integrity, and connection and collaboration. Again, these are tenets of innovative pedagogy emphasized in the context of leadership skill development. Finally, the area of valuing others or attention to cultural diversity prepares the student leadership to work and live in a diverse cultural global society.

Cultural diversity knowledge and understanding are critical in a world economy. Knowledge of customs and practices is an essential tool for success in a world interconnected with people accessing information through technology. Students become college and career ready as they develop competencies in these areas that will lead to future success in living, working and continuous learning in the society or culture in which they choose. The development of global competencies applies to instructional practices as another aspect of authentic learning.

Innovative future ready learning pedagogy and authentic learning. Authentic learning pedagogy, designed to provide real-life problems solving opportunities, prepares students for higher education and future careers. Presented with, or choice of, a real-life problem, students require multiple perspectives and collaboration to reach a plausible solution within the context of authentic learning. Student selected investigation and research exposes them to concepts of thinking and doing across various content areas that promote transdisciplinary learning and leading. The authentic learning process requires a plausible solution that may result in multiple and varied outcomes, concluding with the final aspect of the authentic learning process, reflection (Strimel, 2014). As students grapple with the problem of

interest to them, they develop “new knowledge that is essential in designing and creating a quality innovative solution” (p. 9).

Authentic learning practices produce meaning as they tie academic knowledge to solving practical, real-life problems (Strimel, 2014). Innovative and authentic learning practices include project-based learning, Maker Lab and computer programming (coding) and “gaming” that develops critical and computational thinking skills. These instructional methods are examples of innovative future ready learning pedagogy that prepare students’ for higher education and future career readiness (U.S. NETP, 2016). Through the process of finding and developing solutions to problems, students gain knowledge and practice 21st century skills required for success in college and future careers.

Innovative Future-Ready Learning Pedagogy Practices

Innovative future ready learning pedagogy and project-based learning. As a creative future ready learning method, project-based learning (PBL) incorporates tenets of authentic learning, fostering students’ development of problem-solving, collaboration and self-directed learning, as 21st century skills, towards preparation for college and future careers (Barrows, 2002). PBL engages and motivates students in solving challenging problems relevant to real-life. Within PBL, learning is student-centered, and the teacher acts as an instructional guide or facilitator to assist students’ scaffolding of knowledge from multiple content areas and subject disciplines. Another innovative future ready learning method that develops students’ postsecondary higher education and future career preparation is the Maker Lab.

Innovative future ready learning pedagogy and makerspaces. The Makerspace Playbook defines makerspaces as community places where skilled persons and novices gather with mentors and others with expertise as a community to create items of personal interest and

meaning with the support of traditional tools and new technologies (Maker Media, 2013). Within the educational context, maker movement practices or makifications involve various principles (Cohen, Jones, Smith, & Calandra, 2016). First, makification requires the interdisciplinary creation of items using math, science, technology and engineering content. Second, makification develops students' higher order thinking skills by applying prior knowledge in analysis and evaluation of students' work as part of an iterative process that increases content knowledge and skill development, developing students' tolerance for failure in the process of iteration. Next, collaboration with peers, mentors, and experts through communication technologies fosters sharing of completed items with a global community outside the physical classroom environment. Finally, although sharing the finished product with others is optional, the learning that occurs is personal and self-directed, increasing student motivation and engagement and developing psychological well-being through the learning process (Reeve, 2009). As a result, the process of learning within this environment has aspects that support authentic learning and the innovative learning practices that prepare students for postsecondary college and future careers. Another innovative instructional practice, evident in the K-12 classroom that prepares students for higher education and future careers is computer programming (coding) that develops critical and computational thinking skills.

Innovative future ready learning pedagogy and computer programming. Jeanette Wing, Corporate Vice President of Microsoft Research, and her colleagues defined computational thinking skills as not only problem solving but “problem formulation” (Wing, 2014, p. 1). Computational thinking includes the “thought processes involved in formulating a problem and expressing its solution(s) in such a way that a computer- human or machine- can effectively carry out” (Wing, 2014, p. 1). In her presentation at the Microsoft Research Asia

Faculty Summit in 2012, Jeanette Wing reiterates her vision of computational thinking as an essential 21st century skill that everyone will use towards the middle of the century (Wing, 2006). Wing believes her vision realized when computational thinking instruction occurs at the K-12 level. In achieving her desired vision, she is involved in two organizations that promote computational thinking.

The two organizations, Computing in the Core and Code.org. (through its Hour of Code and other educational materials and tools), are non-profit groups that promote computational thinking skill development through core academic subjects for students preparation for college and future careers in a “technology-focused society” (Wing, 2014, p. 4). Critical and computational thinking skill development in the context of “coding,” also, incorporates tenets of authentic learning as innovative instructional practices towards students’ preparation for higher education and future careers.

Innovative future ready learning pedagogy and gaming. “Gaming” (p. 51) is learning that involves playing games that increase academic knowledge, and critical thinking and problem-solving skills (Qian & Clark, 2016). Although specific research has not correlated development of 21st century skills with gaming, aspects of entertainment gaming develop the 21st century 4C’s skills. Within a situational setting, gaming encourages social interaction, increasing motivation and engagement. Within the context of his theory of sociocultural learning, Vygotsky (1978) indicates that learning occurs when individuals are in a situation that is similar to play; it is situational, social and participants actively engaged. These aspects of gaming correlate to student characteristics within the 21st century classroom; learners want active engagement with their peers in creating and communicating what they know through the vehicle

of technology. Gaming, and the other forms of authentic learning and innovative future ready learning instruction, facilitate 21st century instructional practice for 21st century students.

Within all forms of authentic and innovative instructional practices, students can take academic content, through instruction and coaching from the teacher, develop the academic knowledge, and higher order critical thinking skills necessary for college and future career readiness. As a result, the educational process does not conclude with the acquisition of knowledge. Education continues through the application of academic content to answering questions and solving problems of importance to the individual in the context of the society in which he/she lives (McCain, 2005). The academic content delivers the knowledge, and the innovative instructional strategies provide the vehicle by which to create possible solutions to real-life problems, preparing students for higher education and future careers.

Innovative Future-Ready Learning Pedagogy Content

Innovative future ready learning pedagogy through instructional content.

Characteristic of future-ready skills development is the infusion of technology into traditional academic content instruction. The technologically infused instructional environment is collaborative, and within its context, students are technically skilled in using critical and creative thinking to solve relevant problems. Students are encouraged to become competent as global citizens through interaction with others in the larger community environment as they engage in solving real-life problems (Jukes & McCain, 2001; McCain 2005). Student engagement in real-life problem solving develops students' financial, civic, economic and business literacies as future entrepreneurs.

Within their respective initiatives, President Bush and President Obama emphasized a focus on K-12 STEM education as an indicator of instruction that prepared students for success

in higher education and future careers. For America to remain globally competitive with an engaged citizenry, the U.S. NETP supports an instructional content that adds multimedia communication into its collaboration development and sophisticated problem-solving and critical thinking skills into the teaching of conventional academic subjects. STEM content uses the scientific methodology, the engineering design process, math, and technology as a means towards students' higher education and future career preparation.

Innovative future ready learning pedagogy and STEM. According to Erdogan and Stuessy, (2015), the perception of STEM education is one of “a unique environment that includes advanced curriculum, expert teachers, and opportunities for internships and immersion” (p. 151). These factors contribute to STEM education's design to ensure students' college and future career readiness. This study's findings presented no significant difference in instructional outcomes, based on high stakes assessment, of multiple groups from traditional high schools and STEM schools in Texas. However, its results indicated that students from low SES did perform better in reading, math, and science on high stake tests in STEM high schools than those in traditional high schools. Whether these differences were due to specific STEM instruction or other school variables was inconclusive. However, an essential component of STEM education is its comprehensive integration of science, math, engineering and technology content.

By applying and integrating math and science, STEM instruction, through innovative future ready learning pedagogy, creates new technologies and innovative solutions to current world problems (English & King, 2015). Through STEM education, creative future ready learning practices integrate math and technology through the engineering design process, similar to the scientific method, in solving real life problems. There are eight steps in the engineering design process; there are five steps within the scientific method.

The engineering design process and scientific method develop critical thinking skills required for problem solving (English & King, 2015). Stages of the engineering design process correlate to steps in the scientific method. The initial step in the engineering design process is to determine the need or problem; the first in the scientific method is to ask a question. Second, in the design process, is to analyze the need or problem; the second, in the scientific method, is to construct a hypothesis. The following third and fourth phases are to form a list of possible solutions and choose the best one to implement. The fifth step is to design a solution prototype; this step may involve creativity that is the artistic aspect of STEAM instruction. The sixth phase is to test the solution prototype/s that correlates with the third phase in the scientific method to test possible solutions. The seventh step is to communicate the results of the solution's which coincides with the fourth phase in the scientific method to analyze results of the experiments. The last step in the engineering design process, which correlates with the final stage in the scientific method to formulate a conclusion, is to redesign the solution as needed (Bequette & Bequette, 2012). Creating solutions to real problems through traditional STEM content is one type of content used to ensure students' preparation for higher education and future ready careers. Another content focus is the development of literacy skills towards students' college and career readiness.

Innovative future ready learning pedagogy and literacy skills development.

Literacy skill development in the context of innovative future ready learning occurs in two areas. The first area is literacy skill development within specific academic subjects through the Common Core State Standards. The second area is skill development in digital literacy.

According to Zygouris-Coe (2012), the Common Core State Standards were designed to “improve educational outcomes, standardize educational opportunity, and focus on more

rigorous standards that are internationally benchmarked” (p. 39). The *Common Core Standards* in English Language Arts (ELA) emphasizes literacy skills development for students’ preparation for higher education and future careers through progression in text difficulty, critical reading and analysis of expository text, use of text evidence and academic vocabulary in the context of informational writing beginning in kindergarten through twelfth grade. It also requires the development and integration of content specific vocabulary within academic disciplines as termed, “disciplinary literacy” (Zygouris-Coe, 2012, p. 38).

The foundation of disciplinary literacy is that each academic subject area or instructional discipline has a specific vocabulary, terminology, and ways of communicating the specific knowledge of that subject or discipline (Zygouris-Coe, 2012). As a result, specific literacy development becomes an integral part of content knowledge acquisition. Four methods encourage disciplinary literacy development and content knowledge acquisition in students’ preparation for college and future careers (Turner & Danridge, 2014).

The innovative future ready learning classroom environment incorporates four methods of literacy instruction towards students’ preparation for college and future careers. The first method is a collaborative, classroom community that fosters communication through listening, speaking, reading, thinking and writing in the academic content areas (Turner & Kim, 2005). The second method is the use of close reading, a process in which students read and analyze text numerous times (Fisher & Frey, 2012). Conley (2012) indicates the development of problem-solving skills through text analysis, collecting and synthesizing information, evaluating content and other points of view and forming various types of work products is a critical skill needed for college and future ready careers. The third method is the use of inquiry-based instruction in which students are encouraged to use informational texts to ask questions, research and find

answers to their questions, continuing their personal process of “wondering and inquiring” (Maloch & Horsey, 2013, p. 477). The last method is providing literacy instruction that connects instruction to students’ cultural backgrounds and the cultures of others (McIntyre & Turner, 2013). Developing awareness of other cultures in relationship to their own in the context of literacy instruction prepares students for future careers (P21, 2009). However, academic content literacy and disciplinary literacy, as indicated by the *Common Core State Standards*, is only one type of literacy required for students’ innovative future ready learning preparation for higher education and future careers. The other type of literacy necessary for students’ readiness for higher education and future careers is digital literacy.

Literacy skills required for college and future careers are no longer limited to the traditional definition of a unimodal, textual way of communication through reading and writing (New Media Consortium, 2005). In its report, *A Global Imperative* (2005), the New Media Consortium defines literacy in the 21st century as “the set of abilities and skills where aural, visual and digital literacy overlap” (p. 2). The National Council of Teachers of English (NCTE, 2013) provides a 21st century definition of literacies as technology tool proficiency, multimodal text design, and global awareness. Both definitions encompass the use of technology in the creation of presenting information for digital literacy in the 21st century.

In a global community, the presenter designs the text presentation in a multimodal manner that incorporates visual and auditory aspects for multiple purposes. According to the six digital literacy proficiencies found in the NCTE Framework (2013), others include the ability of the text presenter to gather, analyze, synthesize varied sources of information, present and solve problems collaboratively, and be ethically responsible for technology use in the design presentation of information within a global environment. Incorporated into literacy skills

development required for the 21st century in preparation for students' college and future careers is attention to an auxiliary skill, global literacy (P21, 2008).

Within the Oregon Department of Education (2008), 21st century global literacy is determined an essential skill for secondary school graduation. Oregon is one of eleven states that participated in the ADP that addresses and requires some form of global literacy for high school graduation. With input from the K-12, business, community college and higher education communities, Oregon's Department of Education developed a final iteration of the definition of global literacy. Their definition includes students' demonstrated "knowledge of diverse cultural, linguistic and artistic expression" (p. 127) and application of "a global perspective to analyze contemporary and historical issues" (King & Thorpe, 2012, p. 127). 21st century preparation for college and future careers requires global, digital, and academic content literacies (P21, 2011).

Predicated on literacy instruction that "enhances students' intellectual and relational development" (p. 98) are educational content and digital and global literacy competencies (Ivey, 2011). Intellectual and relational skills are the 21st century skills that require development within instructional environments for students' higher education preparation and future employment (P21, 2011). According to the literature, instruction within classroom environments that incorporate digital technology can develop these competencies through student-student and teacher-student interactions using Web 2.0 tools (Nowell, 2014).

Nowell's (2014) findings indicated that the high school students struggled, initially, in the educational use of Web 2.0 tools. However, Web 2.0's social aspect facilitated teacher-student interaction towards "increased learning inside and outside the classroom" (p. 120). Teachers were able to assist with homework assignments and connect learning to real-life issues. They,

also, commented on how they were able to facilitate appropriate use of information and presentation through interactions on Web 2.0. Technology-enhanced instruction within the context of future ready learning towards students' college and future career preparation is one way of ensuring 21st century skills development. It is most important to use technology to augment academic, digital, and global literacy competencies, within a digital classroom environment, to extend learning from the physical classroom to the outside community. Future innovative learning practices promote technology use and extend learning from the physical classroom environment to the students' outside community. However, there is an instructional program design that targets students' traditionally underrepresented in higher education in developing academic skills that increase access to the rigor of higher-level courses.

Advancement via Individual Determination Program (AVID)

Research by Adelman (2006) indicates the primary determinant of higher education success is the “academic intensity of the high school student’s curriculum” (p. xviii). Adelman purports tools that create momentum towards underrepresented students’ postsecondary success. The primary instrument was participation in a rigorous high school curriculum that provided students’ access to math courses above Algebra II, advanced lab courses, and writing courses. Designed to support underrepresented students' access to rigorous curriculum for higher education is the AVID program (Huerta, Watt, & Butcher, 2013).

English teacher, Mary Catherine Swanson, created the guidelines of the AVID program to support disadvantaged students bussed to her school during the 1980s. Consideration for participation in the AVID program included students of economic, ethnic or linguistic backgrounds traditionally underrepresented in higher education. Included, also, are first-generation college students (Black, Little, McCoach, Purcell & Siegle, (2008). Other criteria

include students' level of determination and willingness to participate in advanced coursework and parents' level of commitment and support of the student. Backed by the collaborative efforts of school and home, and local business and community organizations focused on students' postsecondary success is student participation in the program (Bernhardt, 2013).

The AVID program curriculum consists of elective coursework that develops students' skills in areas not directly addressed in the secondary classroom environment. Students acquire note taking, organization, presentation, test taking, time-management, study, and writing skills. The curriculum also emphasizes collaboration, inquiry, and reading skills, and self-determination skill development. Next, students take rigorous coursework, higher-level math, and advanced placement courses, in preparation for higher education courses. Finally, students learn to navigate the college system by learning terminology and gaining exposure in how school systems function.

The AVID program is a college preparation system that supports traditionally underrepresented students' access to higher education. The program exists in middle schools and secondary schools in the District of Columbia, forty-seven states, sixteen countries and fourteen postsecondary institutions (avid.org, n.d.). As the most extensive college preparation system used to prepare those underrepresented students for higher education, the AVID program supports creation of learning environments towards student access to the rigor required in preparation for college coursework (Huerta, Watt, & Butcher, 2013).

Innovative Future Ready Learning and the Classroom Instructional Environment

A future innovative learning structure that supports the integration of technology, extending the learning platform from the physical classroom to the outside community is the blended learning school or classroom environment. The blended learning school or classroom

environment is a supervised instructional program in which students receive face-to-face instruction within a physical school environment, away from home, through online content delivery with some elements of instructional pace, path, place and time under the student's control (Staker & Horn, 2012). The types of blended learning structures are the individual, lab rotation/rotation model, and flipped classroom models.

The blended learning models have slightly different structures. The rotation model incorporates face-to-face instruction and an online component within a single classroom space; one example includes students who rotate between a teacher-led teaching station, online teaching station and collaborative small group activities' stations. The lab rotation model incorporates face-to-face instruction and an online component within different classroom spaces as learning labs on the same school campus. The individual rotation model is a student-customized schedule of learning that incorporates face-to-face instruction and online learning as determined by the individual needs of and the student's preference for courses taken in online and brick-and-mortar location combinations. The flipped classroom model incorporates face-to-face and online instruction. Within the flipped classroom, the primary subject content and instruction delivery occur online; face-to-face teaching as a teacher-guided practice in the context of project assignments, takes place at the school site (Horn & Stacker, 2014; Stacker & Horn, 2012).

The flipped classroom blended learning environment leaves time for students to learn by doing, working collaboratively on projects, asking questions and helping each other in the process. Within the flipped classroom environment, the teacher acts as a support to those students who need guidance in learning the academic content, while facilitating and encouraging learning through interaction with peers through a project and group assignment completion. The

literature suggests that the flipped classroom increases student to student and student to teacher interaction with the instructor acting as a model of authentic learning (Nwosisi et al., 2016).

The authentic learning environments created by innovative instructional models of project-based learning, Maker-Lab and the blended learning flipped classroom develop students' deep understanding of academic material and skills required for future learning in preparation for college and future careers (Carpenter & Pease, 2013). These authentic learning environments develop 21st century skills for success in school and future life-long learning and personal growth. These innovative instructional models provide an opportunity for authentic learning as part of the classroom instructional environment towards students' preparation for college and future careers. However, according to the Carnegie Corporation, located in New York, required for students' preparation for college and future employment are more than a few school environments consisting of a few blended learning flipped classrooms (Lake, Hill, & Maas, 2015). Required of schools is a sustainable educational environment in which innovative future ready learning pedagogy through full integration of technology, as applied to instructional practices of authentic learning, project-based learning, Maker Lab, coding, and gaming exists.

Innovative Future-Ready Learning School Environment

Innovative future ready learning pedagogy and the school instructional environment. Involved in reimagining and supporting the redesigning of school environments for innovation are two nonprofit organizations. The first is the Carnegie Corporation (carnegie.org); the second is the Next Generation of Learning (nextgenlearning.org). Both organizations have developed design principles and attributes that reflect innovative secondary school environments towards students' preparation for college and future careers.

The first, the Carnegie Corporation, through its Opportunity by Design work (Hamilton & Mackinnon, 2013), has developed integrated principles of design that steadily improve student performance in secondary school for students' preparation for college and future careers (Lake et al., 2015). Consistent with research based attributes of effective schools, these principles yield strong results in students' preparation for college and future careers within schools that are "deliberately created and sustained" (Lake et al., 2015, p. 6). There are ten principles that the Carnegie Corporation purports for innovative school environments.

Ten Carnegie principles result in innovative future ready learning secondary school environments for students' preparation in skills for college and future careers. The first is that the innovative high school environment must have a clear mission that permeates the school culture. The second is that the innovative secondary school establishes priority of implementation of rigorous college and future career standards. The third is that the innovative high school meets individual student needs through personalized instruction. The fourth and fifth principles emphasize developing criteria that align with the school structure and mission priorities for choosing staff, building on and using the strengths of the teachers and employees. The sixth principle for an innovative secondary school environment is the connection it makes and sustains with the school community. The seventh and eighth principles focus on integrating students' personal development to optimize effort and engagement that supports them through transition to high school and postsecondary transition from high school into college and future careers. The ninth and tenth principles, of innovative secondary school environments, involve the proper management and operations of the physical school environment in creating an atmosphere that continues to improve the school environment and instructional model. The

second, the Next Generation Learning Challenges (NGLC) [Edwards, 2015], has also aligned attributes of innovative school environments that prepare students for college and future careers.

There are six design characteristics that NGLC purports to contribute to students' preparation for college and future careers (Edwards, 2015). The first attribute is that learning outcomes are important as they reflect mastery of academic content through state testing scores and measurement of deeper learning towards college and career preparation within a sustainable and scalable business model. The second and third attributes are student focused in that students are able to progress at their personal learning rate and should be actively engaged in learning, without the confines of a classroom or school campus. The fourth and fifth attributes are that utilization of technology must be as an effective teaching practice to personalize instruction and allow for flexibility in providing differentiated instruction, assessment and pacing, accommodating students' learning styles in the context of high expectations toward students' preparation for college and future careers. The last attribute focuses on the sustainability and scalability of innovative school environments to duplicate their results over time and within other school settings through adoption of innovative future learning strategies and practices towards students' preparation for college and future careers.

Carnegie principles and NGLC attributes provide the framework for developing innovative school environments that prepare students for college and future careers. However, schools do not exist independently of governing structures. School district policies and procedures can impede or support schools in creating innovative school settings (Hill & Maas, 2015; Lake et al., 2015).

Impediments to innovative school development may occur in the school district's politics, structure or attitudes (Hill & Maas, 2015). Examples of political obstacles include school board

compliance to unrelated mandates and state formulas that control teacher assignments. Examples of structural impediments include reliance on grants for and educational funding of special programs and school leadership that focuses on issues not related to school continuity. Attitudinal barriers can occur in the belief that teachers can operate in isolation; that an instructional program should offer numerous choices; and that use of assessment and accountability criteria is for meeting compliance standards instead of instructional effectiveness. However, a district that supports innovative school structures develops opportunities for students' preparation for college and future careers.

School districts that provide support of innovative school environments are also promoting the opportunity for students' preparation for college and future careers (Lake et al., 2015). There are six requirements of districts towards development and implementation of innovative future ready learning school environments. The first condition that districts may provide to facilitate innovative school development is its ability to choose, manage, develop and retain its teachers and leaders. The second condition is the ability for the school to determine which instructional practices to implement to best meet its mission and vision for students' personalized instruction. The third condition is the timely access to informative data on student performance and instructional effectiveness. The fourth condition is to allow the school the ability to control its budget allocations entirely. The fifth condition that districts can provide to the innovative school development is time and support to implement the school's new design for effectiveness and coherence, all the pieces fitting together to create positive outcomes for student achievement. The last support that districts can provide to innovative school development for future ready learning towards students' preparation for college and future careers involves the ability of students and families choice of enrollment, not assignment. Both, the Carnegie

principles and NGLC attributes in the context of innovative school development towards students' college and future career preparation and the student's' family's right to choose the instructional environment are aspects of K-12 public education that have given rise to the charter school movement.

Innovative future ready learning pedagogy and charter schools. Historically, the presence of charter schools, amongst others, which include voucher schools, community schools, magnet schools, and schools with open enrollment, are part of an ongoing political and ideological debate regarding school choice (Convertino, 2016). The charter school movement began in response to the report, *A Nation at Risk* (U.S. National Commission on Excellence, 1983). This report recommended to “restructure schools to provide a professional environment for teaching, freeing them to decide how best to meet state and local goals for children while holding the accountable for student progress” (p. 3). Subsequently, the report, *Education by Charter: Restructuring School Districts* (Budde, 1988) outlined ways to restructure schools towards school improvement. The ultimate result of which was Minnesota writing the first law and then, opening the first charter school in the United States. The charter school movement had begun; it continues to grow as an option for students' preparation for higher education and future careers.

Charter schools are increasing as an option of school choice by parents (Convertino, 2016). Charter schools are public schools and receive the same categorical funding from the federal government, state financing for every student, and local funding as traditional schools. Their form of governance, also, allows for greater autonomy and flexibility in their curriculum and management (Convertino, 2016; Witte, Schlomer, & Shober, 2007). As a result, charter schools, viewed as providing alternative forms of teaching, have the opportunity to provide

alternate forms of instruction and innovative education for students' access to the knowledge and skills that prepare them for postsecondary endeavors (Convertino, 2016; Witte et al., 2007).

Subsequently, the District of Columbia and 43 states have passed charter school legislation in response to RTTT where states that included charter school expansion as an innovative reform received funding priority (Convertino, 2016). In its report, *How Charter Schools Provide Higher Levels of California Public University Access* (2016), the California Charter School Association presents conclusions on charter school benefits. Their report concludes that due to the flexibility and autonomy of charter school governance and curriculum, charter schools can use “non-traditional delivery models” to prepare traditionally underrepresented student populations in higher education as a “step up” in higher education access and acceptance (California Charter School Association, 2016, p. 24). Due to their flexibility of instruction and autonomy of governance structure, charter schools, also, have a greater opportunity to provide the innovative future learning pedagogy to prepare underrepresented student populations in higher education, with future knowledge towards equitable access to higher education and future careers.

Although access has improved for students traditionally underrepresented in higher education, a disparity continues to exist between access and successful completion of first generation students, students with exceptional needs, students of low socioeconomic status, and students from minority groups (Engle & Tinto, 2008; Means, Bryant, Crutchfield, Jones, & Wade, 2016). As a group of students that have similar demographics as first generation, low SES, minority or students with disabilities, homeless and foster youth, also, experience limited access to higher education and future career preparation.

Future-Ready Learning and Under-represented Students College and Career Preparation

Future implications of future ready learning pedagogy in underrepresented

students' preparation for higher education and future careers. In its 2014 document, *The Right to Education Law and Policy Review Guidelines*, UNESCO developed guidelines to address concerns about the limited access to educational opportunities given to millions of children and adults worldwide. The Programme for International Student Assessment (PISA; Tienken, 2016), also, reflects universal concerns of children's education regarding students' successful preparation for life through their academic programs, as nations compete, globally.

Within the United States, traditionally under-represented student populations in higher education are those with a low socioeconomic/low income status, first generation students, students from minority groups and students with disabilities/exceptional abilities (Engle and Tinto, 2008; Means et. al, 2016). The United States Department of Health and Human Services (HHS Releases Notice Concerning 2017 Federal Poverty Guidelines; The LIHEAP Clearinghouse, 2016) defines low-income status as households whose previous annual taxable income was less than 60% of the level of poverty. First-generation students are defined as those whose parents may have only completed secondary school without obtaining a bachelor's degree (Aud et al., 2010; Engle & Tinto, 2008) Next, the literature indicates that students underrepresented in higher education come from ethnic/racial backgrounds, African American, Latino/a and Native Americans (Pitre & Pitre, 2009). Finally, in 1975, the Individuals with Disabilities Act [(IDEIA), Naglieri & Kaufman, 2004) defines special education as services provided to students with exceptional needs due to physical and cognitive disabilities that impact their educational progress in the context of and in comparison to the educational services provided to general education students.

Conley (2014) indicates that those who are first in their families and under-represented student populations would benefit from the particular academic expertise and experiential skills

required to be college and career ready as first-generation college students and those from under-represented student populations. The first-generation college student who enters college without the experiences of others in their families having done so, are at a significant disadvantage in three areas (Pascarella et al., 2004). First-generation college students lack basic knowledge of costs, degree plans and expectations and academic preparation. Next, they have not developed the necessary transition to college skills needed to overcome feelings associated with going to college that may involve addressing social, cultural, and academic expectations. Finally, they are less likely to complete their degree as students from African American and Hispanic culture (Sparks & Malkus, 2013). Included in the category of underrepresented student groups in postsecondary education due to exceptional education challenges are foster and homeless youth.

Students with exceptional learning needs. Public Law 94-142 (PL 94-142) addresses the needs of students with educational challenges that affect their academic progress. Without regard to a child's disability, PL 94-142 ensures all students' certain rights as stipulated in a legally binding document called an individual education plan [(IEP), United States Special Education Programs Division for Innovation and Development, 1991]. The first right is access to a free and public education. Second, is to due process procedures when the course of the provision of educational services is unmet. Next, to assessment methods to identify and evaluate students' need for supportive education services that must be nondiscriminatory. Finally, to educational services provided in the least restrictive environment as determined by the student's assessment results. Students with special education services, also, receive consideration for educational early intervention services and support for a transition to higher education through their IEP. Special education services may also include behavioral supports and mental health services.

California foster youth education law. Assembly Bill 490 that became effective on January 1, 2004, governs the duties and rights regarding the education of students within the foster care system. Assembly Bill 490 addresses the responsibilities of school districts and schools in meeting the unique educational needs of foster youth regarding enrollment, school stability, grades, and activities. Educational services support early care, intervention, and transition to higher education for foster youth. The Law also ensures the provision of appropriate special education, behavioral supports mental health services.

The educational needs of foster youth are similar to those of students with educational challenges. Legal provisions made for foster youth and students with special educational problems ensure access to an appropriate education. However, the primary issue for students with special learning challenges, including those in foster care, is the right of inclusion. According to the United Nations Education, Scientific and Cultural Organization (Calderbank, 2016), inclusion is “a process of addressing and responding to the diversity of needs of all learners” (p. 13). Inclusion is decreased exclusion from and in education. Inclusion, also, requires increased participation in learning, cultural and community activities with access to modifications and changes in instructional approaches, content, strategies and structures. Inclusion, at its best, considers the education of students with special education challenges is the responsibility of the general school system, not a separate or an auxiliary system. Most education services to students with special education needs exist in specialized day classes on the public school campus. However, full integration within the general education classroom environment is a gradual process. As a result, the education of students with special education challenges continues to lag behind that of their general education peers, which often results in a lack of preparation for higher education and future career.

McKinney-Vento homeless assistance act for homeless youth and children. In

October 2016, changes to the ESSA amended the McKinney-Vento Act. The original act ensures the educational rights and protection of homeless youth and children (United States Department of Education Office of Elementary and Secondary Education, 2000). According to the McKinney-Vento Act (U.S. DOE, 2000), local education agencies, comprised of district schools, are to provide certain protections to homeless youth. A recent report on the status of homeless youth by the National Center for Homeless Education (2015) indicates significant findings. Based on information obtained from surveys, research of current and former foster youth state indicate that their experiences of homelessness have affected their education and social-emotional development. Similar to the experiences faced by foster youth, homeless youth experience greater school mobility and instability in their academic programs. They experience greater levels of absenteeism and lower academic achievement that usually produce a higher dropout rate, usually in middle or high school. These youth, also, reported that their schools did a fair to poor job supporting their needs. Just as with students with exceptional needs and youth in foster care, homeless youth have unique educational needs that are to be a focus of attention to ensure their preparation for higher education and future-career. See Figure 4 and Figure 5.

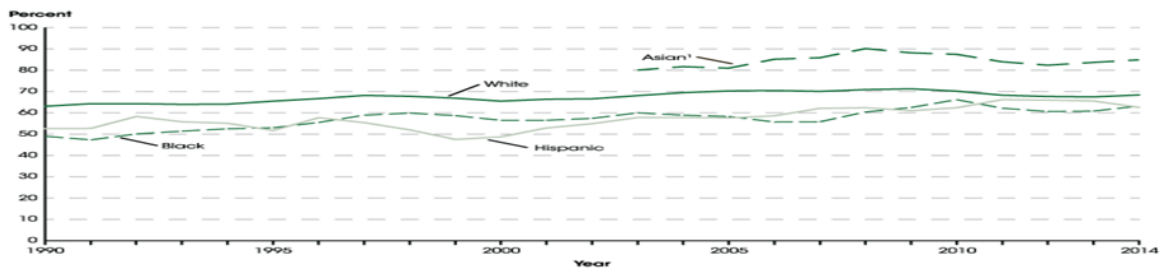


Figure 4. Percentage of recent high school completers enrolled in 2-4 year colleges by the October immediately following high school completion, by family income: 1990-2014.

Note: Low income refers to the bottom 20% of all family incomes. Middle income to the 60% in between the bottom 20% and the top 20% of all incomes; high income to the top 20% of all incomes. Source: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), October Supplement, 1990-2014. See Digest of Education Statistics 2015.

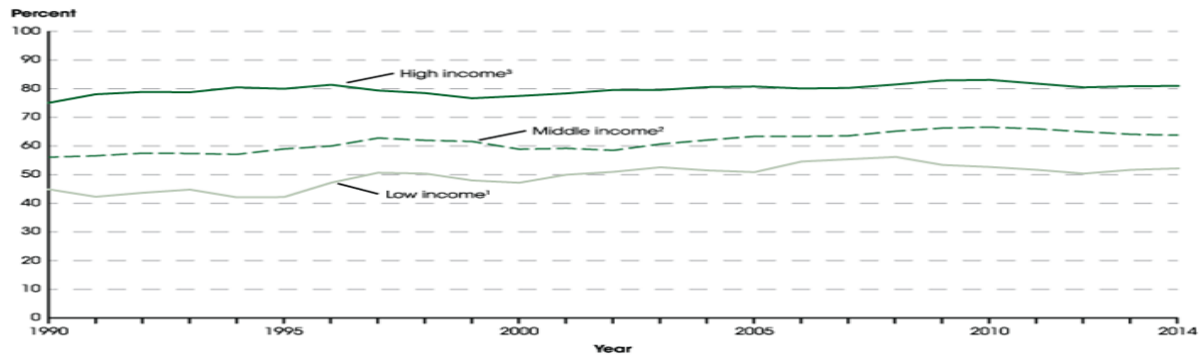


Figure 5. Percentage of recent high school completers enrolled in 2- or 4-year colleges by the October immediately following high school completion, by race/ethnicity: 1990–2014.

Note: Separate data on Asian high school completers have been collected since 2003. Source: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), October Supplement, 1990–2014. See Digest of Education Statistics 2015, Table 302.20.

Table 1

Undergraduate Student Enrollment

Percentage distribution of undergraduate students enrolled in postsecondary institutions, by disability status and selected student characteristics: 2007–08 and 2011–12				
Selected student characteristic	Students with disabilities ¹		Nondisabled students	
	2007–08	2011–12	2007–08	2011–12
Percentage distribution of students (Total)	10.9	11.1	89.1	88.9
Male	10.9	11.3	89.1	88.7
Female	11.0	11.0	89.0	89.0
White	11.7	11.1	88.3	88.9
Black	9.9	12.2	90.1	87.8
Hispanic	9.4	10.4	90.6	89.7
Asian	8.0	8.0	92.0	92.0
Pacific Islander	7.6	14.9	92.4	85.1
American Indian/Alaska Native	10.0	14.4	90.0	85.6

(continued)

Percentage distribution of undergraduate students enrolled in postsecondary institutions, by disability status and selected student characteristics: 2007–08 and 2011–12				
Two or more races	13.5	13.6	86.5	86.4
Other	11.3	—	88.7	—
15 to 23	9.8	9.0	90.2	91.0
24 to 29	12.8	11.3	87.2	88.7
30 or older	12.4	15.7	87.7	84.3
Dependency status (percent)				
Dependent	9.6	8.6	90.4	91.4
Independent, unmarried	14.1	14.3	85.9	85.7
Independent, married	12.0	13.3	88.0	86.7
Independent with dependents	11.5	13.1	88.5	86.9
Veteran	15.0	20.6	85.0	79.4
Not veteran	10.8	10.8	89.2	89.3

Source: U.S. Department of Education, National Center for Education Statistics. (2016). *Digest of Education Statistics, 2014* (NCES 2016-006), Table 311.10.

The number of these under-represented students prepared to enter postsecondary education towards success in a career is significantly below that of their peers. (See Figure 4, Figure 5 and Table 1). To prepare these under-represented student populations adequately for a higher education that would lead to success in future careers requires addressing their unique needs. Students, under-represented in higher education, require future ready innovative instructional pedagogy enhanced through technology and other effective practices for preparation for college and future careers. To address the needs of students currently underrepresented in higher education in preparation for future careers requires effective school leadership from the principal instructional leader.

Educational Program Leadership, Assessment and Sustainability in the Innovative Future-Ready Learning Environment

Conley (2007) purports students are ill prepared for success in higher education due to the gap that exists between secondary school experiences and higher education expectations. High school experiences that prepare students for postsecondary higher education and future careers requires school leadership that implements an efficient, innovative, instructional plan that supports students' achievement. Fryer (2014) identifies five practices, usually performed at charter schools than traditional high schools, (Dobbie & Fryer, 2013), and determined to create a high level of student achievement towards underrepresented students' preparation for higher education and future careers. One particular area of focus for implementation of effective practices for student achievement was in changing human capital to locate school leadership with a vision for student preparation for higher education.

Within the study (Fryer, 2014), changes were made at 20 traditional high schools in Houston, Texas to increase student achievement. Changes included lengthening the school day by an hour, and the school year by ten days. Students attending Saturday school received incentives. Changes in human capital resulted in 19 principals removed and 46% of teachers leaving. Teachers administered interim assessments to gather data to guide instruction. In addition, students participated in tutoring. A culture of high expectations for college established a vision for school leadership, rubric criteria for school and classroom environment and school-parent-student contracts with specified student performance expectations and school leadership accountability. According to O'Donnell and White (2005) principal's instructional leadership behaviors affect student achievement. Student achievement requires educational program assessment by the educational program leadership. Students' preparation for higher education

requires the vision of the principal and the mission of the educational organization to align with federal government initiatives emphasizing postsecondary student success in higher education and future careers. Towards that end, educational program assessment is the endless task of the principal school leadership in developing a program that maintains student achievement and is sustainable. Research indicates Principal leadership is critical towards students', and school's continuous success, and a valuable component to ensuring a school's educational sustainability (Moos, Johansson, & Day, 2011).

Principal leadership. Authored by Moos et al. (2011), an international study researched practices of school principals in Australia, Shanghai, Denmark, England, Norway, Sweden and the United States. These researchers examined the factors that produce successful principal leadership, the practices that they employ as successful Principals, the conditions that positively and negatively affected their success, and the link their success had to student success and school sustainability. The research design included a mixed method approach using documents, observations, interviews, shadowing and surveys at the beginning and end of a five-year period. Despite the country of origin, national political climate or challenges in fluctuating school area demographics and changing principal school leadership, the research made the following conclusions. First, successful school administrators communicated and shared "core ethical and moral purposes" (Moos et al., 2011, p. 5). The school leadership developed and distributed all levels of leadership teams. School administrators actively engaged participation in the education program from external organizations in the community. The principal emphasized both academic achievement and social learning skills development for all students (Moos et al., 2011). Next, the study concluded students' success and educational program sustainability connected to the principals' leadership styles.

School principal leadership styles varied across the spectrum of educational research sites. School administrators exhibited collaborative, democratic and consultative leadership styles. Other leaders displayed situational and distributive leadership; others a transformational leadership style. Despite their leadership styles, successful school principals were willing to work with their staff in making decisions regarding the educational program, involve staff in leadership through leadership teams, maintain visibility and an open door policy, care about the program and staff concerns, and maintain excellent communication with staff parents and the community. Staff considered administrators who participated in these activities as trustworthy. According to the research, trust, built by leadership over time, connects increasing levels of individual, relational and organizational trust to building capacity within the educational program towards student success and its program sustainability (Moos et al, 2011). Another study, with similar results, also identified and synthesized research of leadership practices that influenced student achievement.

Provided with expert recommendations, Hitt and Tucker (2016) conducted a literature review of peer-reviewed journal articles from 2000-2014 that produced 56 research studies and three existing frameworks that provide evidence how school leadership influences student achievement. There were three frames used as the empirical foundation of the research. The first was the *Essential Supports Framework* (Sebring, Allensworth, Bryk, Easton, & Luppescu, 2006). The second, *Learning Centered Framework* (Murphy, Elliot, Goldring, & Porter, 2006). The third was the *Ontario Leadership Framework* (Leithwood, 2012). This research unifies the empirical research on leadership practices that influence student achievement. The results, also, provide a framework as evidence for the direction school principals follow to ensure students' success. The researcher's stated purpose was to, "propose a unified model of school leader

practices that a) reflects the thinking of eminent scholars, b) is supported by rigorous empirical research, and c) conveys the evolving breadth and depth of practices that contribute to improved student achievement” (Leithwood, 2012, p. 536).

The researcher’s review of the peer-reviewed journal articles and three frameworks resulted in 28 practices evidenced by the research on effective school leader practices that influence student achievement (see Table 2). Clustering of the 28 practices into five domains considered their inclusion in all three frameworks. Then considered were practices that indirectly affect student achievement in the organizational context. Finally, considered were practices associated with the responsibilities and routines that indirectly affect teaching. The first area of leader practices was building professional capacity. The second domain was connecting with external partners. The third, creating a supportive learning organization. The fourth, establishing and conveying the vision. The last was facilitating a high-quality learning experience for students (Hitt & Tucker, 2016).

Research results by Hitt and Tucker (2016) corroborate similar findings by Moos et al. (2011). Determination of effective practices involves communicating the vision or goals of the school organization. Then, the principal willingly works with staff to accomplish the purposes of the organization developing trusting relationships with stakeholders and building staff capacity. The building of collaborative and trusting relationships promotes a supportive learning environment that yields successful student achievement. Additionally, Hitt and Tucker’s domain of building capacity reflects Moos et al.’s (2011) self-renewing capabilities as a means to an educational program’s sustainability. Examined are the uses of educational program assessment tools and their ability to sustain students’ success.

Table 2

Domains in Three Prominent Frameworks

<u>Framework</u>	<u>Domains</u>
Essential Supports (ES)	Leadership for change Ambitious instruction Student-centered learning environment Professional capacity Parent/community ties
Learning-Centered Leadership (LCL)	Vision for learning Instructional program; curricular program; Assessment program Communities of learning Resource acquisition and use; Organizational culture Social advocacy
Ontario Leadership Framework (OLF)	Setting directions Managing the instructional program Developing people Redesigning the organization

Note. Information adapted from Leithwood (2012), Murphy et al. (2006), and Sebring et al. (2006).

Educational program assessment. The monitoring of the United States education organization exists through a federal education code and a state education code by which local school districts develop policies and procedures. The Code of Federal Regulations (The United States Patent and Trademark Office, 2012) is general and permanent rules published by various government agencies. Title 34 alone consists of different regulations governing the education organization; Section 300-399 specifically addresses the educational needs of students who have learning challenges. The California Code of Regulations, modeled on the Federal Code of Regulations, exists as a set of rules and regulations filed, after review and approval of the office of administrative law, with the Secretary of State. Title 5 of the California Code of Regulations is the Education Code. All education organizations must develop policies that affect procedures

of students' instruction towards ensuring their preparation for higher education and future careers.

In 1988, institutions of higher education evaluated their current educational programs as a federal mandate for assessment that linked to its accreditation. As a result, Astin's (1984) philosophy of educational program evaluation, which closely linked assessment to the institution's mission, prompted colleges and universities to develop new assessments of their educational programs. Astin's framework continues as one foundation of program evaluation to ensure that assessment furthers the institution's educational mission as it reflects on student involvement in the school environment (Astin, 1984). Astin, in his student involvement theory, defines student engagement as, "the quantity and quality of the physical and psychological energy that students invest in the college experience" (p. 528). Astin (1984) proposes that the more the student engages in the college experience through time spent in academic study, extracurricular activity and faculty and personnel interaction, the more the student learns and develops, personally. Therefore, increased or decreased student involvement through student inputs within the instructional environment and output upon exiting the academic environment is the premise for evaluation of educational program success (see Figure 6).

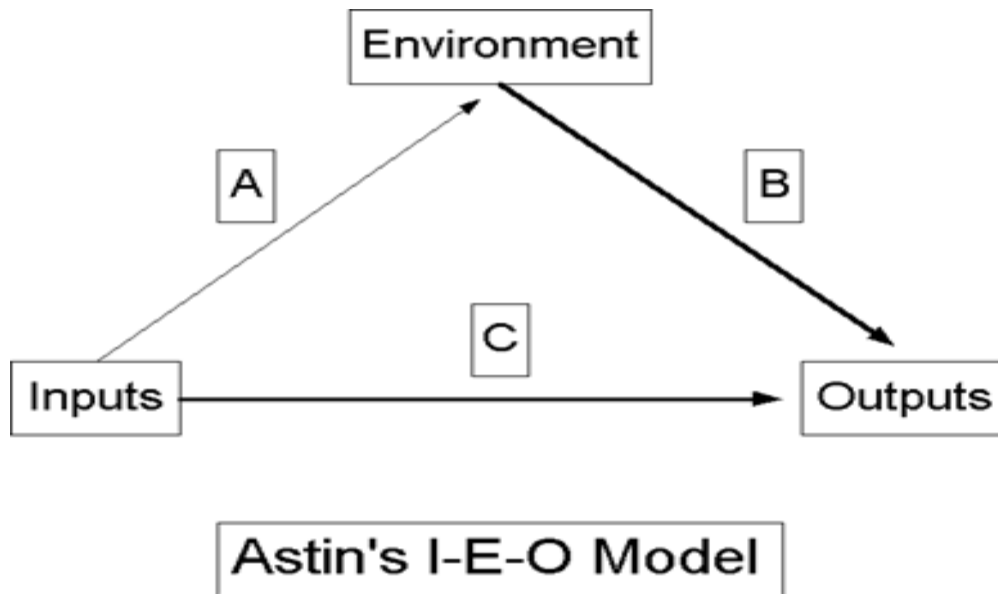


Figure 6. Astin's I-E-O model.

Source: <http://uwm.edu/saassessment/assessment-cycle-reports/ieo-model>

Another framework used as criteria for program excellence is the Baldrige framework. In 1987, President Reagan created this program as a bipartisan effort to implement excellent organizational practices that take a holistic view of program management (Karathanos & Karathanos, 2005). Based on Kaplan and Norton's concept of the balanced scorecard (BSC) in which a business organization's success derives solely from its financial status is the Baldrige framework (Karathanos & Karathanos, 2005). Kaplan and Norton's BSC provides business performance evaluation as related to internal business practices, learning and growth, customer satisfaction, and financial stability. Recognized as very instrumental in augmenting United States global competitiveness, the Baldrige framework analyzes an organization's management across seven performance categories as shown in Figure 7.



Figure 7. The Baldrige framework.

Source: <https://www.nist.gov/baldrige/publications/baldrige-excellence-framework/education>

In 1995, the Baldrige framework for the analysis of a business organization's performance began conversion for use in education. In 1999, development of the Education Criteria for Performance Excellence culminated in the Congressional approval of the Malcolm Baldrige National Quality Award for Education. Similar to Astin's framework of educational program effectiveness as aligned to the college and university mission and reflected in student involvement, the Baldrige framework proposes that an organization's measurement system aligns with its strategic goals and objectives.

Finally, Kohler, Gothberg, Fowler, and Coyle, (2016) have developed a model that specifically evaluates programs designed for students' postsecondary transition into higher education and career (see Figure 8). As with Astin's Student Involvement Framework and Baldrige's BSC, a portion of the evaluation of transition programs for students is the assessment

of the program’s structure. The area of program structure evaluates the program’s philosophy, policies, human resource development, program evaluation, strategic planning, and resource allocation. Four other areas of Kohler et. al.’s program evaluation include (a) family involvement, (b) interagency collaboration, (c) student-focused planning, and (d) student development. The areas of family involvement and interagency collaboration as student-focused planning are aspects of her evaluation plan that differ from Astin’s and Baldrige’s frameworks. However, these three program assessment tools evaluate educational program success as emphasized by student involvement that produces instructional outcomes that meet the mission and vision of the organization. RTTT demonstrates the current impetus of secondary education in the United States is towards students’ development of college and career readiness skills (United States 112th Congress House of Representatives, 2011).

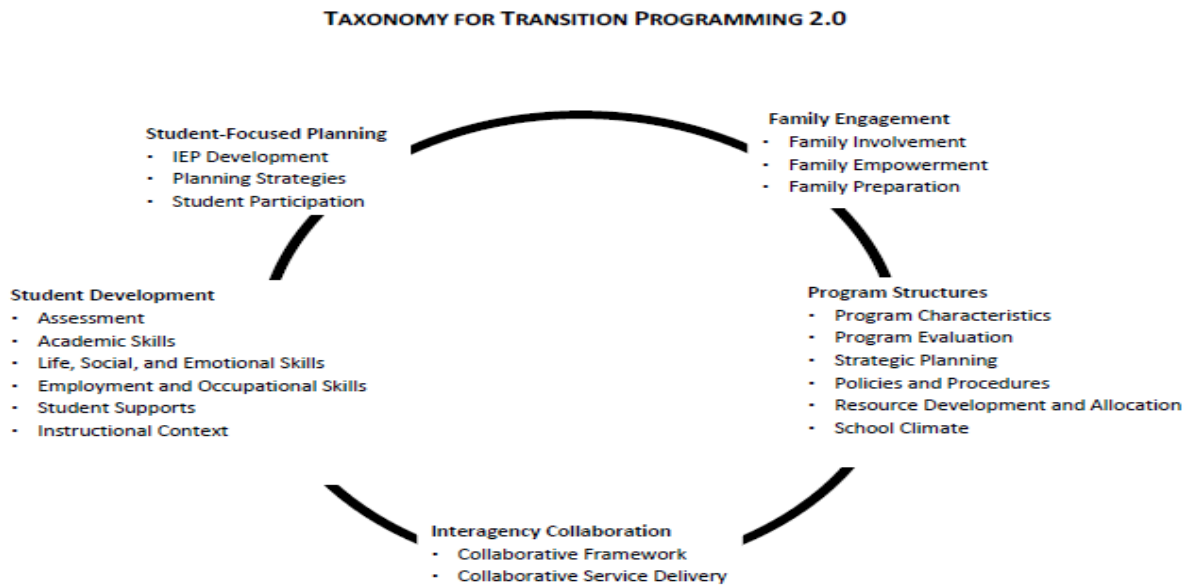


Figure 8. Taxonomy for transition programming.

Note. From *Taxonomy for Transition Programming 2.0* (p. 3), by P. D. Kohler, J. E. Gothberg C. Fowler, & J. Coyle (2016), Champaign, IL: University of Illinois. Copyright [2016] by Kohler et al. Reprinted with permission.

Education program sustainability. Warner and Elser's (2015) research claims, "solutions-based learning is the foundation of sustainability education (p. 1). They propose a link between student education, the community, and local businesses with an emphasis on developing competencies in action orientation, futures thinking, normative competence and systems thinking. Educational sustainability in the K-12 system should address two areas. First, it should provide opportunities for students to collaborate with their community to solve problems. Second, solving the problem should connect to relevant academic learning that relates the interconnectedness of instruction to the practical side of solving a problem. Consistent with one of the Carnegie principles for school design that fosters student success is the connection the school makes with its community. As students engage in tackling real-life issues through instructional practices of innovative pedagogy, they are prepared for postsecondary endeavors in college and future career. The research concluded in acknowledging the gap that exists between current instruction and the need for instructional practices that connect academic learning to real-life problem-solving activities as in innovative pedagogy, in which the leadership is forward thinking, and the educational program becomes sustainable.

Wiek, Withycombe, and Redman (2011) also developed a framework of sustainability competencies based on a literature review of 15 reports and whitepapers and 28 books and peer-reviewed journal articles. Using the definition of competence from Spady (1994), their frame defines competence as "a functionally linked complex of knowledge, skills, and attitudes that enable successful task performance" (p. 204) and problem-solving capacity. A key competency is "having the skills, competencies, and knowledge to enact changes in economic, ecological and social behavior without such changes always being merely a reaction to pre-existing problems" (de Haan, 2006, p. 22).

Although focused on sustainability regarding “anthropogenic challenges” (Wiek et al., 2011, p. 203), this sustainability framework synthesizes the literature in developing five core competencies in sustainability. The first key competency is anticipatory competence, the “ability to collectively analyze, evaluate, and craft rich ‘pictures’ of the future related to sustainability issues” (Wiek et al., 2011, p. 209). The second is interpersonal competence, the “ability to motivate, enable, and facilitate collaborative and participatory sustainability through advanced skills in communicating, deliberating, negotiating, collaborating, leadership, pluralistic and trans-cultural thinking and empathy” (Wiek et al., 2011, p. 211). The third, normative competence is the “ability to collectively assess the unsustainability of current and future states of social-ecological systems and create and craft sustainability visions for these systems” (Wiek et al., 2011, p. 209). The fourth is strategic competence, the “ability to collectively design and implement interventions, transitions, and transformative governance strategies toward sustainability” (Wiek et al., 2011, p. 210). The fifth is systems-thinking competence, the “ability to collectively analyze complex systems across different domains (society, environment, economy, etc.) and different scales (local to global)” (Wiek et al., 2011, p. 207).

The literature mentioned above on sustainability can reflect on three areas of importance in students’ preparation for higher education and future-career. The first is the principals’ leadership skills in sustaining an educational environment for students’ future-ready learning experiences. The second is the students’ use of the five core competencies to develop their systems’ thinking towards preparation for their postsecondary higher education and careers. The third is the students’ ability to use their personal systems’ thinking within the context of having opportunities to engage in their learning as linked to businesses and their local community in pursuit of their future postsecondary higher education and future careers. Each area involves

emphases on understanding current norms through systems thinking and developing future thinking to solve problems. According to the Next Generation of Learning non-profit organization's authors, Cochran-Smith and Lytle, (2009), a school environment based on a business model is sustainable and scalable and can achieve the goal of students' successful preparation and future careers. A school that can replicate its results in student achievement and access to postsecondary higher education and future careers across different settings produces sustainability and scalability. The business model of sustainable and scalable school environments and innovative instructional programs has resulted in charter schools that have developed their programs with support from grants from organizations that ensure the continuity of successful educational programs towards student success and access to postsecondary college and future careers.

Community colleges and educational program sustainability. Established to provide affordable access to higher education to the under-represented citizens coming from foreign countries and disadvantaged backgrounds was the system of community colleges. They expanded an individual's access to higher education provided through the Morrill Act in agriculture and the mechanical arts in 1862 and to African Americans in 1890. Subsequently, opened, in 1901, as a democratizing venue for under-represented individuals in higher education was the first community college. William Rainey Harper, President of the University of Chicago, founded Joliet Junior College, the first and oldest existing community college, in Illinois in 1901.

The basis for their identity as community colleges is their location in local communities. The early focus of community colleges was on providing a general education in liberal arts. During the 1930's Depression Era, community colleges offered job-training programs to the

masses of unemployed. In 1948, a community college network developed to address local community needs in response to the GI Bill because of the new, skilled jobs created by military industry conversions to consumer goods after WWII. The GI Bill created a greater demand for options in higher education. Subsequently, the network of community colleges increased in the 1950s and 1960s, providing affordable access to higher education to individuals in their local neighborhood (Chancellor's Office Portal Home, n.d).

Historically and currently, community colleges demonstrate flexibility as centers of educational opportunities, breaking down social and economic barriers as a gateway in the local community for those interested in seeking a higher education. Established in 1921, the American Association of Community Colleges (AACC) reports over 1,132 United States community colleges. The community colleges enroll more than 13 million students, nearly 50% of all United States undergraduates and graduating 20-25% of all first generation, full-time students (The 50 Best Community Colleges in the United States, 2016; Top 50 Best Value Community Colleges, 2016).

Community college rankings. The AACC used the results of numerous studies on community colleges' reputation, coupled with students' completion and graduation rates, as determinants of the colleges' success to rank the top 50 United States' community colleges (50 Best Community Colleges in the United States, 2016; Value Colleges: The best colleges, lowest costs and highest returns, 2016.). The AACC also identified several significant factors reflecting the overall mission of the colleges as selection criteria for the top community colleges. The first criteria, students' perseverance towards obtaining an Associate degree, completion of a certificate program, and transference to a four-year university as reflected in "sustained achievement outcomes." A second criterion, students' engagement in learning that values and

expands their pursuit of multiple areas of study and educational experiences as reflected in “learning outcomes.” Third, student graduates’ salaries and employment and advancement rates as matched with skills and needs in the workplace as reflected in “deployment results.” Next, practices and policies that address student diversity and “equitable outcomes” and success among underrepresented racial/ethnic groups (Native American, African American, and Hispanic/Latino), first-generation students and students from low-income families. Finally, students’ access to financial aid resources with emphasis on maintaining reasonable tuition costs and minimizing post-school debt as reflected in cost-to-value outcomes (The 50 Best Community Colleges in the United States, 2016). These significant factors delineated by the AACC in determining the top fifty (50) United States’ community colleges coincide with their criteria for collaborating with K-12 education to improve student success in their report, *Seizing the Moment* (2016).

There are six schools in California that firmly measure these significant factors, ranking them in the top fifty community colleges in the United States (The 50 Best Community Colleges in the United States, 2016; Value Colleges: The best colleges, lowest costs and highest returns, 2016). CNN has also rated U.S. community colleges in regards to graduation rates and student transfer into four-year universities within three years in its 2012 report of top community colleges (How does your community college stack up? - CNNMoney.com," 2012). Ranked #2 is Santa Barbara City College by bestschool.org; #8 by valuecolleges.com and CNN ranked #23 at a 66% student graduation/transfer rate. Rated #4 is East San Gabriel Valley Regional Program and Technical Center; CNN ranked East San Gabriel Valley Regional Program and Technical Center #1 at a 93% student transfer rate. Ranked #13 is Victor Valley College in Victorville; CNN ranked #3 at an 84% student transfer rate. Ranked #15 is DeAnza College in Cupertino by

bestschools.org; #1 by valuecolleges.com; CNN ranked #10 at a 74% transfer rate. Ranked #35 is Moorpark College in Moorpark; CNN ranked #26 at a 64% transfer rate. Ranked #38 is Foothill College in Los Altos Hills; CNN ranked #29 at a 63% student transfer rate.

Significant features of each of these California community colleges are the community college system's mission in addressing the specific needs of the local community at the local community college (50 Best Community Colleges in the United States, 2016). Santa Barbara City College has a program that assists students in their first year to complete remedial courses as it also serves a high number of underrepresented students of Hispanic heritage. East San Gabriel Valley Regional Program and Technical Center is one of 72 regional occupational centers that provides adult and high school students with practical preparation in the job specific skills required for employment in the community, through internships with local businesses and industry. Victor Valley College is one of the largest in California with a student population of 12,000. DeAnza College is part of Silicon Valley's Foothill-DeAnza Community College system, housing the Kirsch Center, the first building in the U. S. community college system to receive the LEED Platinum rating as a carbon-easy, sustainability leading building. One of three in the Ventura County Community College system and second in the state for student transfer to independent private colleges and universities, University of California and California State University, is Moorpark College. There is a high school on its campus that provides the opportunity for junior and senior high school students to obtain dual college and college credit. Moorpark College also supports foster youth in pursuing a higher education through participation in the Foster Youth Success Initiative, and its "Desire2Learn" program, offering students online courses. However, Foothill College was the first community college in California to offer online courses. Given the impact that community colleges have in addressing the access of first

generation students to higher education, only 50% of these California community colleges have programs that support first generation students' success in college through programs offered to high school students. These California community colleges, of the top fifty in the nation, are Santa Barbara City College, East San Gabriel Valley Regional Occupation Program and Moorpark College (50 Best Community Colleges in the United States, thebestschools.org, 2016).

Reviewing the demographics, the system of community colleges, particularly the California Community College system, provides access to higher education for numerous under-represented groups (California Community Colleges Chancellor's Office, n.d.). As the United States' largest system of higher learning, the 113 California campuses offer higher education and technical training to over 2.1 million students. Thirty percent of Californians, 18-24 years, 30% enroll in a community college; 67 % are of diverse ethnic backgrounds, and 53% are female. The growth expectation of occupations that require an associate's degree is 18% through 2020 according to the United States Bureau of Labor Statistics. These students will be ready to fill the expected workforce skills gap as baby boomers retire, leaving a dearth of workers with the critical thinking skills to take their places (American Association of Community Colleges, n.d.).

The California Community College system has already begun to address the state's need for an educated workforce while also closing the achievement gap for those students traditionally underrepresented in higher education through their Student Success Initiative (Foundation for California Community Colleges, n.d.). Under-represented student groups receive grants to decrease the amount of time needed to complete an Associate's degree and transfer credits to an independent four-year college or university, enabling taxpayers and students in saving money by reducing inefficiencies and eliminating the need for other societal reforms. In addition, the California Community Colleges system in collaboration with the California State University

system have developed the Associate degree for transfer program that makes it easier for students to transfer from the community college to the state university. This initiative produces \$160 million in cost savings, annually. These cost savings provide access to higher education to 40,000 additional community college students and 14,000 California State University students, including secondary school graduates from early college high school programs. Each year these initiatives produce favorable results with students entering the community college system, obtaining a degree and transferring to a four-year university. As the local high school and community college collaborate with the same effort in ensuring student success within a shorter timeframe, students have a greater likelihood of completing their first degree and continuing their higher education, adding increased value to California's workforce.

The Community College system benefits its community workforce in numerous areas. It offers short-term job training certificates and associate degrees in more than 175 fields, with over 100,000 persons trained in workforce skills in specific industries. California Community Colleges also educate 70% of the nurses in the state, emergency medical technicians and 80% of law enforcement personnel. Finally, of the 29% of students transferring from the California Community College to the University of California college system, 48% obtain a bachelor's degree in STEM, science, technology, engineering, and math. As a result, the California Community College provides the greatest amount of employee training in the state and nation, producing a high return on the educational investment.

A high return on a college education begins in the California Community College system (thebestschools.org, 2016). First, for every \$1 invested in college graduates, the state of California receives \$4.50 as a net return on investment. Second, California college graduates earn \$400,000 more in life than those graduating from high school only. Next, graduates

obtaining a certificate or degree from the California community colleges will receive approximately double in salary than their peers within three years. Additionally, community college attendance and completion increase the likelihood of getting a job as compared to those who only have a secondary school diploma. Finally, the California Community College system is the most cost-effective system of education at approximately \$5,000 per year and is a gateway to access of better employment. Programs of collaboration between community colleges and secondary schools create pathways for underrepresented student populations' early access to higher education. Current partnerships between community colleges and high schools called Early College High Schools (ECHS), design sustainable programs that support students' preparation for higher education and future careers.

Early college high schools. The Early College High School (ECHS) system was the outcome of the Early College High School Initiative sponsored by the Bill and Melinda Gates Foundation and supported by the W.K. Kellogg and Ford Foundations and Carnegie Corporation (www.earlycolleges.org). The California Education Code (Section 11302) defines the ECHS as an innovative partnership between the public secondary schools and local community colleges that form a coherent blended high school and college educational program.

As a nonprofit, the Jobs for the Future (JFF) organization implements the ECHS program, providing early college high schools with development and support to sustain their programs. Early college high school designs operate on formal agreements between the high school (charter, magnet, city public or tribal) and community college, public state university, a private liberal arts college, or historically black institution.

There are essential elements common to the ECHS programs. First, there is a coherent framework of instruction. Second, the framework of instruction creates a student-centered

learning environment focused on access to higher education. Next, their location is on or near a college campus. Finally, the college and school district partnership supports students' access to higher education courses while in high school to earn an Associate's degree, technical credential, two years' college credit and high school diploma within four years (www.earlycollege.org).

Community college and secondary school partnership educational sustainability. In partnership with intermediaries, JFF offers school districts cost effective, proven ways to transform schools by building teacher and school capacity to support underrepresented student populations accessing higher education (www.jff.org). These intermediaries include Gateway to College National Network, Middle College National Consortium and The Foundation for California Community Colleges. JFF and ECHS program models create a sustainable system of high schools and community college partnerships towards underrepresented student access to higher education and success in future careers. Gateway to College National Network, Middle College National Consortium, and The Foundation for California Community Colleges consist of groups of secondary public school and community college partnerships throughout the United States. Each addresses the preparation of underrepresented student population for higher education and future careers in specific ways. Each organization is a model that sustains students' access to postsecondary education in preparation for future careers.

The California Community Colleges Foundation supports the largest system of higher education in the United States, the California Community Colleges. Founded in 1998 as a statewide non-profit organization, the California Community Colleges Foundation supports 113 colleges and college foundations for the benefit of the students in 72 districts. In 2002, the Foundation collaborated with the Bill and Melinda Gates Foundation to develop ECHS programs. The Foundation supports innovative, scalable and sustainable programs that introduce

new approaches or replicate best practices towards students' successful access to higher education and future employment. To this end, the California Community Colleges Foundation believes in collaboration for growth and development through innovation, building strong relationships in shared leadership, resulting in shared success (Foundation for California Community Colleges, n.d.).

In their design model, the Gateway to College National Network partners with more than 250 school districts to provide the opportunity for students aged 16 to 21, who have dropped out of high school, to complete their education and access postsecondary education. Students can obtain significant dual credit, and they receive holistic support in an environment of innovative teaching and learning. Students receive scholarships for tuition, books and staff support in the form of a resource specialist/counselor. College professors teach the course offerings on the college campus for dual credit, assisting students in completing their high school diploma while working towards a postsecondary credential. The Gateway to College structure gives assistance in the implementation of curriculum alignment, credit articulation, special education agreements, teacher certification, and calendar waivers. The organization also provides training on instructional techniques and student support strategies for student accountability. The student-centered approach focuses on the student's strengths towards developing solutions. Students receive instruction to obtain their high school diploma and in the soft-skills of self-advocacy, communication, personal learning style, time management, stress management towards in preparation for higher education. Finally, there exists a sustainable program with the partner college of intentional collaboration to ensure student success in getting their high school diploma and accessing higher education possibilities (www.gatewaytocollege.org).

The Middle College National Consortium (MCNC) is composed of nearly 40 public and

charter campuses on or near college sites within sixteen states (mcnc.us, n.d.). Their program design focuses on four areas, (a) high school- college collaboration, (b) college and career ready education alignment, (c) comprehensive academic support, and (d) continuous organizational improvement. Membership varies at different levels and services provided to MCNC schools include customized coaching, a leadership conference, student leadership initiative, data-driven decision-making, summer professional development, math and literacy support, peer review, principal residency, and student support. Finally, membership at different levels is available. At MCNC attention is given to students' educational and emotional needs and it is expected that students are well known and recognized for who they are. Their program model supports growth in students by combining challenge with the proper supports that is critical to student success in higher education (mcnc.us).

Summary

Students in the current global economy learn in a manner facilitated by technology use. Technology skills developed for use in the academic environment will facilitate students' preparation for higher education and future careers. Students, who develop the skills needed for higher education through innovative instructional practices that are action-based and connected to the use of technology, will develop as self-determined life-long learners with the learning skills needed to have an impact in tackling problems, in the society, community and the global environment. However, the use of future ready innovative pedagogy for students' preparation for higher education and future careers needs to, also, address issues of diversity, students at risk, and special education, foster and homeless youth, to impact future policies in K-12 instruction towards students college and career preparation. The extensive use of instructional best practices with attention given to the development of college to career preparation at all levels of secondary

public education leadership will alter the postsecondary educational environment for students most underrepresented in higher education. Collaboration between community organizations, public high schools, and community colleges in creating programs for underrepresented students' early access to higher education is one way to support their preparation for future careers in a manner that is sustainable. Chapter 3 presents an outline of this study's design and data gathering process and a description of the population. The chapter also presents a discussion of validity and reliability and an explanation of the interview protocol.

Chapter 3: Research Design and Methodology

Introduction

Chapter 3 presents a description of the design of qualitative research approach implemented for this study. First, the nature of the research discusses characteristics, strengths, weaknesses and assumptions of qualitative research studies. Second, the methodology section describes the design of this study and the specific reasons for choosing the particular methodology for this study. Third, the research design section provides information regarding the identification of the research analysis unit, population and sample, human subject considerations and data collection procedures. Identification of the study's analysis unit, population and sample include the detailed process implemented in the selection of the criteria used for inclusion and exclusion in the sample. Exclusion criteria, also, state the conditions, qualifications, and experiences that would disqualify someone who fits the description of the analysis unit. The next part of the research design section discusses the human subject considerations made for the study's participants as determined by the Institutional Review Board (IRB) of Pepperdine University. The final part of the research design section discusses the process of data collection from the study's sample participants. This section includes the steps taken to contact and interview the participants. The next segment of this chapter describes the interview protocol used to create the interview questions that address the research questions based on the literature review. Next, there is a discussion of research validity and reliability. Then, acknowledged is any researcher bias. Finally, the chapter concludes with the research data analysis. The data analysis details the coding process and the steps taken for inter-rater reliability. A detailed description of these areas within this chapter sets the foundation for good quality research (Creswell, 2013; Fox, 1958).

Re-Statement of Research Questions

The research questions direct the approach to and focus of inquiry in the proposed study (Creswell, 2013). The research questions seek to answer what the researcher wants to know about a particular natural or human phenomenon (Agee, 2009). This study aims to direct the focus of the inquiry by answering the following research questions:

Research Question 1: What best practices and strategies do high school principals employ that determine students' college and future career preparation?

Research Question 2: What challenges do high school principals face in implementing effective college and future-career readiness programs?

Research Question 3: How do high school principals measure success in college and future-career readiness programs?

Research Question 4: What recommendations do high school principals have for implementing college and future-career readiness programs?

Nature of the Study

As a descriptive study, a qualitative research methodology adequately addressed the proposed research questions. With similarities to the scientific method, Creswell (2013) defines the "research design" (p. 5) as the course of identifying a problem, asking questions, collecting, analysis and synthesis of data and writing the results. The two distinct types of research designs are quantitative research and qualitative research methodologies. Quantitative methods measure findings regarding how much, how frequent, or how intense; a qualitative approach encapsulates the researcher and subject relationship as well as the situational content of the study (Denzin & Lincoln, 2011). The objective of qualitative research methodology is to gain an in-depth richness and quality of information by compiling and assessing the information provided by a

limited number of individuals, actively involved in high school students' preparation for higher education and future careers. An interview process, frequently used in a qualitative research design, accomplished this objective (Brief, 2012; McFadzean, 2007; Network, 2000).

According to Creswell (2013), "Qualitative research is a situated activity that locates the observer in the world and consists of a set of interpretive, material practices that make the world visible" (p. 43). Therefore, observation and transformation of the world occurs through use of the tool of the qualitative research design methodology (Creswell, 2013). As a result, an essential characteristic of qualitative research is that it explores and interprets phenomena in its natural environment (Creswell, 2013; Denzin & Lincoln, 2011). There are other distinct characteristics of qualitative research design.

There are eight unique features of the qualitative research design (Creswell, 2013; Johnson & Christensen, 2008; Lichtman, 2012). The first characteristic is the setting. Within the qualitative research design, the collection of data occurs in the natural environment where participants experience the phenomena studied, as opposed to a lab-type situation. The second characteristic involves the researcher's role. The researcher is an integral part of the process of gathering data by viewing documents, observing behavior, developing the questions used for inquiry and interviewing the participants. The third characteristic involves the use of multiple methods of data collection including documents, interviews, and observations. The fourth feature is that the qualitative research design affords the researcher to take the specific information from data collected and work backward towards organizing the data into "abstract units of information" (Creswell, 2013, p. 45). This inductive process produces themes that reflect the data collected from the participants from which construct research observations and develop general conclusions. The fifth characteristic is that, during the data collection process, the

researcher is interested in knowing the meaning the participants bring to the investigated phenomena. As a result, multiple perspectives of an experience may develop into various themes by the study's participants. The sixth characteristic of the qualitative research design is in its "emergent design" (Creswell, 2013, p. 45), which implies that as data occurs, there may be changes in the original plan in obtaining the information needed to complete the study. Another characteristic of the qualitative research design is in how researchers can place themselves within the natural setting of the investigation and provide information about their experiences that may reflect in the interpretation of the data collected within the study. The final characteristic of the qualitative research design is in its "holistic" (Creswell, 2013, p. 45) application. Instead of analyzing a single cause and effect relationship as in a quantitative study, the qualitative research design seeks to report on the relationships between various factors within an investigated situation. These unique characteristics reflect on the assumptions, strengths and weaknesses of the qualitative research design as a framework for its application by researchers within an investigative study.

There are strengths, weaknesses, and assumptions associated with the qualitative research design as a framework for a study of inquiry. The theoretical framework is the scientific paradigm, manner, structure, system or ways in which a group of scientists develops meaning through observations of the world (Kuhn, 1997). The scientific paradigm determines the method of data collection, the researcher's role and the process of knowledge observation and acquisition in the context of the framework (Gelo, 2012). The interpretive frameworks postulated by Creswell (2013), by which the researcher may develop meaning for a qualitative research design, are critical, disabilities, feminist, positivism/post-positivism, pragmatism, queer, race, social constructivism, and transformative/postmodern frameworks. Connected to these interpretive

frameworks are the philosophical beliefs that determine the nature of reality (ontology), how reality is known (epistemology), and the part that values play (axiology) and how the investigative inquiry is implemented (methodology). These frameworks and beliefs reflect on the strengths and weaknesses of the qualitative research design.

The unique characteristics of the methodology in qualitative research design reflect its strengths and weaknesses. The strengths of the qualitative research design include its depth of analysis, inclusiveness of many persons affected by the investigated phenomena and the detailed information derived from various perspectives within unique social and cultural contexts. Reflected in its greater subjectivity, smaller and purposive sampling and lesser generalizability of the study's findings are the weaknesses of the qualitative research design (Brief, 2012; Johnson & Christensen, 2008; Lichtman, 2006). The philosophical frameworks and beliefs, strengths and weaknesses of the qualitative research design indicate that the personal bias of the researcher using this methodology for investigative research exists. However, the acquisition of knowledge through lived experience is the personal meaning given to that lived experience (Creswell, 2013). The personal meaning contributed to a lived experience, also, creates assumptions that exist within the qualitative research design.

The qualitative research design methodology indicates six assumptions (Atieno, 2009). The first is that it is graphic in nature as it attempts to document lived human experiences through words and pictures. The second is that it is an inductive process as the researcher takes specific details provided by participants and builds generalized concepts and theories of the phenomena. The third is that it requires the researcher to conduct fieldwork, going directly to the participants of the study in their natural environment. As a result, another assumption of qualitative research is with the researcher acting as the primary instrument in the data collection

and analysis process. Finally, the last two assumptions of qualitative study methodology reflect the concerns and interest of the researchers toward it being a process of determining the meaning of the participants lived experience.

The assumptions of the qualitative design methodology reflect its strengths, as well as, weaknesses. The strengths of the qualitative design are in its potential to describe the participant's personal experience as complex phenomena in the context of the participant's natural setting. Another strength is that the data collected embody the dynamic process of the individual's development of meaning around a particular phenomenon. Weaknesses of the qualitative design lie in its lack of generalizability to other people or situations, its results possibly influenced by the researcher bias and the time-intensive manner in which data is collected and analyzed (Atieno, 2009).

Methodology

This qualitative study employs the phenomenological design as its methodology. Giorgi (2005) states, "Because human participants can relate intentionally to objects of the world, consciousness manifests relationships to things and others that are other than cause-effect relationships" (p. 75). Creswell (2013) postulates that phenomenological research investigates a shared experience by others. The individual shared experience becomes the phenomena that contribute to a universal description. Used often in the context of social science and health science research, the phenomenological design methodology, therefore, is the scientific manner in which considerations for the unique characteristics of the human condition are investigated. There are two distinctive philosophical foundations of the phenomenological design methodology.

The first philosophical foundation is that of Edmond Husserl. Husserl based his approach to the phenomenological method as purely scientific and descriptive in nature. He believed the descriptive phenomenological research approach as strictly scientific methodology of the human condition. Therefore, the researcher, using the descriptive phenomenological approach, should leave aside the position of an expert with prior knowledge of the phenomena investigated. The researcher's purpose was to eliminate or minimize the investigator's impact on the investigative inquiry through continuous assessment of personal bias. Subsequently, the researcher achieves the Husserlian concept of "transcendental subjectivity" (Lopez & Willis, 2004, p. 727). According to Creswell (2013), Husserl also called the suspension of these biases and judgments, "*epoche*" (p. 77). The researcher gains knowledge of the phenomena as experienced by the human subject without preconceived assumptions or biases.

Martin Heidegger, a student of Husserl, proposed the second philosophical foundation of the phenomenological methodology. Heidegger's philosophical foundation, which forms the basis of the phenomenological method, is the interpretive or hermeneutical tradition (Lopez & Willis, 2004). Both descriptive and interpretive phenomenological methodologies investigate a particular phenomenon of the human condition. Whereas descriptive phenomenology attempts to minimize researcher's prior knowledge and biases during the investigative research, interpretive phenomenology or hermeneutics acknowledges the possible impact the investigator's knowledge and experience may have in how the study investigate the meanings human subjects place on a common lived experience.

Hermeneutics considers the cultural, political and societal contexts of the research in creating meaning from the shared human experience. Hermeneutics, also, considers the blend of interpretations the researcher and human participants bring to the context of the study.

Heidegger's hermeneutics regards the significance of human beings' interaction, existence and performance in our world (Dowling, 2007).

Structured process of phenomenology. The process of phenomenological methodology employs similar systematic steps. Based on Husserl's concept of "epoche" (Creswell, 2013, p. 80; Dowling, 2007), the first phase in the process is bracketing. In bracketing, the researcher, to the best of her ability, filters out her experiences regarding the investigated phenomena. The researcher participates in bracketing before beginning data collection. The next step involves determining whether the phenomenological approach is best suited to the studied phenomena. The investigator, then, determines the phenomena studied and acknowledges the phenomenological foundations of the study. Next, is the collection and analysis of the data. Analysis of the data consists of taking information from "significant statements" (Creswell, 2013) made by the participants and forming the statements into themes to develop meaning. Constructed from these themes is a written description of the participants' experiences. Finally, from the written description of these themes, the researcher writes a composite summary that presents the "essence" of the phenomena" (Creswell, 2013, p. 82). Consideration of the types, strengths and weaknesses of the phenomenological methods mentioned above determined the appropriateness of the selection of the phenomenological design methodology for this study.

Appropriateness of phenomenology methodology. According to Spiegelberg (1975) as cited in Omery (1983), there are six types of phenomenological methodology: (a) descriptive, (b) constitutive phenomenology, (c) hermeneutical phenomenology, (d) phenomenology of appearances, (e) phenomenology of essences, and (f) reductive phenomenology. *Introduction to Qualitative Research* (n.d.) provide greater clarity for these six types. Through a description of the depth, breadth, and richness of the lived experience, descriptive phenomenology stimulates

the participants' perception of the lived experience. Phenomenology of essences seeks to know what is essential versus what is accidental in the participants' lived experiences. Constitutive phenomenology involves a process of determining participants' growth in the context of the lived experience. Reductive phenomenology is the process in which the researcher continually sets aside biases and assumptions to accomplish the goal of obtaining as unbiased a description of the phenomena as possible. Phenomenology of appearances gives attention to the study of a shared lived experience as viewed from different perspectives. Finally, hermeneutical phenomenology employs the study of a shared lived experience through the focus on the societal, political, and cultural world of the participants. One or more of these types of phenomenology may exist in the context of a single study.

Creswell (2013) posits the features of the phenomenological methodology that make its use appropriate for this investigative research design. First, the focus of the study investigates a unique phenomenon in human experience. Drawing from a theoretical knowledge base in education, psychology, and philosophy, this study will provide a description of an experience in which the researcher is intensely aware, by studying participants who, also, have shared the experience. Then, data collection from these individuals will ensue through a primary source of interviews and secondary source of surveys. Finally, the analysis of the data will yield a concise report of the essential elements of the participants' shared experience. The research method, founded on the philosophy of hermeneutical phenomenology, considers the engagement of the participants and researcher in their cultural, societal and political surroundings.

The following practices addressed the challenges of the phenomenological methodology approach used in this study (Creswell, 2013). First, careful selection of participants who have experienced the phenomena under investigation occurred. Second, clearly defined were

individual experiences that may inform and bias results of data collected. Finally, identification was made of the philosophical foundations and assumptions that underlie the phenomenological methodology.

In consideration of its strengths and challenges, deemed appropriate for this research study was use of the phenomenological method. The methodology uses the expertise of those directly involved and experienced in the phenomena. Additionally, the researcher is aware of the phenomena studied. With knowledge of the phenomena studied, the collected data will produce a wealth of insight into the particular intricacies of the phenomenality through the shared experiences of the participants. The insights gained through the study will be available for use by others who, also, share that same experience. Critical to the quality of the phenomenological methodology is the selection of its participants.

Research Design

The unit of analysis for this phenomenological research study was a secondary school principal. According to Creswell (2013), choice of the research design involves consideration of three criteria. These criteria are the research participants, types of sampling, and sample size.

The selection of the analysis unit for this research required use of criteria indicated in the Schools and Staffing Survey [(SASS), 2011-2012] by the National Center for Education Statistics (NCES) of the Institute of Education Sciences (IES). The SASS reports on the staffing of primary and secondary schools in the United States. According to the SASS (2011-2012), of the estimated 115,540 K-12 school principals in the United States, 89,810 were public school principals. Among these 89,810 public school principals, 7% were Hispanic, 10% were African American, 80% were White, and 3% were another race/ethnicity. In total, 62% of public school principals obtained a master's degree as their highest degree held, an education

specialist/professional credential/ diploma at 26% or a doctorate degree at 10%. On average, public school principals spent 22.5 hours interacting with students from a 58.1-hour workweek and had an average of 7.2 years of experience as a principal in a traditional school and 5.9 years of experience in a charter school. Review of the above criteria informed the selection of the research sample.

Sample size. Creswell (2013) has observed the sample size of research participants in a phenomenological research design ranges from one to more than 300. The point at which the participants' answers provide no new knowledge to the data on the shared experience under investigation determines the level of saturation, and therefore, the sample size. Creswell also presents suggestions of others' sample size recommendations. Creswell (2013) states that Dukes (1984) recommends studying three to ten and Riemen (1986) recommends studying ten. Creswell (1998) suggests 5 to 25 for a phenomenological research design. Mason (2010) researched a sample of 560 Ph.D. studies that used a qualitative design and qualitative interviews as the methodology for data collection. Results indicated that 31 participants was the mean sample size obtained for these studies. The aforementioned indicates that there is no fixed sample size agreed upon for a phenomenological research design. The one factor that the researcher must determine is the point at which saturation occurs, where answers yield no new knowledge. The researcher chose the sampling size of fifteen, a mid-range between ten (Dukes, 1984; Riemen, 1986) and twenty-five (Creswell, 1998), as recommended by researchers using the phenomenological methodology. Accordingly, selected was a sample size of 15.

Research sample. The task of identifying the most efficient practices implemented by secondary school principals in students' postsecondary preparation for higher education and future careers required identification of the research sample. The selection of the study sample

involved use of the following inclusion and exclusion criteria. Implemented as follows were the Inclusion and exclusion criteria. .

Criteria for inclusion. The Jobs for the Future website of early college high schools provided the master list of participants for this study. Inclusion criteria were (a) secondary school principals, (b) in early college high schools, and (c) in California. The analysis unit had the characteristics that follow:

1. Be a male or female between ages 30 and 65 years.
2. Possess the educational minimum of master's degree and California Department of Education administrative professional credential.
3. Provide leadership in the role of secondary school principal/administrator or chief executive officer of a public California high school or charter school.

Criteria for exclusion. This research study excluded states that contained small numbers of early college high schools. Further exclusion criteria transpired in the selection of the early college high schools in California. Excluded from this study, also, were twenty schools located in the Northern California area. Preference was given to schools located in Southern California.

Maximum variation. A purposive sampling method employed use of a maximum variation criterion in the selection of participants for this study. This study's data collection came from a carefully selected group of fifteen persons holding a school leadership position as a secondary school principal/administrator. These participants had experience in the investigated phenomena. They also had knowledge and experience in the most efficient practices implemented in students' preparation for higher education and future careers. Finally, criteria were used to ensure the research included participants of diverse cultural and ethnic background.

Purposive sampling. Purposive sampling consists of the strategic, deliberate choice made in the selection of the research study participant (Etikan, Musa, & Alkassim, 2016; Palinkas et al., 2015; Palys, 2008). An essential characteristic of the research study participant is their consideration as information-rich, knowledgeable and experienced about the studied phenomena. As the qualitative research methodology is structured to provide an in-depth analysis of a particular phenomenality, this research study used a purposive sampling method of selection of its participants.

Characteristic of the purposive sampling method is its process of identifying information for comparison and contrast; it also identifies similarities and differences (Plinkas et al., 2015). Additionally, purposive sampling places emphasis on developing in-depth and comprehensive knowledge by continuous sampling until there is no new substantive knowledge obtained. The point at which no new knowledge is acquired is called “saturation” (Plinkas et al., 2015, p. 534).

Participant selection. Two types of nonrandom sampling methods may have determined the selection of participants for this qualitative study. The first was the convenience sampling method in which selection of study participants occurs based on easy access to the researcher by location, group affiliation, or time (Etikan et al., 2016). Often considered biased are the results of a study using convenience sampling, as the sampling is usually homogenous. Purposive sampling was the second method.

Sampling frame to create the master list. The selection of participants for this study began with choosing a sampling frame, a master list of full contact information, of all potential participants. Selection of the sampling frame occurred by obtaining the public information about early college high schools from the Jobs for the Future website (www.jff.org). This sampling frame created the master list of early college high schools for the selection of the study

participants. Permission to obtain this master list was not required as the website contained public information, accessible to anyone. The criteria for inclusion on the master list included all 40 early college high schools in California, the state with the largest number of early college high schools at this time. The exclusion criteria for the master list included the other states that contain smaller numbers of early college high school programs. As the master list of early college high schools in California is more than 40, further exclusion criteria usage narrowed the sampling frame to 20 early college high schools in the Southern California area.

Early college high schools are independent school sites that blend the curricular content of the first two years of college with the curriculum required for high school graduation. The blending of the secondary school and college curricula creates a comprehensive and cohesive educational program in which students may participate to prepare for higher education and future careers. Early college high schools serve students, traditionally underrepresented in higher education, who are of low SES, of racial minority groups, and English Language Learners. The Jobs for the Future website provides a list of early college high schools, which focus on underrepresented students' preparation for higher education and future careers. Research-study participant identification and selection transpired as follows:

- Step One: The Jobs for the Future website home page provided information of early college high schools located in each state in creating the master list. This list is public and readily available from the website.
- Step Two: Filtered to those schools located in California was the master list of early college high schools. This master list has school contact information, including school specific websites.
- Step Three: The master list contained the particular school website details that

provided information on the name of the school principal or site administrative staff.

- Step Four: This list was modified as determined by whether the potential participant met the criteria for inclusion outlined in this study.
- Step Five: Eligible participant identification and selection occurred through the application of set standards for inclusion and exclusion as indicated by the factors that follow:
 1. The participant holds a master's degree.
 2. The participant has a minimum of two years of experience as a principal.
 3. The participant has a minimum of two years of experience on the current high school campus.
- Step Six: Implementation of maximum variation criteria occurred to ensure inclusion of males and females and diverse ethnicities and cultural groups from the list of 40 potential participants in this qualitative phenomenological research.

Human Subject Consideration

In 1974, Congress passed the National Research Act that directed any institution receiving federal support to conduct research and evaluation studies to form Institutional Review Boards (IRB). The primary purpose of the IRB is to formally document that the research undertaken at a university, hospital, non-profit organization or public school follows the federal requirements to protect the rights and welfare of human subjects participating in the research activities. The Department of Health and Human Services has developed policies for the protection of human participants as indicated in the Code of Federal Regulations (CFR) Title 45, Part 46, Subpart A [HHS.gov, (2016.)].

Applications for research conducted at Pepperdine University encompass social, behavioral, and educational research. The Pepperdine University IRB follows a process of review in adherence to the Federal Policy for the Protection of Human Subjects (45 CFR 46) and the Federal-wide Assurance (FWA) enacted between Pepperdine University and the Office for Human Research Protections (OHRP) under the Department of Health and Human Services (DHHS). At Pepperdine University, there is a required human subjects' training for all individuals implementing research involving human subjects.

According to the IRB, considerations for human participants must satisfy six specific conditions; (a) participants' risks are minimized and (b) participants are informed of any known risks for participation in the study. The four remaining requirements reference participants' rights regarding consent for involvement in the research study. First, obtained and documented is the informed consent from the investigator and prospective participants or their legal authorized representative. Second, participants are advised of their rights to voluntarily withdraw, at any time, from the research study. Third, participants are apprised of provisions to protect their privacy and maintain confidentiality, and fourth, participants are informed of the importance of the knowledge the study is expected to produce (Bell & Morse, 2008).

The required steps for implementation of the Pepperdine IRB occurred as follows. First, as required for research using human participants, application to the Pepperdine University's IRB was made and approval for the study was obtained (see Appendix A). Second, potential participants were presented with an inquiry as to their willingness to engage as a participant in the research study using a recruitment script, as outlined by Pepperdine's IRB (see Appendix B). Next, secondary school principals who accepted participation in this study's research were provided with a consent form. For each potential participant, the consent form documented the

participant's willingness to join in the study by agreeing to being interviewed, being recorded in the interview and by allowing the use of the meeting content as part of the research study.

Potential participants' permission to use their actual names and name of the school in which affiliated was requested. If potential participants chose anonymity, pseudonyms were applied. In turn, the consent form, advised the participant of their agreement to participate in the study was voluntary. The participant was informed of their right to withdraw from the research at any time, before, during or after the interview. The participant was, also, apprised that no risks would incur through participation in the study. Participants were also notified that should they desire to remain anonymous, confidentiality would be maintained to ensure no specific identifying information is used or documented as part of the research. Participants were informed that reference to actual names of participants would only occur during the process of the researcher's data analysis. Participants were apprised that the researcher's process of coding the data would yield research documentation that would be destroyed at the study's completion. An exempt application containing the steps for protection for human subjects was submitted for review before contact with any potential research study participants. Finally, IRB approval was given, research participants had been chosen and their consent obtained, the data collection process began.

Data collection. A collection of data for this phenomenological qualitative study started with the 40 names of potential participants taken from the master list of early college high school secondary principals located on the Jobs for the Future website. These potential participants satisfied the requirements necessary for inclusion in this study. Next, the potential participants' introduction to the study began with the recruitment script, which helped determine the potential participant's interest in volunteering in the research. The initial phone call introduced the

researcher to the school's office staff instrumental in making contact introductions with the potential participant. Then, an e-mail was sent to the office staff and the potential participant to explain the nature of the study.

An e-mail was the primary vehicle used to establish and maintain contact with the potential participant to obtain their initial consent for participation in the study. First, the e-mail explained the nature of the study. Second, the e-mail included a copy of the informed consent form (see Appendix C), which provided a more detailed description of the study and the participant's involvement. Then, the e-mail provided a copy of the open-ended questions for the potential participant's knowledge and review with the information that the participant would take part in a 45-60 minute interview that would be audio-recorded. The interview would be conducted at a convenient time and location for the potential participant. Finally, the e-mail inquired of the potential participant's acceptance to participate in the study.

If the potential participant expressed willingness to engage in the research study, the participant was asked to sign, PDF and e-mail a copy of the informed consent form before the scheduled interview appointment. If the signed informed consent form is not received before the scheduled interview date, extra copies to ensure an informed consent form is signed and obtained before the beginning of the meeting. A copy of the signed consent was kept and another copy provided to the participants. If a potential participant decided to decline participation in the study at the onset or withdraw at any time before, during or after the interview, subsequent potential participants from the master list of 40 obtained from the Jobs for the Future website of early college high school principals was contacted. This process continued until the sample size of 15 participants for this study was obtained, secured and interviewed.

The collection of research data occurred with participant interviews. The interviews consisted of a nine open-ended question protocol. A portable recording device recorded all the interviews. An additional recording device was also available as needed. At the end of the interviews, the meeting information was transferred to a USB storage device for transcription. On completion of the transcription, the content of the interviews was coded and the final interview transcript stored under lock and key for five years. For those participants who elected to have their identities concealed on the consent form, all documents and coded transcripts were carefully stored to ensure anonymity. Finally, the research participant's interview and the research results were made available to the participants for review at the study's conclusion.

Interview techniques. Although the qualitative method of interviewing for data collection has as its basis the concept of having a conversation or dialogue on a topic of mutual interest, the relationship between the researcher and interviewee is not to be regarded as one between two equals (Kvale, 2006). Kvale (1994) also mentions that aspects of the interview process itself preclude its consideration as a method of data collection that is devoid of bias and researcher influence. However, developing rapport is the essential initial component of the interview process, according to Gubrium, Holstein, and Warren (2002), and Douglass and Moustakas (1994). Therefore, carefully employed will be the following to develop rapport and minimize bias to maintain the study's validity in research results.

Rapport is the trust and respect given to the interviewee and the information shared (DiCicco-Bloom & Crabtree, 2006; Legard, Keegan, & Ward, 2003). According to researchers Briggs (1986), and Spradley (1979), the rapport between the interviewer and interviewee occurs in four stages: apprehension, exploration, cooperation, and participation. Apprehension is the result of the newness of the relationship between interviewer and interviewee. Exploration

occurs when the interviewee becomes comfortable enough within the interview context to provide an in-depth explanation without further solicitation when asked a question. Cooperation occurs when interviewee and interviewer are comfortable enough not to be concerned with offending one another. Participation occurs when the respondent takes on the position of teaching and guiding the interviewer. The goal of the researcher is to get through the initial stages of developing rapport to the final stage of participation. The greatest amount of data collection occurs within the participation phase of developing rapport. Therefore, the first step in the interview process is establishing rapport with the interviewee.

Legard et al. (2003) lists the steps the researcher can engage to progress the meeting discussion in the direction of obtaining the greatest amount of data by developing a rapport with the interviewee. The first step is to put the interviewee at ease by arriving early and “playing the role as guest” (p. 145). As a guest in the respondent’s environment, the researcher does not engage in discussion of the research topic. Second, the formal interview process begins by introducing the topic through reiterating the nature and purpose of the study, reaffirming confidentiality and requesting permission to record the session. It is, also, important to ensure the interview can progress without unnecessary distraction and interruption, if possible. Next, the interview questions begin with those the interviewee can directly answer and provide valuable data to the research study. For example, “How long have you been in your current position as a high school principal?” Then, the researcher continues to progress through the interview questions protocol using active listening and refraining from contributing personal opinions or displaying emotional reactions. Approximately ten minutes before the interview concludes, the researcher informs the respondent that the interview protocol is approaching its end. Provided to the interviewee was an opportunity to present any other information that is of

importance. Finally, on conclusion of the meeting, when the recorder is off, the interviewee is thanked and the value of the interviewee's input to the research is noted. Thanking the interviewee for participation in the study continues the rapport in case of a follow-up to the meeting is required.

Interview protocol and process. According to Qu and Dumay (2011), "the interview method is the art of questioning and interpreting the answers (p. 243). The qualitative interview is the most used form of data collection associated with human research (Englander, 2012; Kvale, 1994). Unlike the survey interview in which information is passively gained from what is termed by Warren as "vessels of answers" (Qualitative Interviewing - SAGE Research Methods, 2011); the qualitative interview is constructivist and open-ended in design which lends itself to gathering information through meaning making provided by the participants. As a result, the objective of the qualitative interview is to discover the participants' interpretations of shared phenomena through "respondent talk" (Qualitative Interviewing - SAGE Research Methods, 2011). According to Kvale (1996), the interview is a dialogue between the researcher and participants about a topic of mutual interest in which they walk together to develop shared meaning of the studied phenomena. Although the qualitative interview has aspects of a conversation between the researcher and participant, there is a significant requirement that consideration of the interview process not be trivial. Interview protocol planning, preparation, and structure assure data collection that is useful to the research (Qu & Dumay, 2011). As a result, there are three categories with a continuum of interview methods considered in the research study design.

The three interview types are the semi-structured interview, structured interview, and unstructured interview. Qu and Dumay (2011) define the structured interview as reflective of the

neo-positivist view of collecting data; the interview becomes the way in which knowledge is transmitted where “capable researchers establish a context-free truth about objective reality producing relevant responses, with minimal bias” (p. 241). The unstructured interview reflects the romanticist view of collecting data in which inquiry is by use of only open-ended questions without structure and directed by the answers provided by the participants. The semi-structured interview reflects the local perspective in which presentation and explanation of open-ended questions occur based on a theme of the lived experience. Both the unstructured and semi-structured interview types remain open to new and unexpected information. However, the semi-structured interview focuses on specific themes in developing its open-ended questions. Kvale (1996) indicates the interview becomes an experience of developing new insights into shared phenomena between the researcher and the study’s participants. Therefore, this qualitative research design used the semi-structured interview process of questioning the study’s participants.

The semi-structured interview method lends itself to asking questions of research participants through a formal process of forming open-ended theme based questions. The structured aspect involves the formulation of the pre-determined list of inquiries based on the subject of the phenomena under study; the open-ended aspect enables the researcher to ask further questions of the study’s participants in gathering more in-depth information of the phenomena under study (Qu & Dumay, 2011). According to Kvale (1996), characterization of the semi-structured interview is a precise form of questioning within a specific structure for a particular purpose. The interview guide or protocol incorporates specific interview questions that help direct the conversation of the participant in the direction of the information that the researcher wants to learn. Categorized into ten different types are the research questions. These

types are (a) direct questions, (b) follow-up questions, (c) indirect questions, (d) interpreting questions, (e) introducing questions, (f) probing questions, (g) silence, (h) specifying questions, (i) structuring questions, and (j) throw away questions. Within the semi-structured interview, the researcher makes use of these inquiries to probe, sensitively, for answers from the participants to understand, well, their lived experience. The participants, also, must be able to comprehend the questions asked of them quickly. The use of the semi-structured interview reflects a combination of strengths and weaknesses.

Kvale (1994) indicates the ten relative strengths and weaknesses of the semi-structured interview protocol. The first weakness is that it is not scientific; the first strength is that it is common sense. The interview is not of a methodology that is traditionally scientifically oriented. The second weakness is that the semi-structured interview is not objective; it is subjective. However, in phenomenology, “objectivity is reached through intentional acts of consciousness and is an expression of fidelity of the phenomena investigated” (p. 151). The third weakness is that the results are not trustworthy due to possible researcher bias; however, the researcher can counteract biases by reflecting on their presuppositions and prejudices. The fourth weakness is that the interview findings are not reliable because they derive from specific, structured questions. However, since the interview is an investigator and respondent dialogue, the essential factor to consider is how the leading question usage provides the necessary information for the researched phenomena. Therefore, to answer where the interview question leads is critical in whether it produces new and relevant information. A fifth weakness of the semi-structured interview is that the same protocol may yield different results from different readers. Therefore, interview results are a subjective outcome of the particular researcher. However, hermeneutical phenomenology accounts for multiple interpretations of the lived experience of

participants as long as there is clarity between researchers of what is investigated by the research questions. As long as there is understanding of the research questions, the personal results derived from the interview questions produce a richness of new information, which is a strength of the qualitative research design. The other weaknesses of the semi-structured interview reflect in its comparison to the scientific method.

The semi-structured interview method is weak as compared to the scientific method. Kvale (1996) determines the reasons for its weaknesses as follows. First, the semi-structured interview is not considered a formalized method of inquiry. Second, the protocol does not involve scientific hypothesis testing. Third, the semi-structured method is not an experimental design that produces quantifiable data. Fourth, the interview process does not yield generalizable data. Fifth, the semi-structured interview is subjective, and may compromise the validity of the data. However, as the researcher takes certain precautions, there are no flaws in the semi-structured interview approach to acquiring new knowledge of the studied phenomena; these, therefore, are considerations of its strengths. With knowledge of its value and the criteria for its effectiveness, the semi-structured interview utilized the following questions to compile this study's data.

Specific considerations, made by the researcher, ensure that use of the semi-structured interview protocol produces valid results. The semi-structured interview requires the interviewer's competence in conducting the interview. The interviewer's skill involves the exchange of information through dialogue and interaction with and observation of the respondent. The researcher's ability is also engaged in the extensive analysis of the data through description, interpretation, conceptualizing and theorizing. The semi-structured interview protocol produces the contextualization of knowledge vs. the generalization of information.

Additionally, the conceptualization of the validity of the semi-structured interview rooted in conversation and interaction influences the social world rather than a dichotomy based upon what is true/false. Therefore, the weaknesses become the strengths of the semi-structured interview within the qualitative phenomenological research design. Rubin and Rubin, (2005) state that the interview is a structured conversation. With knowledge of its value and the criteria for its effectiveness, the semi-structured interview utilized the following questions to compile this study's data.

Interview questions. Gathering data for this research study required use of the following interview questions:

IQ 1: How would you describe your leadership approach and/or practice?

IQ 2: What practices and strategies employed at your school prepare underrepresented students in higher education for higher education and future careers?

- What category of underrepresented student populations exist on your campus?
- Do you have students in foster care, special education or homeless students on your campus?
- Do you employ separate strategies to prepare these students for higher education and future careers?

IQ 3: What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers?

IQ 4: How did you engage various constituencies in the planning, implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

- How did you engage various constituencies in the planning of best practices and

strategies used for underrepresented students' preparation for higher education and future careers?

- How did you engage various constituencies in the development of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
- How did you engage various constituencies in the implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

IQ 5: What were challenges faced in the development and implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

- What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
- What were challenges faced in the development of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
- What were challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

IQ 6: How were these challenges to implementation of the practices and strategies for underrepresented students' preparation for higher education and future careers overcome?

IQ 7: What formative and summative assessments used measure success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?

IQ 8: What recommendations may be provided to another school principal/administrator in the

planning, development and implementation of practices and strategies for underrepresented students' preparation for higher education and future career?

- What recommendations may be provided to another school administrator in the planning of practices and strategies for underrepresented students' preparation for higher education and future career?
- What recommendations may be provided to another school administrator in the development of practices and strategies for underrepresented students' preparation for higher education and future career?
- What recommendations may be provided to another school administrator in the implementation of practices and strategies for underrepresented students' preparation for higher education and future career?

IQ 9: Is there anything else you would like to add?

Relationship between research and interview questions. Outline of the research and interview questions used the interview protocol of Rubin and Rubin (2005). Guided by the research questions and based on the information gathered from the literature review, the nine open-ended questions for the interview protocol developed. The nine open-ended interview questions correspond to the four research questions. Each interview question provides the interviewee with the opportunity to articulate and expand upon their lived experiences by relating their feelings and emotions regarding the studied phenomena. For example, one open-ended interview question asks the interviewee to expound on their experience and opinions in the development of a program that addresses underrepresented students' preparation for higher education and future careers. Construction of all the open-ended interview questions occurred using this same approach. The above (see Table 3) shows the relationship between each open-

ended interview question and its related research question.

Reliability and validity of the study. According to Creswell (2013), researchers such as LeCompte and Goetz (1982) have used experimental quantitative approaches to issues of validation and reliability within ethnographic qualitative research as a way to gain the acceptance of qualitative research. LeCompte and Goetz use of experimental quantitative methods were to dispel criticism from the scientific community for the failure of qualitative research to adhere to the strict tenets of validity and reliability. According to Lincoln and Guba, (1988), qualitative research is an alternative approach to naturalistic studies. As an alternative approach to naturalistic studies, qualitative research does establish a study's trustworthiness using terms of authenticity, confirmability, credibility, dependability, and transferability. These qualitative research terms are the naturalist researcher's equal to the terms of external validation, internal validation, objectivity, and reliability. The following presents both views of the definitions of internal validation, external validation, reliability, and objectivity.

- Internal validity - the degree to which researchers observe and measure what they expect to observe and measure (LeCompte & Goetz, 1982); credibility - confidence that the research results are truthful (Lincoln & Guba, 1988).
- External validity - given similar constructs and settings, are the research results able to be replicated by other groups (LeCompte & Goetz, 1982); applicability/transferability - research results can apply to other contexts (Lincoln & Guba, 1988).
- Reliability - the extent to which research can be replicated (LeCompte & Goetz, 1982); consistency/dependability - research findings are consistent and be replicated (Lincoln & Guba, 1988).

- Objectivity - without the influence of the research observer's effects, personal bias, political agenda or prejudice (Creswell, 2013); neutrality/confirmability - the degree to which there is no researcher's bias, interest or motivations on the study's findings. Based only on participants' responses are this study's findings (LeCompte & Goetz, 1988).
- Authenticity - an inquiry obtained and presented fairly from research participants (Lincoln & Guba, 1988).

Agee (2009) states that poorly conceived research questions will likely result in research problems that negatively impact subsequent stages of the qualitative study. As a result, recommended as a means for creating research questions that structure and give direction to the qualitative research study, is a reflective and interrogative process. Qualitative researchers (Creswell, 2013; Creswell & Miller, 2000; Morse, 2015) posit strategies used by qualitative researchers to determine research validity. These strategies include the following: 1) "external audits" (p.252); 2) "prolonged engagement and persistent observation" (p. 250); 3) "peer review or debriefing" (p. 251); 4) "clarifying researcher bias" (p. 251); 5) "in member checking" (p. 252); 6) "negative case analysis" (p. 251); 7) "triangulation" (p. 251); 8) "rich, thick description" (p. 252).

The following three-step process occurred to obtain the data collection's reliability and validity by establishing this study's prima facie validity, peer-review validity and expert review. Employing this three-step process provided assurance that the interview questions aligned with and informed the research questions.

Prima facie validity. Developing the nine questions used for interviewing the research participants was the first step in developing the data collection instrument. The literature review

contributed to the design of the interview questions. The design of the interview questions corresponded to the study's research questions. After the development of the interview questions, the next step was to ascertain the validity of the tool in measuring the intention of the questions. Analysis of the interview questions' clarity, ease of use and readability determined the validity of the interview questions on its face appearance, *prima facie*. Table 3 represents the relationship between the research and interview questions.

Peer review validity. Another step the validation process of the interview questions as a research tool was the peer review validity. According to Marsh et al. (2008), the peer review serves multiple functions. First, the peer review provides constructive input to implementation and revision of an author's work. Second, the peer review acts as a filter of what is and is not acceptable as valuable and trustworthy research. Implemented as a process to ensure successful research data collection was the second function of the peer review for this study.

The peer review process for this study involved the creation of a table that correlated the eight interview questions with the four research questions (see Table 3). On completion of this step, chosen were three subject matter experts from doctoral students with over 30 years of combined public school education experience. These three doctoral students' combined experience in public education coupled with their knowledge of research methodology provided the required expertise to evaluate this study's data collection instrument for its reliability and validity. Given to each peer reviewer was a copy of the research and interview questions (see Table 3) with a request to do the following:

1. Review the interview question regarding how well it addresses the research question.
2. Ascertain the relevance of the interview question to the research questions.

3. Provide input on how the interview questions may be modified to correlate with the research question.
4. Recommend any additional interview questions.

The peer review results indicated changes to make to increase clarity of eight of the nine interview questions for greater specificity as based upon information obtained in the literature review. Some examples of modifications made to the interview questions follow:

- Original IQ 2: What practices and strategies do you engage to prepare students for college and career?
- 1st Revision IQ 2: What practices and strategies do you engage to prepare students for higher education and future careers?
- 2nd Revision IQ 2: What practices and strategies are employed at your school to prepare underrepresented students in higher education for higher education and future careers?
 - a) What category of underrepresented student populations exist on your campus?
 - b) Do you have students in foster care, special education or homeless students on your campus?
 - c) Do you employ separate strategies to prepare these students for higher education and future careers?
- Original IQ 8 - If you could start over, what would you do differently?
- 1st Revision IQ 8 - If you could start over, what would you do differently in implementing programs for students' preparation for higher education and future careers?
- 2nd Revision IQ 8 - What recommendations may be provided to another school principal/administrator in the planning, development and implementation of practices and

strategies for underrepresented students' preparation for higher education and future careers?

a) What recommendations may be provided to another school administrator in the planning of practices and strategies for underrepresented students preparation for higher education and future careers?

b) What recommendations may be provided to another school administrator in the development of practices and strategies for underrepresented students preparation for higher education and future careers?

Expert review validity. As the concluding step in the determination of the reliability and validity of the data collection instrument, the expert review process was established to make a final decision in forming the interview questions if consensus was not reached in the peer review process. If agreement was not reached concerning suggestions for edits or additional interview questions to be included in the interview protocol by peer reviewers, the dissertation committee served as the expert review panel. The expert review panel determined whether edits and suggestions made on the interview questions to the researcher would improve the data collection tool for greater reliability and validity. The recommendations and edits made by peer review were accepted. Therefore, the expert review by the expert review panel was not required.

Table 3

Research Questions and Corresponding Interview Questions

Research Questions	Corresponding Interview Questions
<p>RQ1: What best practices and strategies do high school principals employ that determine students' higher education and future career preparation?</p>	<ul style="list-style-type: none"> ● IQ 1: How would you describe your leadership approach and/or practice? ● IQ 2: What practices and strategies employed at your school prepare underrepresented students in higher education for higher education and future careers? <ul style="list-style-type: none"> ● What category of under-represented student populations exist on your campus? ● Do you have students in foster care, special education or homeless students on your campus? ● Do you employ separate strategies to prepare these students for higher education and future careers? ● IQ 3: What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers? ● IQ 4: How did you engage various constituencies in the planning, implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers? <ul style="list-style-type: none"> ● How did you engage various constituencies in the planning of best practices and strategies used for underrepresented students' preparation for higher education and future careers? ● How did you engage various constituencies in the development of best practices and strategies used for underrepresented students' preparation for higher education and future careers? ● How did you engage various constituencies in the implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
<p>RQ 2: What challenges do high school principals face in implementing effective higher education and future career readiness programs?</p>	<ul style="list-style-type: none"> ● IQ 5: What were challenges faced in the development and implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers? <ul style="list-style-type: none"> ● What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

(continued)

Research Questions	Corresponding Interview Questions
<p>RQ 2: What challenges do high school Principals face in implementing effective higher education and future career readiness programs?</p>	<ul style="list-style-type: none"> ● What were challenges faced in the development of the practices and strategies used for underrepresented students' preparation for higher education and future careers? ● What were challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers? ● IQ 6: How were these challenges to implementation of the practices and strategies for underrepresented students' preparation for higher education and future careers overcome?
<p>RQ 3: How do high school principals measure success in higher education and future- career readiness programs?</p>	<ul style="list-style-type: none"> ● IQ 7: What formative and summative assessments use measures success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?
<p>RQ 4: What recommendations do high school principals have for implementing higher education and future-career readiness programs?</p>	<ul style="list-style-type: none"> ● IQ 8: What recommendations may be provided to another school principal/administrator in the planning, development and implementation of practices and strategies for underrepresented students' preparation for higher education and future career? <ul style="list-style-type: none"> ● What recommendations may be provided to another school administrator in the planning of practices and strategies for underrepresented students' preparation for higher education and future career? ● What recommendations may be provided to another school administrator in the development of practices and strategies for underrepresented students' preparation for higher education and future career? ● What recommendations may be provided to another school administrator in the implementation of practices and strategies for underrepresented students' preparation for higher education and future career? <p>IQ 9: Is there anything else you would like to add?</p>

Reliability of the instrument. The reliability and validity of the data collection instrument affect the reliability and validity of the study. Morse (2015) states that the level of a study's reliability and validity of a qualitative research design are the criteria that determine its

view as rigorous. Rigor, determines the study's (a) validity, how well its results are accurate and well founded; (b) reliability, how well the study's results are repeatable; and (c) generalizability, how well the research can apply to other individuals, institutions, settings, and times. In qualitative research, strategies for obtaining rigor, ensuring validity as supported by reliability (Guba, 1981) include prolonged engagement, persistent observation and thick, rich description (Creswell & Miller, 2000; Morse, 2015). As a process of further evaluation of the research instrument after the initial peer review of the research questions, the interview questions were administered in two pilot interviews with individuals who meet the criteria of the study's sample. The interviewees were presented with the interview questions in the same manner as a participant in the actual research study. Then, the respondents were asked to provide feedback as to the interview questions' comprehensibility. The results of the pilot interview determined whether the interview questions needed modification. Through the process of peer review and pilot interview as the means of ensuring external and internal validity, the data collection instrument's reliability was increased. Once the data collection was determined to be reliable, the following interview techniques were implemented.

Statement of Personal Bias

Creswell (2013) indicates that the nature of the phenomenological qualitative research design presupposes the researcher have some knowledge and understanding of the research topic. Therefore, the researcher has personal assumptions about the issue that can affect the research results. The responsible researcher provides the reader with the perspective when data the data is analyzed and interpreted. Brought to the research study were the following personal biases:

1. The researcher has over 25 years of experience as a teacher and administrator in public education.

2. The researcher has five years of experience working with under-represented student populations in the nonprofit sector.
3. Based upon personal knowledge and expertise, the researcher has developed opinions about the use of the effective practices implemented at the secondary school level for underrepresented students' preparation for higher education and future careers.

As part of the research design, the practice of bracketing or epoche was conducted to alleviate any bias and ensure the researcher study's rigor.

Epoche. Husserl proposed that in its purest form, phenomenological research is a description of an experience, without any explanation provided by that experience. As a result, the description of the experience occurs before reflection or its interpretation (Giorgi, 2005). This reduction of the experience to a clear description makes it possible for the researcher to present the phenomena without prejudice and develop a new way of looking at the researched phenomena. Epoche is the ability to set aside biases and prejudices based on knowledge and experience of the research topic. According to Moustakas (1994), epoche is a word of Greek origin and is the means by which researchers avoid judgments and the common way of perceiving things. Another term used for epoche is bracketing in which the researcher sets aside or implements steps to become clearly aware of the personal experiences and knowledge that can affect the study's results.

Creswell (2013) provides the measure performed for bracketing, setting aside personal bias and judgement to understand the research participants' experience of the studied phenomenon. The steps used are as follows:

1. Identify and describe all possible bias and judgments based upon previous

knowledge of and expertise with the experience before beginning the project (Creswell, 2013; Richards & Morse, 2013).

2. Summarize the knowledge gained from the literature review, understand the basis of the research study and considering it to compare and contrast with evidence of knowledge gained from the research study (Creswell, 2013).
3. Maintain a journal of the biases and judgments that may arise during the interview protocol and place that information as part of the research to inform the reader of those biases and judgments.

Implementing steps within the research design to address bracketing and epoche creates the opportunity to include this information within the data analysis. According to Moustakas (1994), personal experiences of the phenomena, biases, and judgments when conducting the data analysis can be recorded.

Data Analysis

As integral to the qualitative research design, the researcher begins data analysis at the beginning and throughout the research study's conclusion (Richards & Morse, 2013). The researcher is directly involved in the data collection process of interviewing the research participants. As a result, epoche or bracketing implementation takes account of any bias or prejudgment regarding the collection of research data. Therefore, the researcher is intricately involved in the strategies implemented to analyze phenomenological research data. Giorgi (1997) developed particular protocol used for data analysis that requires the following:

1. Collection of verbal data through the interview process.
2. Transcribing and reading this collected data to observe key descriptive words of used by interview participants.

3. Breaking data of the key descriptive words into themes.
4. Organization and expression of these themes, from the disciplinary perspective, using the researcher's definition, keyword samples and a particular quote from the interview participants.
5. Synthesis and summary of the data in a visual and written format to communicate results to the academic community.

Interviews were conducted and transcribed, data were coded, the coding process was peer reviewed, to arrive at a consensus on common themes, and data were analyzed to develop conclusions about the phenomena. Creswell (2013) outlines similar steps to phenomenological data analysis including (a) reading through text and making notes in transcript margins to create original codes, (b) developing and grouping relevant statements into themes, and (c) coding the themes and presenting the data results in visual tables, figures, and written form.

Reading, memoing. According to Kuckartz (2014), the initial work with the document involves reading and memoing. Preliminary work on the texts requires the following, (a) reading the text carefully to get to know the essence of the interview, (b) highlighting central terms and concepts, (c) marking and making notes of important and challenging to understand passages in the margins of the text. Creswell (2013) states that memos are notations of “short phrases, ideas, or key concepts” (p. 183) made in the margins of interview transcripts by the researcher as the researcher reviews details of the interview before dissecting it into its parts.

Describing, classifying, and interpreting, (coding). The process of coding is the connection between data collection and its subsequent explanation of meaning (Saldana, 2012) and is the “heart of qualitative data analysis” (Creswell, 2013, p. 184). Coding occurs after the researcher reviews the interview transcript and memos initial impressions in the transcript

margins from which a list of 25-30 tentative codes was developed. These codes reflected categories of interview participant responses. Then, these responses were sorted into five to six themes. Through an inductive process, the themes were organized into “larger units of abstraction” (Creswell, 2013, p. 187) to be interpreted by the researcher and peers to develop interrater reliability and validity.

Interrater reliability and validity. Just as the interview questions were peer-reviewed to ensure their use in a rigorous research design towards the study’s reliability and validity, the process of coding in analysis of the study’s research data followed the same rigor. According to Creswell (2013), the reliability of qualitative research is based on the “stability of responses to multiple coders of data sets” (p. 253) of the interview transcript data. Obtaining interrater reliability and validity followed a three-step process. First, two doctoral students, experienced in qualitative research and coding and familiar with the academic setting of this research study, were selected as co-raters. Then application of the subsequent steps determined interrater reliability and validity:

1. The first three interviews were transcribed, read, memoed, and coded.
2. The transcripts and coding results were sent to the co-raters for review to confirm initial coding or recommend modifications. If consensus was not obtained, the dissertation chairperson would make the final decision regarding consideration of the transcript and corresponding coding. In this instance, the chairperson’s decisions were implemented.
3. The final step involves completing the transcription, reading and memoing of the remainder of the fifteen interview transcripts. Again, as indicated in Step 2, the transcripts and coding will be sent to the co-raters for review. If consensus cannot be reached, the dissertation committee chairperson will act, again as the arbitrator. Finally,

coding results will be displayed in a visual format.

Representing, visualizing. According to Kuckartz (2014), “visualizations are a standard part of an analysis and are used to assist in the diagnosis and analysis as well as the presentation of results” (p. 146). Therefore, once consensus was obtained, the coding process for all interview transcripts was completed. The next step was to visualize the findings of the text data analysis. Presented was the data analysis of the coding in bar graph format as introduced by the thematic categories represented by each interview and interview participant. Summarized and presented in chapter four were research results with the corresponding bar graphs as visual presentations of the data.

Summary

Chapter 3 gives a comprehensive description of the research design protocol and methodology used in this phenomenological research study. The chapter begins with the nature of qualitative research design and its characteristics, strengths, and weaknesses. Second, the chapter presents the study’s methodology with an explanation as to its appropriate use for this study. Next, a description was provided of the research design by identification of the study’s population, type of sampling, and sample size. This chapter also presented the precise manner for selection of study participants. Human subject considerations were explained as part of the IRB process to ensure participants confidentiality and safety. Then the process of data collection by creating the interview protocol and interview process was presented. The chapter discussed obtaining the study’s rigor by establishing interrater reliability and validity of the study’s data collection tool. The next portion of the chapter presented data analysis and utilization of the co-rater process to determine reliability and validity of the data analysis. Finally, the chapter provides a description of the data analysis in Chapter 4.

Chapter 4: Findings

In the United States, interest in practices that ensure students' successful college and career readiness in a global economy abounds. This attention focuses on areas of curriculum and instructional practices, technology use, school environment and school leadership as it affects students' postsecondary success. Primarily responsible for students' immediate preparation for higher education and future careers is the high school Principal. Given this responsibility requires school leadership for all students, including those traditionally under-represented in higher education, students with low SES, learners of the English language, of African and Hispanic heritage, and youth with special education services. Other student populations with challenges in accessing educational services towards preparation for higher education and future careers are youth in foster families and homeless youth. All students, and especially these underrepresented student groups, require principals' use of school leadership practices that affect their graduation from secondary school with the skills necessary for higher education and entry job positions for the 21st century. As such, this study's purpose was to determine the effective practices of secondary school principals that prepare students for postsecondary higher education and future careers. There were four research questions addressed in this study to gain an understanding of the practices principals employ for students' preparation for college and future career readiness. These questions were:

1. What best practices and strategies do high school principals employ that determine students' college and future career preparation?
2. What challenges do high school principals face in implementing effective college and future career-readiness programs?

3. How do high school principals measure success in college and future career-readiness programs?
4. What recommendations do high school principals have for implementing college and future career-readiness programs?

Created to answer these four research questions were 9-interview questions in which four had three follow-up questions. These questions passed a validation review by a panel of two inter-raters and three experts. The questions made inquiry of principal's leadership style. The query, also, included questions about practices and strategies in developing, implementing and assessing these practices to address the needs of underrepresented student populations on campus. Subsequently, the interview questions usage was to ascertain from this study's participants the information that follows:

1. How would you describe your leadership approach and/or practice?
2. What practices and strategies employed at your school prepare underrepresented students in higher education for higher education and future careers?
 - What category of underrepresented student populations exist on your campus?
 - Do you have students in foster care, special education or homeless students on your campus?
 - Do you employ separate strategies to prepare these students for higher education and future careers?
3. What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers?

4. How did you engage various constituencies in the planning, implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - How did you engage various constituencies in the planning of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - How did you engage various constituencies in the development of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - How did you engage various constituencies in the implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
5. What were challenges faced in the development and implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - What were challenges faced in the development of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

- What were challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
6. How were these challenges to implementation of the practices and strategies for underrepresented students' preparation for higher education and future careers overcome?
 7. What formative and summative assessments used measure success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?
 8. What recommendations may be provided to another school principal/administrator in the planning, development and implementation of practices and strategies for underrepresented students' preparation for higher education and future career?
 - What recommendations may be provided to another school administrator in the planning of practices and strategies for underrepresented students' preparation for higher education and future career?
 - What recommendations may be provided to another school administrator in the development of practices and strategies for underrepresented students' preparation for higher education and future career?
 - What recommendations may be provided to another school administrator in the implementation of practices and strategies for underrepresented students' preparation for higher education and future career?
 9. Is there anything else you would like to add?

The interviewed participants of this study provided knowledge and expertise regarding their experiences as an administrator of an early college high school in preparing students for

postsecondary college and career. The research participants identified their leadership style in regards to planning, implementing and evaluating their program in meeting the education and career readiness needs of students traditionally underrepresented in higher education.

Subsequently, data received from the research participants identified common themes. A research participant profile, collected data from the interview questions and a detailed discussion of this study's results occurs throughout this chapter.

Participants

Selected through a purposeful sampling approach used in the qualitative research design, were 15 research participants of secondary school administrators connected to early college high school programs. The purposive sampling method is the deliberate and strategic choice of research participant (Etikan et. al., 2016; Palinkas et. al., 2015; Palys, 2008). The purposive sampling considers the participant to have content rich information and experience of a particular phenomenon. A purposive sampling of 15 participants for this study consisted of secondary school administrators associated with the early college high school initiative through Jobs for the Future organization, an axillary of the Bill and Melinda Gates Foundation. Further unit of analysis inclusion criteria included the following:

- The participant holds a master's degree.
- The participant has a minimum of two years of experience in administration.
- The participant has a minimum of two years of experience on the current secondary school campus.

Of the 13 participants, seven (54%) identified as male and six (46%) as female. Eight (61%) were high school administrators associated with schools in the local school district; three (23%) were from schools associated with larger charter organizations, and two (15%) were from

schools from another school network. Two (15%) were principals of a combined middle school/high school program. Another was one of three Assistant Principals over an integrated complex of three programs in a large school district. All had intermediary partnerships with the Foundation for California Community Colleges, National Council of La Raza, Middle College National Consortium, Woodrow Wilson National Fellowship Foundation, respectively.

All research participants were administrators at their respective school sites. They willingly participated in the research study, understanding their participation would hold to the highest level of confidentiality. The participants received an e-mail copy of the interview questions for their review before the scheduled interview meeting. The researcher assured anonymity of research participants.

Data Collection

The collection of data ensued on January 24, 2017, after receiving IRB approval, and concluded on March 20, 2017. The span of data collection over two months was the result of accommodating the secondary school principal in scheduling time that was not affected by school holidays, professional development/staff meeting days and other administrative responsibilities. Selection of the 15 research participants for data collection occurred, after receiving IRB approval from Pepperdine University in January 2017, by identifying secondary schools that have an early college high school model from a publically accessible website, Jobs for the Future (jff.org, n.d.). Next, review of the publically accessed websites for each early college high school provided contact information of the schools' address, telephone number, and principal administrator's name. Contact with the research participants initiated via professional e-mail, located on their respective school websites or provided after an initial phone call to the

school office. E-mail and phone contact utilized the approved IRB invitation e-mail and phone recruitment scripts. The following is a modification of the research protocol from Chapter 3.

Avoiding unnecessary delay by oversight using only e-mails as the initial contact, due to the multitude of e-mails received by a school administrator, a blue letter provided the initial cold contact (see Appendix D). The blue letter, mailed to the school and addressed to the Principal as listed on the website, introduced the researcher with a very brief general description of research around early college high school programs. The researcher expected notice of the visual blue letter, after the schools' winter recess, would expedite the subsequent scheduling of interviews. The researcher received four negative potential research participant responses and six affirmative potential research participant responses from the blue letter, after schools re-opened following the winter break. The researcher made e-mail and phone contact with the participants who affirmed participation to schedule the interview meetings. Scheduling of the remaining meetings was through e-mail and persistent phone contact. Also, changes in the initial selection criteria for the research participants was inclusive of administrators who (a) had two years' experience as an administrator and (b) who had a minimum of two years' experience on the current school site. Next, the researcher went to one school in which the principal had not responded, met the Principal and received an immediate interview. Finally, the researcher conducted 13 of the 15 scheduled interviews, after two principals canceled the interview meeting, twice, at the end of the data collection period. Attempts to make further contact to reschedule the last two interview meetings did not occur as the researcher had reached the point of saturation in the data collection.

Interviews followed the prescribed implementation plan outlined in Chapter 3. The researcher presented the research participant with another copy of the interview questions and

consent form. The researcher explained confidentiality and the process of assuring anonymity. Next, the participant signed the consent form. Finally, the meeting commenced.

All interview participants consented to an audio recording. Conducted in one sitting between the hours of 8:00 am – 9:00 pm, time allotted for interviews was 45- 60 minutes. The majority of interviews held to the allotted time, with two between 65-77 minutes in length. Table 4 presents the days on which each participant interview conducted. Transcriptions were made of all audio recordings. Removed from all the transcriptions and notes were all identifying school and participant information.

Implementation of the following procedure occurred for each transcription analysis. First, the researcher listened to each audio recording while taking notes. Second, review of the transcript copy of the audio recording for accuracy occurred while listening to the recording. Third, listening to the audio recording occurred to highlight outstanding information. Next, the researcher read the transcript to integrate notes for data analysis. Finally, the researcher read the transcript to highlight participant quotations to use as evidence in the data analysis.

Table 4

Dates of Participant Interviews

Participant	Participant Interview Date	Participant	Participant Interview Date
P1	January 24, 2017	P8	February 24, 2017
P2	January 25, 2017	P9	February 28, 2017
P3	January 26, 2017	P10	February 28, 2017
P4	February 1, 2017	P11	March 2, 2017
P5	February 3, 2017	P12	March 2, 2017
P6	February 7, 2017	P13	March 2, 2017
P7	February 23, 2017		

Data Analysis

The essence of qualitative research is the involvement of the researcher in the process of

data collection. Therefore, from the onset of data collection, the analysis of data occurs (Richards & Morse, 2013). Steps employed in this study's data collection followed Giorgi's (1997). The first involved collecting and storing verbal data through use of the interview. Second, transcribing and reading the data occurred to observe common descriptive words used by interviewees. Third, the coding process developed themes from the descriptive words. Next, from the organization of the themes emerged interpretations of the research phenomena. Finally, synthesis of the interpretations yielded summaries, which utilized the data to answer the research questions.

Reducing acquired data requires its classification into a framework of simple and manageable pieces of information for analysis (Whittemore & Knafl, 2005). The researcher highlighted recurring statements and words identified during the review of the transcriptions and notes for later categorization in the coding process. According to Creswell (1998), as needed, the researcher made an inference of a participant's phrase or statement that did not result in a particular word or phrase. Repetition of this process and the unstructured coding of the data occurred, by reading the transcribed documents two times. Subsequent steps of analysis were as follows:

- Highlighted during the reading of the transcriptions, were significant phrases as deduced from themes and major concepts based on relevant literature.
- Acknowledgment of common topics in the data produced the creation of codes.
- Listing and compilation of related items determined the data frequency.
- As thematic evidence, descriptive accounts referenced experiences of the theme from research participants.

- The final data presentation used multiple bar graphs as visuals of the data findings coupled with the use of participant narratives.

As stipulated in Chapter 3, two inter-raters reviewed and provided feedback on the coding categories as the process of inter-rater reliability.

Inter-rater Review Process

Chosen because they had knowledge of, and experience using the research methodology, two doctoral candidates enrolled in Pepperdine University's Organizational Leadership program were inter-raters for this research study. No information that identified the interview participants existed in the coding table. Independent review of the data by the inter-raters provided initial coding suggestions for inclusion of coding categories. The inter-raters recommended few edits. Discussion of differences in the categories used for coding occurred until consensus. Graphs displayed each question's themes and the data frequency of occurrence.

Data Display

Data organization and display formed as the result of the research and related interview questions. Utilization of frequency charts with transcript excerpts from the interviews highlighted the themes that emerged. Assurance of participant confidentiality required the use of identifying labels that corresponded to the order of each interview (e.g. Participant 1 [P1], Participant 2 [P2], etc.). Theme development occurred utilizing responses of the research participant on the interview questions. Display of the frequency of items took place in graph form. Although similar ideas arose between interview questions, relevance of the collected data for each inquiry corresponds only to that particular interview question. Throughout the pages that follow, research participant responses are verbatim and may be incomplete sentences or

idioms. However, communication of the research participant's intent occurs in the context of the semi-structured interview.

Research Question 1

Research Question 1 asked, "What best practices and strategies do high school principals employ that determine students' higher education and future career preparation?" How would you describe your leadership approach and/or practice?" To answer this question, posed were four interview questions with follow-up questions as follows:

1. How would you describe your leadership approach and/or practice?
2. What practices and strategies employed at your school prepare underrepresented students in higher education for higher education and future careers?
 - a. What category of underrepresented student populations exist on your campus?
 - b. Do you have students in foster care, special education or homeless students on your campus?
 - c. Do you employ separate strategies to prepare these students for higher education and future careers?
3. What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers?
4. How did you engage various constituencies in the planning, implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - a. How did you engage various constituencies in the planning, implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

- b. How did you engage various constituencies in the development of best practices and strategies used for underrepresented students’ preparation for higher education and future careers?”
- c. How did you engage various constituencies in the implementation of the practices and strategies used for under-represented students’ preparation for higher education and future careers?”

Specific themes emerged from each of the four interview questions forming the overall themes to answer research question one.

Interview question 1: How would you describe your leadership approach and/or practice? Data analysis of responses to this interview question developed characteristics from which the following seven themes emerged as presented here in alphabetical order: (a) collaborative/democratic, (b) other leadership styles, (c) relational leadership, (d) servant leadership, (e) student-centered, and (f) transformational leadership (see Figure 9).

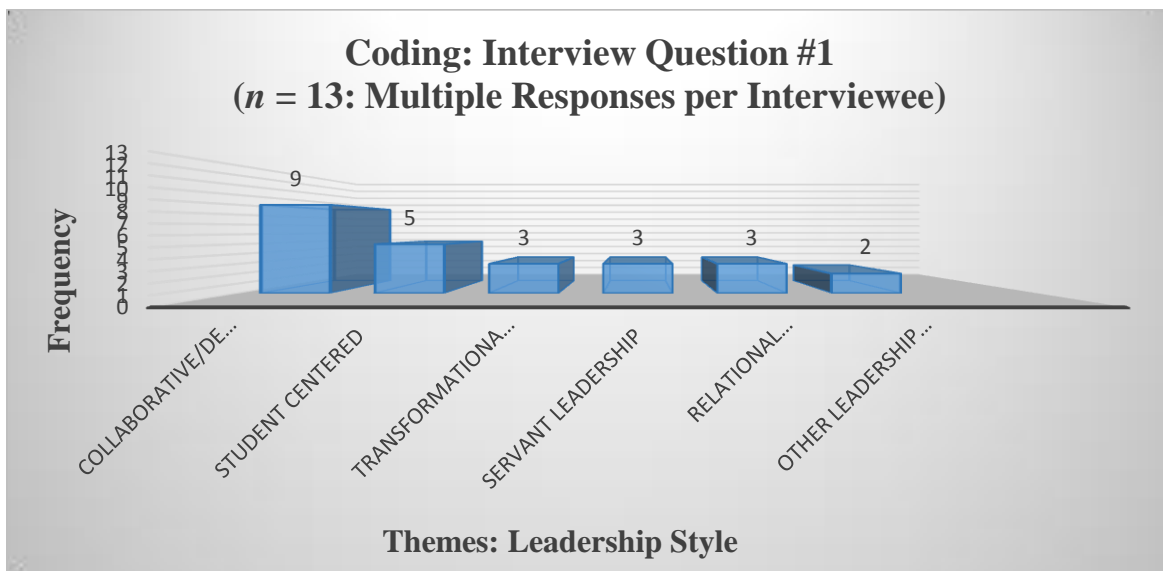


Figure 9. How would you describe your leadership approaches and/or practice?

Note: This figure demonstrates the five themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Collaborative/democratic leadership. This theme emerged as the primary response to interview question one with nine instances (36%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require leadership oriented towards working with others, providing opportunity for others' input to decisions made regarding instruction and school policies and procedures as shared leadership. P4, P5, P10, P12, P13 specifically mentioned they use a collaborative style of leadership; P5 connected use of the collaborative style with democratic leadership, "I like to lead; I like to demonstrate democratic and shared leadership" (P5, personal communication, February 3, 2017). Another response made by P4 stated, "...collaborative; it felt natural to be collaborative with the people already here; working alongside with teachers is very natural for me" (P4, personal conversation, February 1, 2017). Responses by P10 and P12 resonated the other research participants' responses in that administrators collaborated with teachers, staff and other constituency groups in discussing what is and is not working to create buy-in to decisions made regarding instructional practices and school policies.

Student-centered leadership. This theme emerged as a secondary response to interview question one with five instances (20%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require leadership oriented towards students' student learning outcomes. P4 maintained the leadership focus of the student population served by the school for student learning outcomes stating, "...we still want to see those kids (1st generation college) because that's where our passion is. That's really the kids that we're trying to serve," (P4, personal

communication, February 1, 2017). Another comment by P12 indicated, “Every decision I make has to benefit students” (P12, personal communication, March 2, 2017)

Relational leadership. This theme emerged as another response to interview question one with three instances (12%) of being directly or indirectly mentioned by the research participants. This theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require relationship as the key to effective leadership. Research participants who contributed this response were P7, P9 and P12. The participants indicated that building trust, exhibiting respect towards everyone, and being a family and creating a community created a positive school culture. According to P7, “...everything is defined by our relationships with people. It’s about relationships; it’s about creating trust; it’s about creating approachability; it’s about acknowledging and recognizing other’s importance, whether we’re talking about teachers or custodial staff” (P7, personal communication, February 23, 2017).

Transformational leadership. This theme emerged as another response to interview question one with three instances (12%) of being directly or indirectly mentioned by the research participants. According to P1, P3, and P9, this theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require leadership that develops another’s leadership potential. Research participant P3 indicated, “I hire people and treat them as professionals; then allowing them to do their job and to grow. I will definitely provide feedback” (P3, personal communication, January 26, 2017). Research participant P9 stated, “I might change, but my staff will stay. If I can build that leadership and motivate them to make changes and improvements constantly; ...it’s the most important thing because they’re the heart

of the school” (P9, personal communication, February 28, 2017). Finally, P1 epitomized transformational leadership in the statements, “I believe in the program. I wanted to come here. My overall mission is to help everybody around me achieve their own personal goals while maintaining a focus on what the school site’s supposed to be accomplishing” (P1, personal communication, January 24, 2017).

Servant leadership. Another theme emerged in response to interview question one with three instances (12%) of being directly or indirectly mentioned by the research participants. Responses by P2, P6, and P8 to this theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require a servant-minded leadership style. Responses made by research participants reflect this theme as P8 stated, “I am here to serve” (P8, personal communication, February 24, 2017). P6 comments, “I am a servant-leader who believes in a student-centered learning environment that meets students’ needs” (P6, personal communication, February 7, 2017). Another research participant responds, “Servant leadership is my focus, of doing. The reason I entered into the business of education, in the first place, is to help kids grow; it’s not just academics but it’s also social, emotional, and just developing future leaders” (P2, personal communication, January 25, 2017).

Other leadership styles. This category encompasses responses to interview question one with two instances (8%) of different leadership styles directly or indirectly mentioned by research participants. Four different types of leadership styles emerged in response to research question one indicating the best practices and strategies employed by a high school principal for students’ higher education and future career preparation. Other leadership styles presented by

research participants included: (a) situational leadership, (b) distributed leadership, (c) culturally responsive leadership, and (d) student-centered leadership.

The situational leadership style proposes the efficient use of teacher and staff skillsets in the situations in which required. Responses made by research participant P8 indicate the manner an administrator exhibited situational leadership in the performance of his/her responsibilities. Requesting further clarification to respond to another interview question, P8 commented, “The principalship is one that is incredibly broad. We are leaders of instruction. We are leaders of culture. We are leaders of school operations. We leaders of the school mission. There’s leadership of effective talent management” (P8, personal communication, February 24, 2017). This response corroborates the literature that a principal is required to wear many hats in performing the different duties of the position and required by various situations. Another aspect of situational leadership involved the employment of staff in the performance of activities in which they have the competence and therefore, enjoy. P6 stated, “It’s not difficult to get people to comply. Allow them to do what they love” (P6, personal communication, January 26, 2017).

The distributed leadership style has similar components of democratic and shared leadership within education. One research participant referenced distributive leadership with the collaborative/democratic styles of leadership. On the small campus site, the principal “empowers staff to lead the learning” with the results being “distributed leadership that has worked really well for this school” (P9, personal communication, February 28, 2017).

The culturally responsive leadership theme emerged as a response to interview question one as it relates to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require behaviors that are inclusive of students intentionally or unintentionally marginalized. Responses

made by research participants P11 and P12 addresses equity and diversity in the school’s instructional program. In response to the leadership style exhibited, P8 indicates, “My leadership is culturally responsive in support of the community needs, based on demographic, geographical, academic data, being very conscious of ensuring that all leader moves and decision making is student-centered, culturally responsive to the community I serve” (P8, personal communication, February 24, 2017).

Interview question 2a: What category of underrepresented student populations exist on your campus? Data analysis of responses to this interview question developed characteristics from which the following five themes emerged as presented here in alphabetical order: (a) African American, (b) English Language Learners, (c) first-generation college, (d) Latino/Latina, and (e) low socioeconomic status (SES) (see Figure 10).

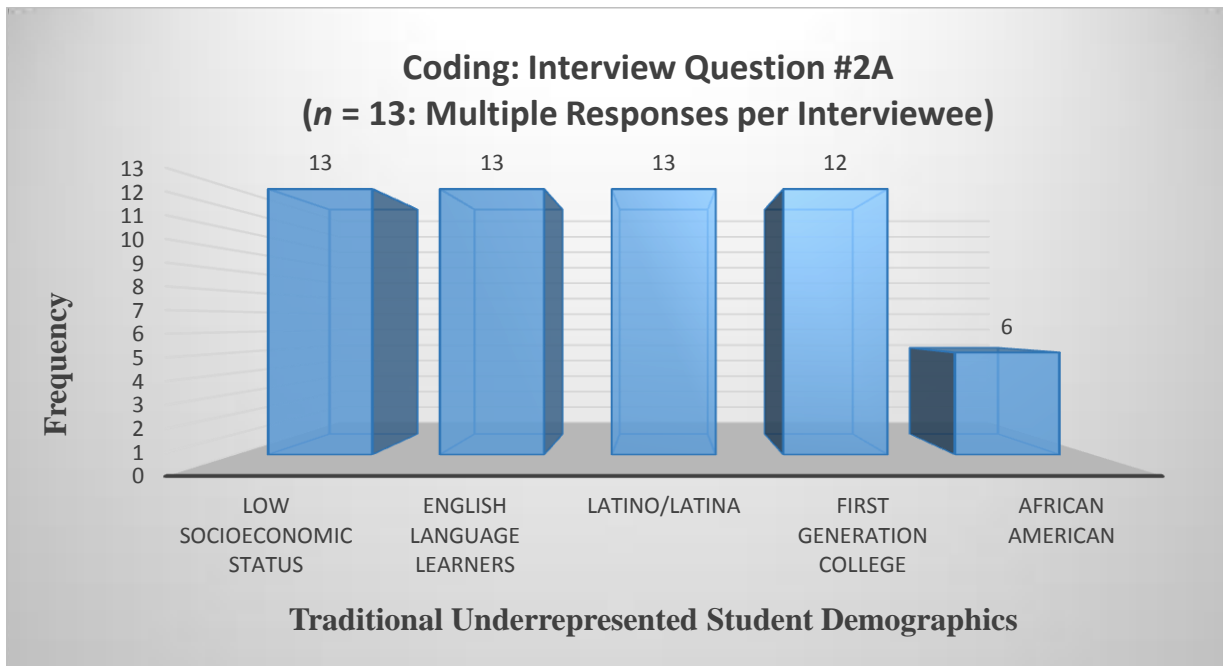


Figure 10. What category of traditionally underrepresented student population exist on your campus?

Note. This figure demonstrates the five themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Low socioeconomic status student demographic. This theme emerged as the primary response to interview question two with 13 instances (23%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing the education of traditionally underrepresented student populations of low socio-economic status in higher education. Within the United States public education system, the number of students accepted into the Food and Nutrition Service School Lunch program (United States Department of Agriculture, n.d) is a determinant of low socioeconomic status based on paying a reduced price for lunch or receiving a free lunch on the public school campus. All research participants reported members of their student population as receiving a free/reduced lunch. The majority reported low socioeconomic rates above 50% on their campus sites.

English language learner student demographic. This theme emerged as another response to interview question one with 13 instances (23%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one, also, indicate that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing the educational needs of students who are English language learners as traditionally underrepresented in higher education. Each research participant reported having English language learners (ELL) of various levels. The majority of students designated as ELL's were of Latino heritage. A qualifying score on the California English Language Development Test (CEDLT) is an indication of student's academic English level competence for reclassification as fluent English Proficient (California Department of Education, n.d.). P1 reported, "It's not even a student that struggles with English as a

primary language; that particular student is a straight-A student” (P1, personal communication, January 24, 2017), having one student identified as EL, on a campus of 400, based on enrollment paperwork. Research participants report high numbers of reclassified fluent English proficient (RFEP) on campus: P10 reported 75-76% students classified as RFEP. Other research participants reported student populations of ELL students on campus from 6% to 20%.

Latino/Latina student demographic. Another important theme that emerged in response to interview question one with 13 instances (23%) of being directly or indirectly mentioned by the research participants the attention given to the educational needs of student populations of Latin ancestry, especially of the male gender, traditionally underrepresented in higher education. The location of the majority of research participant schools was in communities that had a large number of residents of Latin heritage. Every school reported a student population from Latin ancestry; P5 stated a Latino population of 93-94%. P8 stated a Latino population of 98%. P10 reported, 96%, and P13, 99%. Latinos are one of the groups of underrepresented student populations in higher education. P12 mentioned how their instructional program focuses on this population in their preparation for higher education commenting, “We always look at the disparity in the achievement scores of Hispanic students and African-American students, especially in the area of Math.” (P12, personal communication, March 2, 2017)

First generation demographic. Another theme emerged in response to interview question one with 12 instances (21%) of being directly or indirectly mentioned by the research participants. The best practices and strategies employed by a high school principal for students’ higher education and future career preparation consists of meeting the educational needs of students who are the first in their families to attend college as first-generation college students.

All research participants answered the interview question that the first generation college students are present on their campuses. Research participants provided a range of answers that reflected a minimal difference in the occurrence of responses for the interview question. P1 indicated, “We’re not targeting a specific population. We don’t have a GPA cut-off that we don’t take. We don’t have a quota that we are filling” (P1, personal communication, January 24, 2017) P4 indicates, “The greatest percentage of our kids are first generation, at least, 60%, if not more. I think that’s important. That’s something we’ve maintained on purpose. That’s where our passion is” (P4, personal communication, February 1, 2017)

African American demographic. This theme emerged as the primary response to interview question one with six instances (10%) of being directly or indirectly mentioned by the research participants. This theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation requires leadership that focuses attention on African American students, especially of the male gender, traditionally underrepresented in higher education. As reflected in the data of interview question one responses, very few research participants’ school sites have a significant number of African Americans in their student population. Research results reflect community demographics. The student population of P5 was 500 of which 6-7% are African Americans The student population of P11 was 600 of which 5-10% were African Americans

Interview question 2b: Do you have students in foster care, special education or homeless students on your campus? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) foster care, (b) homeless, (c) special education: general education curriculum, and d) special education: modified curriculum (see Figure 11).

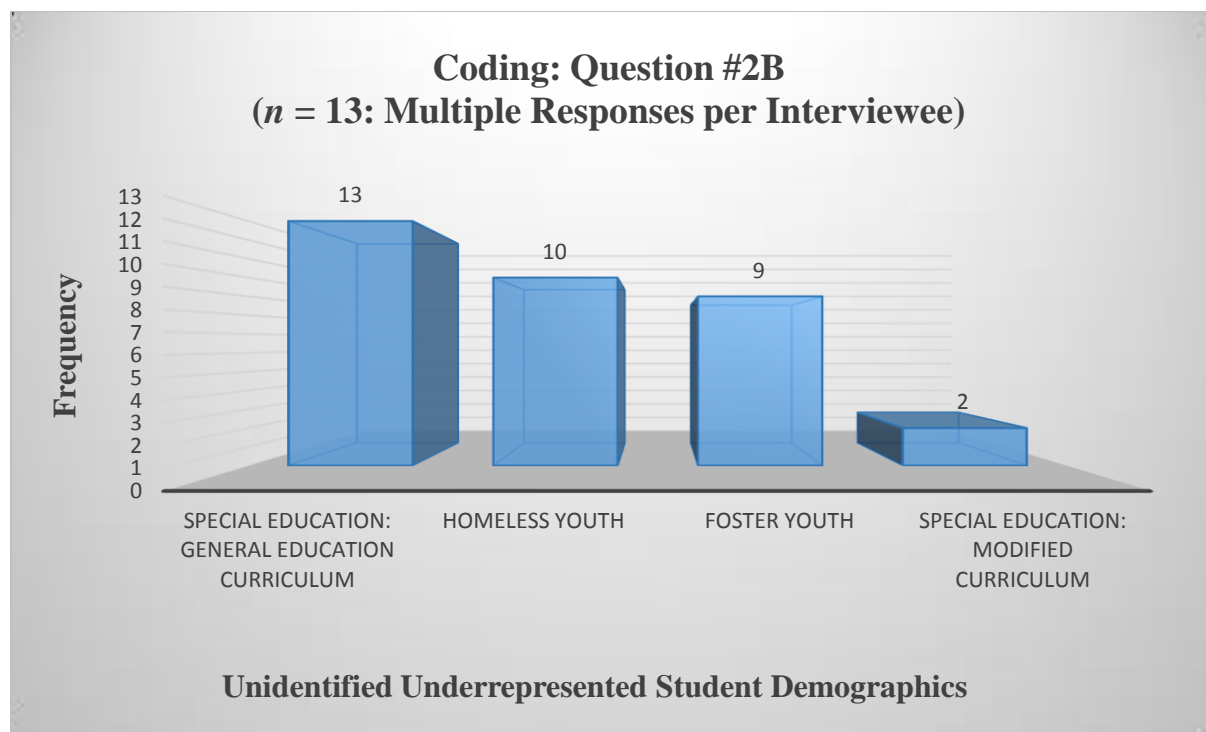


Figure 11. Do you have students in foster care, special education or homeless students on your campus?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Special education-general education curriculum. This theme emerged as the primary response to interview question one with 13 instances (38%) of being directly or indirectly mentioned by the research participants. This theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require attention to addressing the educational needs of students receiving special education services. When stated, research participants indicated that students with special education services are members of the student population, on their school sites, which range from 270 – 600 students. The percentage of students with special education services ranges from 7% to 15%. The special services designation for these students

falls within the mild level of educational support services and may include a 504 Plan, resource assistance in Math and English for delays in a particular area of learning, and speech and language services; some students may require regular counseling services as the result of emotional trauma. As a result, these students fully participate in the educational environment with complete access to the general education curriculum. P3 reported 7% of the 600 students on campus receive special education services. On P5's school site of 500 students, 10 % have mild/moderate special education services. Of the 330 students on P6 campus, 12 % receive services. P8 reports that of the 275 students on campus, 15% benefit from special education services.

Homeless youth. This theme also emerged as a response to interview question one with ten instances (29%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require focusing attention on the educational needs of homeless youth. Considered homeless are children who lack an adequate, fixed and regular nighttime residence (United States Office of Elementary and Secondary Education, Educational Resources Information Center (U.S.), 2000). Eleven research participants stated that they have homeless youth on their campuses, ranging from few to many. P1 indicated one homeless youth on campus, after becoming homeless on her mother's deportation. Reunited with her mother, she will graduate in June. P5 indicated 5-6 homeless students are part of the student population on campus; P6 commented that 10% of the students on campus are homeless youth.

Foster youth. Another theme emerged in response to interview question one with nine instances (27%) of being directly or indirectly mentioned by the research participants. This

theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation address the needs of youth in a foster family. Nine research participants have students, who live with a foster family, on their school sites. However, as P12 indicates, many students do not consider themselves in foster care because they live with a relative.

Special education-modified curriculum. The theme that emerged in response to interview question one with two instances (6%) of being directly or indirectly mentioned by the research participants was in relationship to research question one. The best practices and strategies employed by a high school principal for students' higher education and future career preparation focuses on the educational needs of students with special education services requiring a modified curriculum. They may participate in some general education elective courses with their peers. However, they need a modified curriculum to access their academic instruction. P7 and P11 school sites provided educational services to students with a modified curriculum.

Interview question 2c: Do you employ separate strategies to prepare these students for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) curricular access strategies, (b) family involvement strategies, (c) school entrance strategies, and (d) integrated student development and support strategies (see Figure 12 and Figure 13).

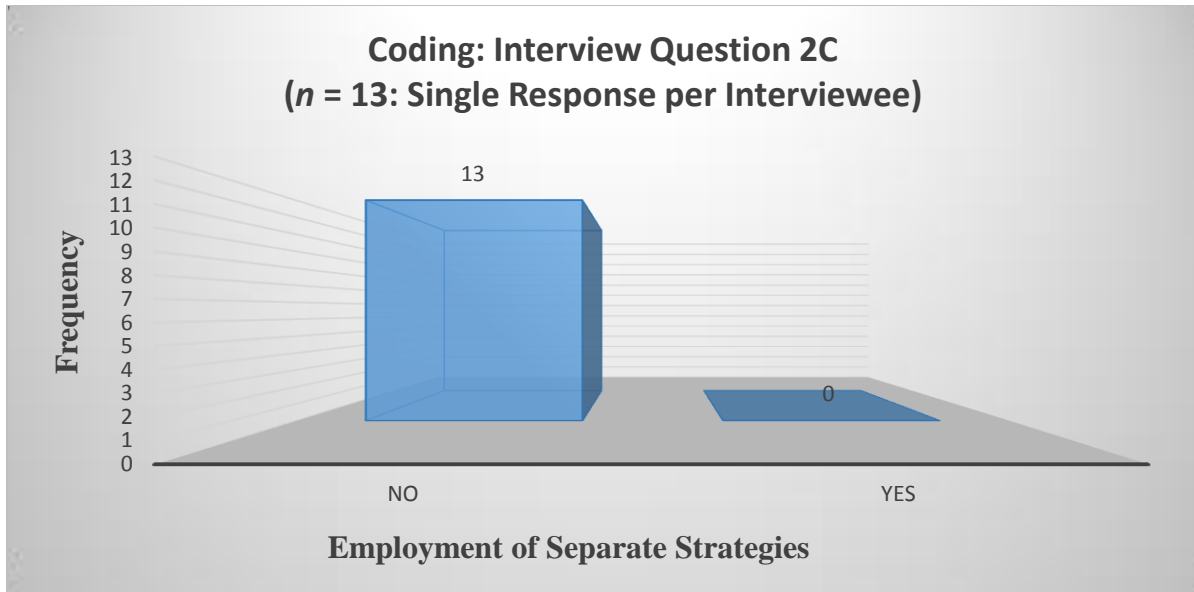


Figure 12. Do you employ separate strategies to prepare these students for higher education and future career?

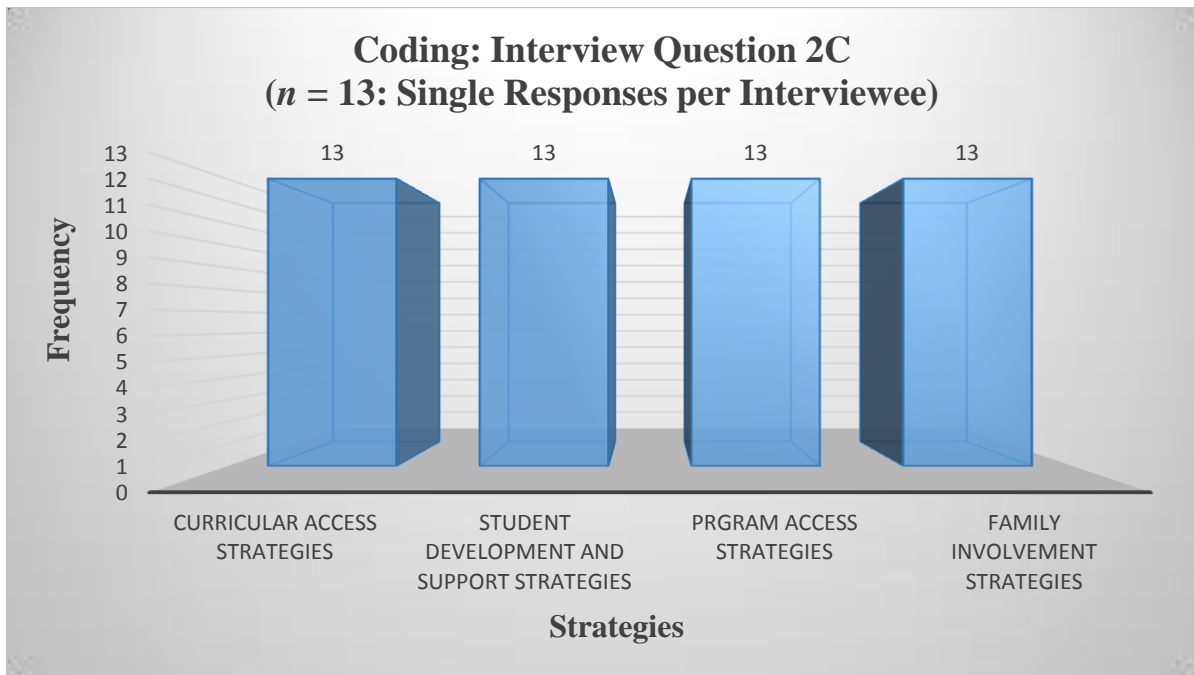


Figure 13. Do you employ separate strategies to prepare these students for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

All research participants stated the response to this interview question as negative with 13 instances (100%) of being directly or indirectly mentioned by the research participants. This question's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require complete access to all services that support their growth and development, academically and emotional with the assistance of their families and school community. Particular responses provided by research participants reflect the level of access all students have to the higher education program offered on the college campuses. After relaying the story of a student receiving special services obtaining 39 college credits on graduating, P13 stated, "So the expectation is the same for all, as well as for college" (P13, personal communication, March 2, 2017) Additionally, P12 resonated the same sentiment in the statement, "Equity and access are provided to every student" (P12, personal communication, March 2, 2017). Another interviewee, P11, also, commented, "Equity, everybody across the board. Whether we have a special ed. student, EL student, any student, we want to give them the pathway to a university, college or a career" (P11, personal communication, March 2, 2017). The following is a final summary by P8,

We are very holistic as it pertains to all students because everything from being able to provide for our students in general, independent of whether they are the top performers and/or some of our subgroups on campus, we're trying to meet their needs by understanding their data, whether that be their behavioral data, their academic data, and their social/emotional data as it relates to developing them in our early college model.

(P8, personal communication, February 24, 2017)

Further analysis of the comments made to this interview question by research participants

yielded themes that the researcher categorized as follows: (a) curricular access strategies, (b) student development and support strategies, (c) school entrance strategies, and (d) family involvement strategies. Curricular access strategies are those used for students' access to the curriculum in support of their higher education and career preparation. Student development and support strategies are the services available to students' when requiring academic counseling, social/emotional counseling, tutoring or other resources outside the classroom instructional time. School entrance strategies are those used to provide access to the early college high school campus as a member of the student population. Family involvement strategies are those engaged in by the school site to bring the family and community into the discussion of the student's plans for higher education and career development and access. All research participants engaged strategies in each of these areas in students' preparation for higher education and future careers.

Interview question 3: What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) activating, (b) no prior knowledge, (c) relationship building, (d) resource sustainability, and (e) synergizing (see Figure 14).

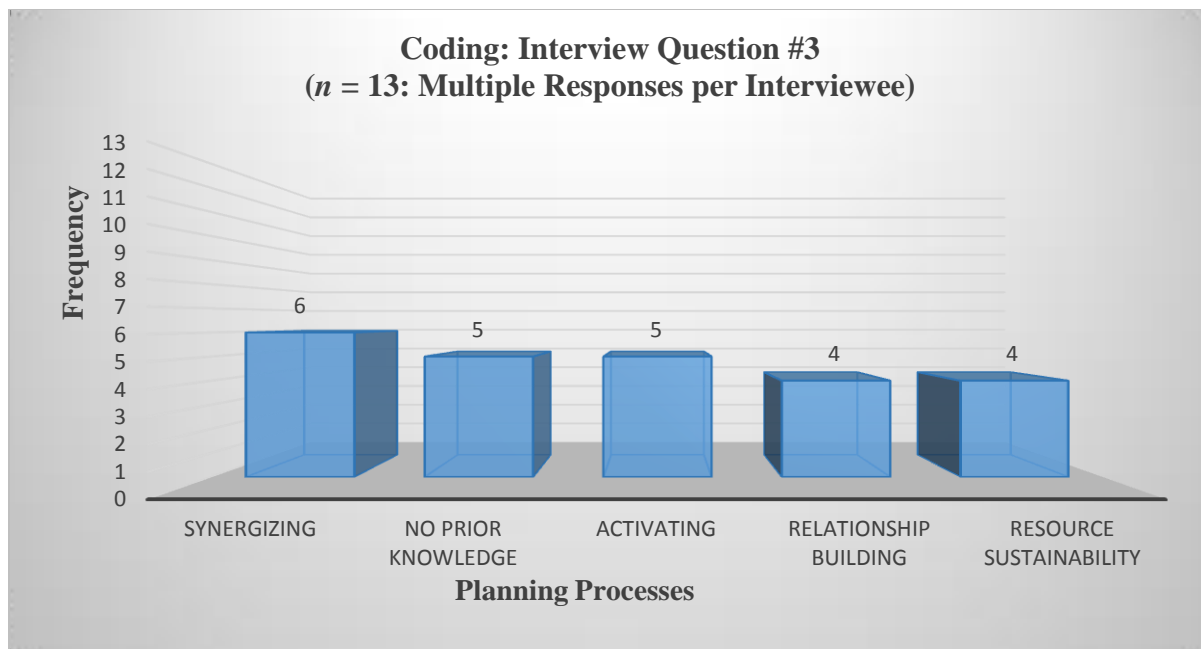


Figure 14. What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

In response to interview question three, four participants (16.6%) had no prior knowledge of the planning process implemented in developing current practices and strategies used for underrepresented students' preparation for higher education and future careers. The early college high school model began in 2003. Established soon after 2003, current administrators, at early/middle college school sites, have no prior knowledge of the planning processes implemented. The responses of current research participants who do have knowledge of the planning process are as follows.

Synergizing. This theme emerged as the primary response to interview question one with six instances (25%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation

require leadership that enables others to unite and act towards a purpose or goal. Corroborated by research participant responses are first steps in the planning process. Research participants commented initial stages of the planning process require discussion and brainstorming about the proposed program. P1's program developed as an innovation to current educational programs in the district, stating, "It was one of those cutting edge things...let's get on board and do it" (P1, personal communication, January 24, 2017). Another participant's program became a solution to a problem identified by looking at student data at the current site. P4 referenced the transition to an academic campus at the current site, "...starting out; it wasn't a very academic place. The Board was, obviously, concerned about outcomes, what are we doing; the test scores were not so great" (P4, personal communication, February 1, 2017)

According to research participants, the next part of the initial step in the planning process was to strategize about what works for students, determining outcomes by what the school program was to accomplish. Instructional rigor, with an emphasis on students' preparation for higher education, continues as a goal in education. P4 stated, "There was more and more pressure to become more academically rigorous" (P4, personal communication, February 1, 2017)

Another part of the synergizing phase of the planning process was to obtain input from stakeholder groups. Lack of stakeholder input in the initial planning affected the program's successful implementation. As testified by P6, "In its initial implementation, the early college program used professors from the community college to teach onsite that did not dovetail with the current teacher's union. In their eyes, they were taking jobs away from the membership" (P6, personal communication, February 7, 2017). The current revival of the early college program includes "members of the teacher's union as part of the stakeholder marketing

campaign” (P6, personal communication, February 7, 2017). After bringing stakeholder groups of K-12 administrators, district representative, college representatives, teachers, parents, and others, together, P1’s input encourages stakeholder participation in the planning stages, “We are thinking about this program. Here is the design of the program. This is how we are envisioning it. How can we make it work” (P1, personal communication, January 24, 2017). Completion of these initial phases of synergizing lead to the next part of the planning process, activating.

Activating. This theme emerged as another response to interview question one with five instances (21%) of being directly or indirectly mentioned by the research participants. This theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation requires activating the plan envisioned during the synergizing phase. Research participants indicated that the actions necessary to the implementation of the plan were studying options, meeting to collaborate to develop and backward plan a timeline and visiting various models implemented in the manner that will address the needs of students within your community. P8 stated, “Prior to your opening year, backward plan using action research to inform that plan, knowing how it fits in providing access to opportunities for kids in the community served” (P8, personal communication, February 24, 2017). There may be multiple planning meetings to develop the timeline with the end goal in mind. These meetings provide an opportunity for stakeholder groups to collaborate in the context of the planning process synergizing and activating the plan through relationship building.

Relationship building. This theme, also, emerged as a response to interview question one with five instances (21%) of being directly or indirectly mentioned by the research participants. This theme’s relationship to research question one indicates that the best practices

and strategies employed by a high school principal for students' higher education and future career preparation require building relationships at the beginning of the planning process.

Predicated on collaboration with stakeholder groups is the success of the proposed program in meeting students' preparation for higher education. Research respondents indicated that building relationships with the major stakeholder groups crucial to obtaining "leadership buy-in" (P3, personal communication, January 26, 2017) and developing a "strong support network" (P7, personal communication, February 23, 2017) for the program's success. Significant stakeholder groups include leadership in the K-12 school district and the college and with teachers, parents, students and others. Also critical to the success of the program is the partner relationship established with the community college. P9 states, "The university partner is key to your early and middle college. If you have a good relationship and a good established contract, it makes everything so much easier" (P9, personal communication, February 28, 2017)

Resource sustainability. This theme emerged as the last response to interview question one with four instances (16.6%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation views, in the beginning, the program's viability. One research respondent postulated to sustain program resources necessitates "engaging strong leadership and obtaining resources" (P7, personal communication, February 23, 2017). Another commented on resource durability as connected to "receiving program coaching" from intermediary partners. (P1, personal communication, January 24, 2017). Others replied on the importance of "managing push-back from naysayers" (P4, personal communication, February 1, 2017). A respondent summarizes the process of program resource sustainability as, "Start small as a 'pilot' program

and grow as resources become available. Sustainability pieces are crucial. As I introduce something I look at the sustainability of it because you don't want people used to something that you can't deliver" (P6, personal communication, February 7, 2017).

Interview question 4a: How did you engage various constituencies in the planning of best practices and strategies used for underrepresented students' preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following three themes emerged as presented here in alphabetical order: (a) formal meetings, (b) informal meetings, and (c) no prior knowledge (see Figure 15).

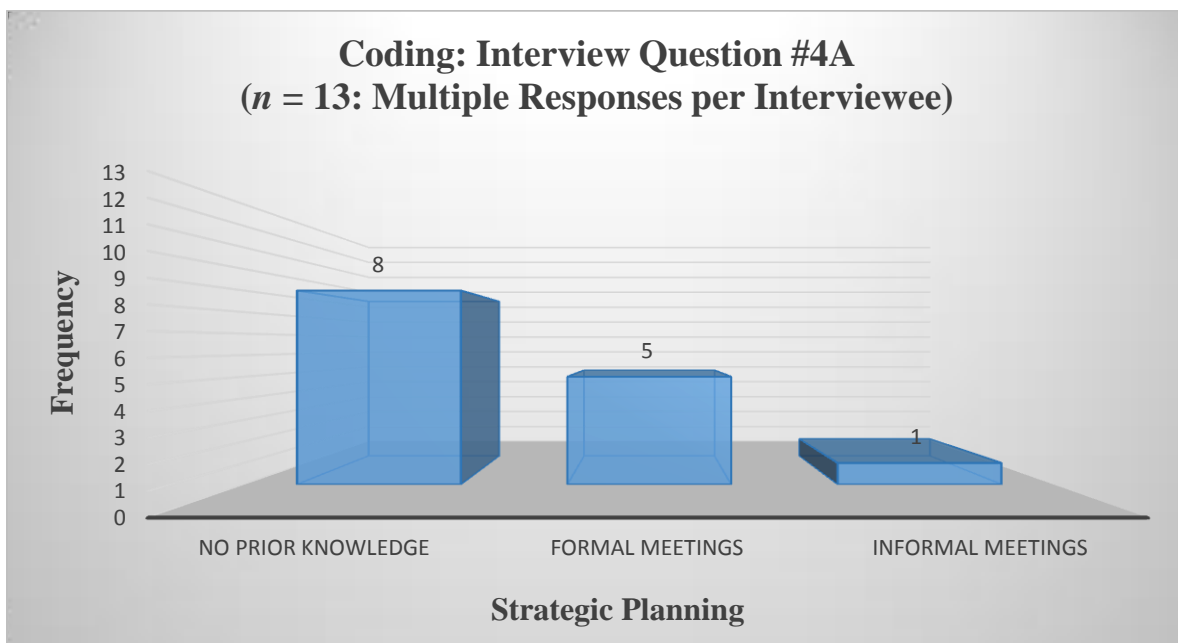


Figure 15. How did you engage various constituencies in the planning of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the three themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

No prior knowledge. In response to interview question 4A, eight participants (57%) had no prior knowledge of constituency engagement in the planning of practices and strategies for

underrepresented students' preparation for higher education and future careers. The early college high school model began in 2003. Established soon after 2003, current administrators, at early/middle college school sites, have no prior knowledge of the constituency engagement processes implemented in the planning. The responses of current research participants who do have knowledge of constituency engagement during the planning process are as follows.

Formal constituent strategic planning. This theme emerged as the primary response to interview question four with five instances (36%) directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation involve engagement of constituency groups in the planning stages of program implementation. Formal meetings were the primary form of engagement mentioned by research participants in answer to this question. Constituency or stakeholder groups in attendance at the official meeting included K-12 district office representatives, community college representatives, administrators, teachers, parents, students and other community members. P4 reports, "A number of teachers, including myself, the superintendent, and several folks began working on the grant, trying to make connections with the community college" (P4, personal communication, February 1, 2017). P1, also, comments, "They brought groups together. They brought teachers and staff to help the Principal of the program; brought together were parents in the community, some people, and professors from the college. At that point, they ironed out all the details" (P1, personal communication, January 24, 2017).

Informal constituent strategic planning. Another theme that emerged as a response to interview question four with one instance (7%) directly mentioned by a research participant. This theme's relationship to research question one indicates that the best practices and strategies

employed by a high school principal for students' higher education and future career preparation engage constituency groups on an informal basis. P2 stated that he keeps stakeholders "in the loop of information by speaking with them outside of official formal meetings," especially teachers when he see them on campus" (P2, personal communication, January 25, 2017).

Interview question 4b: How did you engage various constituencies in the development of best practices and strategies used for underrepresented students' preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) collaboration, (b) communication, (c) education and (d) no prior knowledge (see Figure 16).

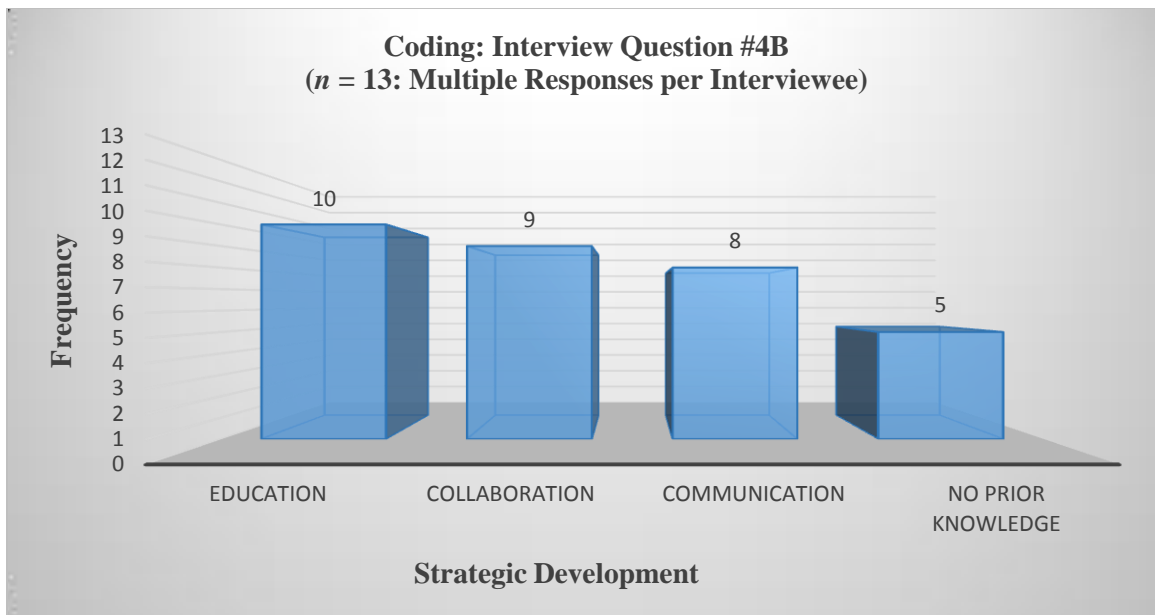


Figure 16. How did you engage various constituencies in the development of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

No prior knowledge. In response to interview question 4B, five participants (16%) had no prior knowledge of constituency engagement in the development of practices and strategies for underrepresented students' preparation for higher education and future careers. Some current administrators, at early/middle college school sites, have no prior knowledge of the constituency engagement processes implemented during development. The responses of current research participants who do have indirect knowledge of constituency engagement during the planning process follow.

Strategic development through education. This theme emerged as the primary response to interview question four with ten instances (31%) of direct or indirect mention by the research participants. This theme's relationship to research question four indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require constituency engagement during the development process. Development of practices and strategies necessitates knowing what exists and what may work with your student population. According to P8, "Education requires research and visiting model programs" (P8, personal communication, February 24, 2017). In addition, P10 states that as instructional practices and strategies change, it is, necessary to "remain current" (P10, personal communication, February 28, 2017). Finally, P4 states that education of constituency groups requires constant focus on presenting data and success stories that show the results of the program's ongoing development. In responses made by research participants, there was always reference towards providing professional development opportunities for teachers and staff. Also included in the education process were other constituency groups of parents and community members. Formal professional development, staff and community meetings was the primary form of constituency education.

Strategic development through collaboration. This theme, also, emerged as a response to interview question four with nine instances (28%) directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation during the development of practices and strategies require opportunities for collaboration with all constituency groups. Research participant responses indicated that during program development of practices and strategies, there was an ongoing collaboration between members of the college and other K-12 district office representatives and stakeholder groups. Collaborating during the program development stage establishes a relationship as "team members working towards a common goal" for the benefit of students (P6, personal communication, February 7, 2017) Therefore, formal meeting was the primary form of collaboration that occurred during the programs development phase.

Strategic development through communication. This theme emerged as the primary response to interview question four with eight instances (25%) directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require communication with and between constituency groups for program development. The most extensively used method of ongoing communication during the program's development reported by research participants was formal meetings. P3, P4, P6, and P9, particularly mentioned the importance of developing communication with stakeholder groups "to create buy-in" (P3, personal communication, January 26, 2017), "receive input" (P4, personal communication, February 1, 2017), "develop critical relationships" (P6, personal

communication, February 7, 2017), and “access needed resources.” (P9, personal communication, February 28, 2017)

Interview question 4c: How did you engage various constituencies in the implementation of best practices and strategies used for underrepresented students’ preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following three themes emerged as presented here in alphabetical order: (a) collaborative instructional leadership, (b) collaborative personal leadership, and (c) collaborative school community culture (see Figure 17).

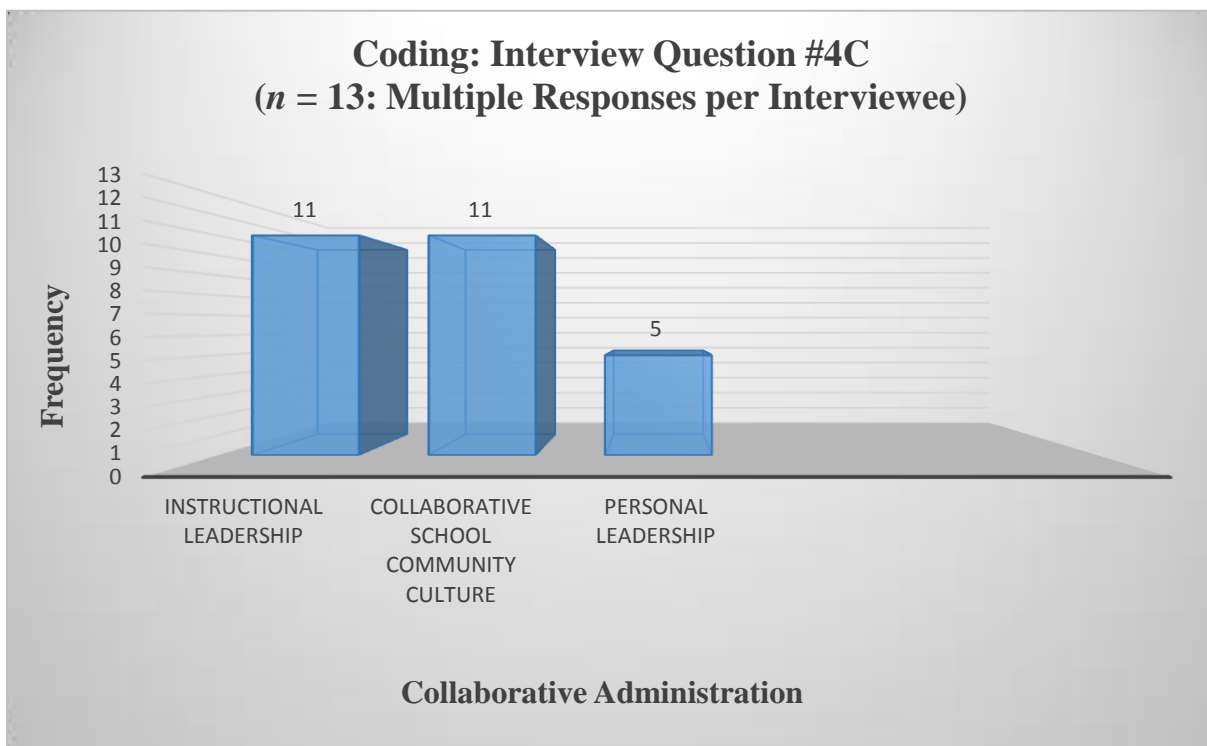


Figure 17. How did you engage various constituencies in the implementation of best practices and strategies used for under-represented students' preparation for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the state interview question presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Collaborative instructional leadership. This theme emerged as the primary response to interview question four with 11 instances (41%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require leadership that involves the school instructional constituency group in the implementation of best practices and strategies. Every research participant had an instructional team (ILT) that was engaged in providing professional development in best practices to the instructional staff. The ILT on larger school sites consisted of academic department chairs with other teachers and members of the administrative team. On smaller campuses, the ILT consisted of all instructional staff with members of the administrative team. P2 commented that the ILT on campus presents the professional development to other members of the instructional staff. P10 states, "The ILT provides feedback and ideas on instruction and other school practices and policies" (P10, personal communication, February 28, 2017). P12 indicated, "Everything derives from the ILT including professional development and peer class observations" (P12, personal communication, March 2, 2017). P8 states that everyone shares in the collective work around students.

Collaborative school community culture. This theme emerged as another response to interview question four with 11 instances (41%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question one indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require involvement by the school community as a constituency group. A collaborative school culture, according to P6, exhibits shared decision-making. A collaborative school community culture "establishes an ongoing communication loop between all

stakeholder groups” (P1, personal communication, January 24, 2017). One way that ensures all constituencies in providing input is the Local Control Accountability Plan (LCAP). As offered by some research participants and stated by P10,

Parents and students engage in an active LCAP meeting each year where they listen to a ‘state of the school presentation,’ then they circulate between thematic rooms that request their input as to what will assure their child’s success. The answers are charted and shared with the School Site Council to see where we can enact the ideas.

(P10, personal communication, February 28, 2017)

Finally, as most research participants indicated and P7 said, “Our school is small, and because we know everyone’s story, we can create family relationships and community, culture and traditions where everyone has input and decisions are made from the ground-up, knowing we are all in this together” (P7, personal communication, February 27, 2017)

Personal leadership. This theme, also, emerged as a response to interview question four with five instances (27%) of direct or indirect mention by the research participants. This theme’s relationship to research question one indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require personal leadership characteristics that engage constituent groups in the implementation of best practices. Research participant responses emphasized relationship building when working with constituency groups. Comments included build trust, ask for input, be accessible, and be authentic and vulnerable. To illustrate the value placed on those constituency groups with whom they work and interact, P9 said of her staff, “I want them to become instructional leaders. I can’t do this alone. They are the heart of the school, and it’s not just a school. We’re family” (P9, personal communication, February 28, 2017).

Summary of research question 1. Research Question 1 asked what best practices and strategies do high school principals employ that determine students' college and career preparation? To answer this question, posed were four interview questions with six follow-up questions:

1. How would you describe your leadership approach and/or practice?
2. What practices and strategies employed at your school prepare underrepresented students in higher education for higher education and future careers?
 - What category of under-represented student populations exist on your campus?
 - Do you have students in foster care, special education or homeless students on your campus?
 - Do you employ separate strategies to prepare these students for higher education and future careers?
3. What planning process did you implement in developing practices and strategies for underrepresented students' preparation for higher education and future careers?
4. How did you engage various constituencies in the planning, development and implementation of best practices and strategies used for higher education and future careers?
 - How did you engage various constituencies in the planning of best practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - How did you engage various constituencies in the development of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

- How did you engage various constituencies in the implementation of best practices and strategies used for underrepresented students' preparation for higher education and future careers?

A summation of 32 themes emerged in response to the four interview questions and six follow-up questions associated with this research question. Inclusive examples of the 32 themes are relational leadership, curricular access strategies, resource sustainability, instructional leadership and collaborative school community culture.

Research Question 2

Research Question 2 asked, "What challenges do high school principals face implementing effective higher education and future career readiness programs?" To answer this question, posited were two interview questions:

5. What were challenges faced in the development and implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - a. What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - b. What were the challenges faced in the development of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - c. What were challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
6. How were these challenges to implementation of the practices and strategies for underrepresented students' preparation for higher education and future careers overcome?

Specific themes emerged from each of these interview questions forming the overall themes to answer research question two.

Interview question 5a: What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) bias challenges, (b) financial challenges, (c) no prior knowledge, and (d) program challenges (see Figure 18).

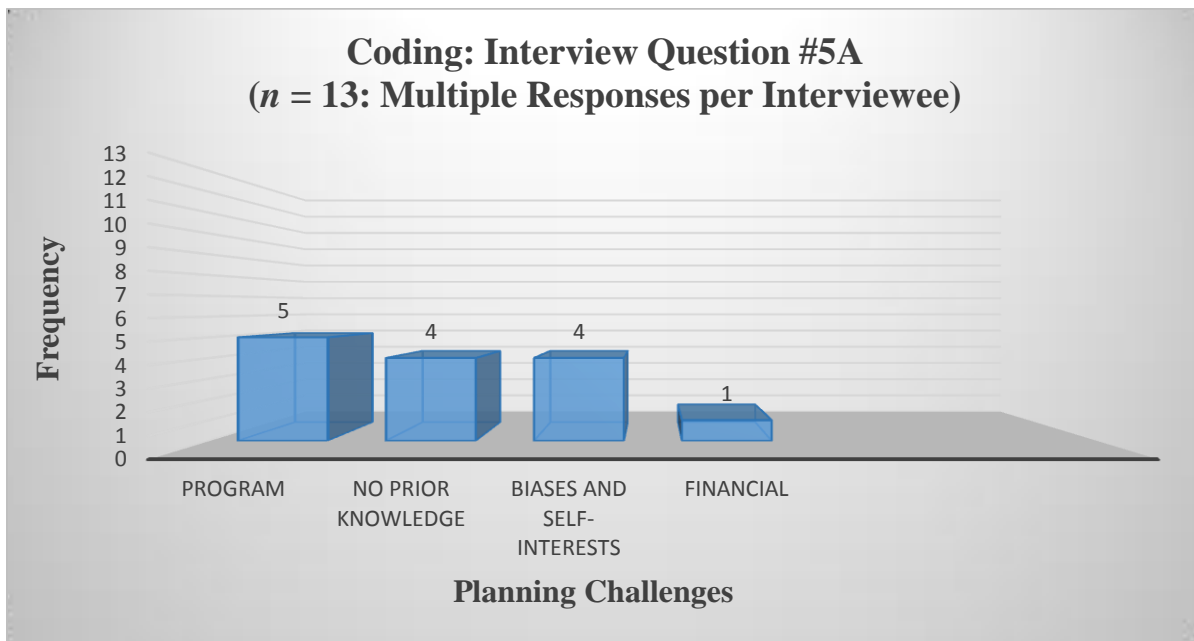


Figure 18. What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each participant fell into the respective theme category.

No prior knowledge. In response to interview question 5A, four research participants (29%) had no prior knowledge of the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future

careers. These administrators were not in their current positions when the school program began. The responses of current research participants who do have knowledge of challenges faced during the planning process are as follows.

Program challenges. This theme emerged as the primary response to interview question five with five instances (35%) of direct or indirect mention by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing program challenges in the planning phase. One research participant's response to this interview question included tackling the problem of not having a student population because the program was so new. He states, "They, for years...every year had to go beg, steal and borrow. The staff and Principal would go to other school open houses, set up a table and there was just no interest" (P1, personal communication, January 24, 2017) Another challenge faced by P4 and P7 was the absence of any interest in an academic, college school culture, especially by parents and students. P7 stated that it took time to change students' mindset toward college vs. sports; P4 said, "Slowly, by changing the dynamics, the first class that we put into early college, it was all about identity. 'You are college students,' that was what we told them every single day" (P4, personal communication, February 1, 2017).

Biases and self-interest challenges. This theme, also, emerged as another response to interview question five with four instances (29%) directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing issues of self-interests and biases in the planning phase. Mentioned by P4 and P11 were issues of teachers' low expectations regarding students'

academic abilities and success in a college program; P4 said, “Teachers did not believe that students would succeed” (P4, personal communication, February 1, 2017; P11, personal communication, March 2, 2017). Another response given by P6 and P8 mentioned the teacher’s union and teacher self-interests, respectively, as problems in planning a college program for students.

Financial challenges. This theme emerged as a response to interview question five with one instance (7%) of directly or indirectly mentioned by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require addressing financial challenges in the planning phase. P10 mentioned financial problems as an ongoing issue in the planning of a program for students’ preparation for higher education. According to P4, there are financial problems in finding finances for initial program start-up, outside of the early college grant, for equipment and other instructional expenditures.

Interview question 5b: What were challenges faced in the development of the practices and strategies used for underrepresented students’ preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) program operations, (b) school culture, (c) student heutagogy, and (d) teacher facilitated pedagogy (see Figure 19).

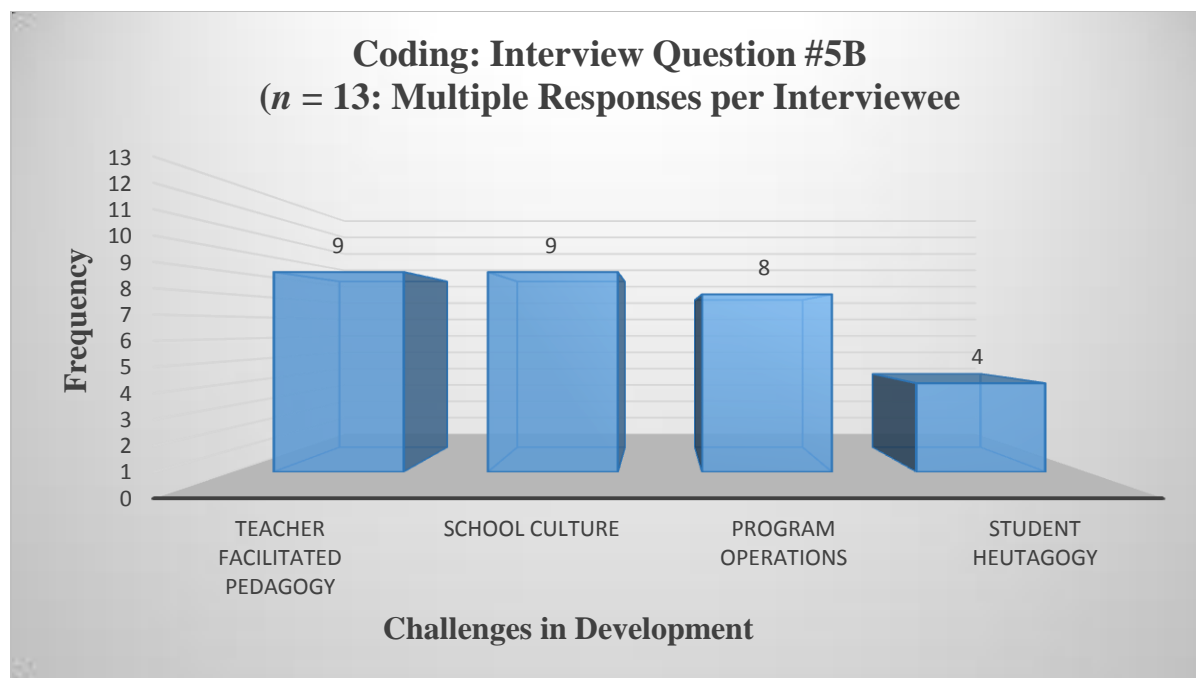


Figure 19. What were the challenges faced in the development of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Teacher facilitated pedagogy. This theme emerged as the primary response to interview question five with nine instances (30%) directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing program challenges in the development phase regarding teacher-facilitated pedagogy. Research participant responses indicated that teachers had to be encouraged to change the traditional manner of instruction to "try new things, be creative and innovative" (P1, personal communication, January 24, 2017). P2 stated that teachers had to become comfortable "sharing data to inform instruction" (P2, personal communication, January 25, 2017). P1, P4 and P8, respectively, indicated that teachers had to

develop their pedagogy to “capitalize on instructional strategies that work” (P1, personal communication, January 24, 2017), and increase instructional “rigor” (P4, personal communication, February 1, 2017) to “create lessons that are student centered” (P8, personal communication, February 24, 2017).

School culture. This theme, also, emerged as a response to interview question five with nine instances (30%) directly or indirectly mentioned by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require addressing program challenges in the development phase that affect school culture. School culture encompasses the learning environment inside and outside the classroom space. Problems in the development of school culture addressed attitudes of staff towards students’ capacity to learn and students’ perception of their ability to go to college. According to P4, also, it was hard to develop an academic culture for college when students and parents were used to less instructional rigor.

Program operations. This theme emerged as another response to interview question five with eight instances (27%) of direct or indirect mention by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require addressing problems in the operations area during program development. Program operations involve anything outside of the direct instruction provided to students. P5 and P6 mentioned the difficulties surrounding establishing systems for attendance/tardiness, as one procedure requiring uniformity on campus. Another area of challenge is in use of human and

financial resources. P9 and P10 report the problems of having to develop a comprehensive program without a full high school staff and money.

Student heutagogy. This theme emerged as the primary response to interview question five with four instances (13%) directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require attending to problems in the development phase in developing students' life-long, self-directed learning. P8 and P3, respectively, comment on "student-centered learning" (P8, personal communication, February 24, 2017) and "student self-directed learning using technology" (P3, personal communication, February 3, 2017). P10 and P12, also mentioned learning that is "relevant" (P10, personal communication, February 28, 2017) and "innovative" (P12, personal communication, March 2, 2017).

Interview question 5c: What were the challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) program operations, (b) school community culture, (c) student directed learning and support, and (d) teacher facilitated pedagogy (see Figure 20).

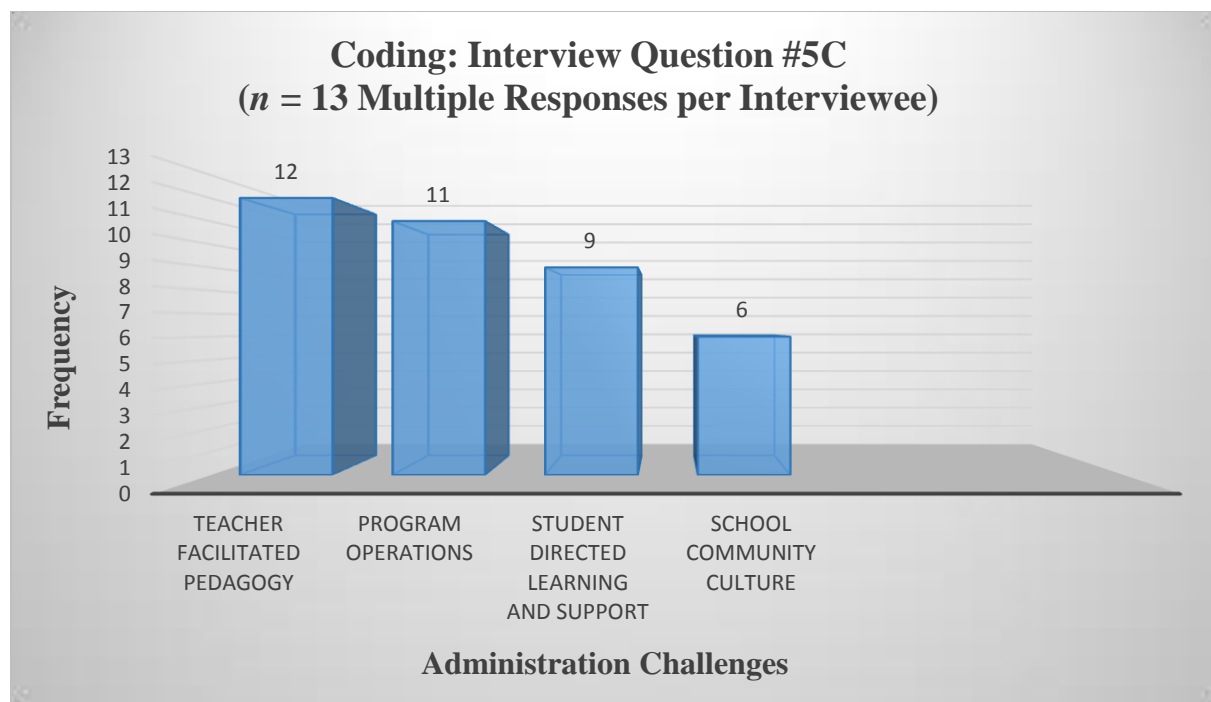


Figure 20. What were the challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each participant indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Teacher facilitated pedagogy. This theme emerged as the primary response to interview question five with 12 instances (32%) being directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing program challenges in the implementation phase in the context of teacher-facilitated pedagogy. Teacher facilitated pedagogy are ways in which teachers assist students to independently acquire knowledge through supportive instruction vs. use of directive instruction. Research participants indicate that teaching must remain "rigorous" (P1, personal communication, January 24, 2017; P4, personal communication, February 1, 2017; P7, personal communication, February 23, 2017). However, according to P7, there is a major

problem when there is “no control of rigor provided to students’ instruction within the community college setting” (P7, personal communication, February 23, 2017). P1 and P10, also, expressed the same sentiment of making instruction “relatable and relevant” (P1, personal communication, January 24, 2017; P10, personal communication, February 28, 2017). Finally, the importance of “developing teacher’s instructional capacity” through professional development can’t be overemphasized, according to P8 (P8, personal conversation, February 24, 2017); teacher capacity yields students’ capacity for their success in college classes.

Program operations. This theme emerged as the primary response to interview question five with 11 instances (29%) of being directly or indirectly mentioned by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require addressing program challenges in the implementation phase in the area of program operations. P10 indicated, “Problems always exist in program implementation in the areas of time, staffing and funding” (P10, personal communication, February 28, 2017). P6 and P7 confirm this reality in “hiring like-minded” staff. (P6, personal communication, February 7, 2017; P7, personal communication, February 23, 2017) P2, also, corroborates these issues when stating that “efficient use of money and providing sufficient teacher collaboration time” are persistent problems in program implementation.

Student directed learning and support. This theme emerged as the primary response to interview question five with nine instances (24%) directly or indirectly mentioned by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation in the program implementation phase require addressing student needs

in instruction, college preparation, and social-emotional health. According to many participant responses, students must gain the skills to exhibit heutagogy, life-long learning skills. P3, P4, and P5 agree that students need “self-directed and project-based learning using technology” (P3, personal communication, January 26, 2017), “to develop self-determined learning skills” (P4, personal communication, February 1, 2017) and “self-advocacy, soft skills” (P5, personal communication, February 3, 2017) that “makes learning relatable and relevant” (P1, personal communication, January 24, 2017)

Another area of concern is students’ preparation for the college curriculum and the college experience as college students, simultaneously. Students lack preparation for the academic demands of the college curriculum in the areas of math and literacy. P1 indicates, “We have short preparation for students’ college integration” (P1, personal communication, January 24, 2017). P9 offered that many times students return to the high school campus to receive the extra support needed during tutoring or intervention to support their college instruction.

The final area of student concern is in the area of health and social-emotional wellness. All participants said that there are major issues of stress experienced by students in a college program. As reported by P1 and corroborated by others, “Stress occurs as the result of managing the high school and college curriculum; stress occurs from peers and parents to complete as many college credits as possible” (P1, personal communication, January 24, 2017). As a result, all the research participants have actively engaged in providing mental health support to students. P9 spoke with the district superintendent and received extra funding to contract an outside agency counselor. A teacher planned a health and wellness conference for students and staff on P1’s campus because of consensus that this was an area of need to address for staff and students.

School community culture. This was another theme that emerged in response to interview question five with six instances (15%) directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require addressing program challenges in the implementation phase in school culture. The two outstanding areas of concern expressed by research participants were parent involvement and developing a college culture mindset with high expectations by teachers and students. P11 spoke about changing cultural biases in regards to students of color and the expectation that some teachers have of their capacity. In addition, P4 and P6 actively engage in developing programs that educate parents about the college experience. P13 mentioned that she provides community service credit to parents to keep them knowledgeable of and engaged in their child's education.

Interview question 6: How were these challenges to implementation of the practices and strategies for underrepresented students' preparation for higher education and future careers overcome? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) program operations, (b) school community culture, (c) student directed learning and support, and (d) teacher facilitated pedagogy (see Figure 21).

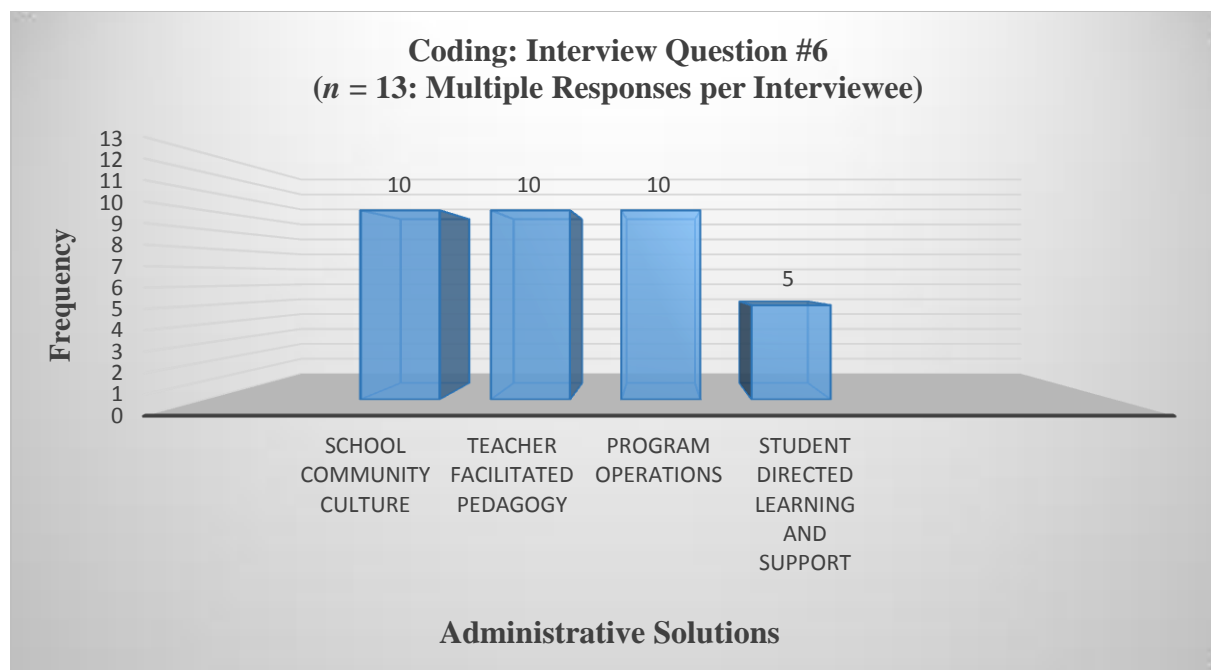


Figure 21. How were the challenges to implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers overcome?
 Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicated the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

School community culture. This theme emerged as the primary response to interview question six with ten instances (28.6%) directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require providing solutions to program challenges in the area of school community culture. Research participants provided solutions to the challenges of parent involvement and college culture development. Regarding parent involvement, P7 developed a seamless connection between parent, school, and community by going beyond the "Back to School Night to offer FAFSA completion, Math Presentations, College/Career night and others for parent and students to attend" (P7, personal communication, February 23, 2017). P13, also, stated that offering parent community service credits for attending school activities and student-

led teacher conferences supports parent involvement. As one solution to developing a campus culture provided by P4, he states, “All school staff tells students, ‘You are not a high school student first; you are a college student’” P4, also, states, “We have ‘college-speak’ in all classes” (P4, personal communication, February 1, 2017).

Teacher facilitated pedagogy. This theme emerged as another response to interview question six with ten instances (28.6%) directly or indirectly mentioned by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation require finding solutions to program challenges in the area of teacher facilitated pedagogy. Research participants provided solutions to the challenges of presenting instructional rigor and developing teacher capacity. Research participants mentioned one way that solves both issues of performing instructional rigor and building teacher capacity while empowering teachers to engage actively in student data analysis. Research respondents concur that teacher participation in collaborative professional development grows teacher capacity and improves instructional rigor. As a result, principals provide time for staff collaboration and data analysis on a weekly or bi-weekly basis. P5, P9, and P12, spoke about using their ILT to provide staff professional development. P10 stated, “WASC results necessitated more teacher collaboration and PD time; staff create their own PD groups and teach each other as personalized PD” (P10, personal communication, February 28, 2017).

Program operations. This theme emerged as the primary response to interview question six with ten instances (28.6%) directly or indirectly mentioned by the research participants. This theme’s relationship to research question two indicates that the best practices and strategies employed by a high school principal for students’ higher education and future career preparation

require discovering solutions to program operations challenges. Research participants provided solutions to the challenges of staffing and money. Four research participants directly commented on the importance of hiring the right staff. P4 and P6 said to hire staff with the right mindset towards students' access to college. The other participants commented, "Hire the right fit" (P6, personal communication, February 7, 2017) and "I hire young staff because they are innovative and already know how to connect with using technology" (P9, personal communication, February 28, 2017)

Solutions to money issues presented by research participants include managing current resources, finding grants and connecting with community service groups. P6 redirected the allocation of money spent on paper to purchase technology for students; P6 said that it was important to manage current resources towards program sustainability, indicating paper was outdated and students need technology. The instructional staff on P9's campus engages actively in finding grant monies to support the program. P9 reported how obtaining the grant money has improved the instructional program and provided recognition of the program to others. P12 is open to assistance from community service groups who provide resources through unique programming. One fraternity recently conducted a "think tank" on race relations that brought students from three different area high schools together and enhanced the students' instructional program (P12, personal communication, March 2, 2017). Research participants did not make any comments that reflected a solution to the problem of there being a lack of time.

Student directed learning and support. This theme, also, emerged as a response to interview question six with five instances (14.2%) directly or indirectly mentioned by the research participants. This theme's relationship to research question two indicates that the best practices and strategies employed by a high school principal for students' higher education and

future career preparation require solving program challenges in the area of student directed learning and support. Research participants provided solutions to the challenges of student stress and college preparation and support. Solutions offered by research participants included provision of mental health and health services, a college preparation class and academic support interventions.

The initial focus of providing mental health and health services occurs in collaboration with the local school district and community college. P1's community college allows students to access all services at the university. P9 had to ask the school district for a school psychologist and nurse to support the health and mental health of her students. Another solution, offered by P1, to dissipate stress due to students' academic load was going to classes of interest at other campuses in the district, developing students' other interests outside of academically demanding coursework. Finally, P13 incorporates a style of restorative circle in students' advisory offers a safe and confidential environment for students to express their feelings in areas of concern in their lives. Students remain with the same teacher and peers during their complete high school program.

There were various solutions offered by research participants regarding the issue of college class preparation and academic interventions. Advancement Via Individual Determination (AVID) is one method widely used by research participants. AVID provides students instruction in the skills for college preparation coursework. P9 ensures training of all staff in AVID strategies, whether or not they teach the class, to support college ready skill development. Other programs support students' preparation for college. In collaboration with college organizations, P4 uses a Summer Bridge and P1 uses Intro to College nights to introduce students entering the high school to college life and academic expectations.

All schools provide academic intervention to support students' educational progress. Although all research respondents provide academic interventions of tutoring and lab classes, two participants provided them in a manner usually offered in elementary school. P2 offers a tiered level of support depending on student need. The degree of support begins with required afterschool tutoring and progresses to restrictions in campus activities and lab classes within an instructional period and at lunch with afterschool tutoring as needed until grades raised. P9 offers academic intervention support afterschool and during Saturday school.

Summary of research question 2. Research Question 2 asked what challenges do high school principals face in implementing effective higher education and future-career readiness programs? To answer this question, posed were two interview questions with three follow-up questions as follows:

5. What were challenges faced in the planning, development and implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - What were the challenges faced in the planning of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - What were challenges faced in the development of the practices and strategies used for underrepresented students' preparation for higher education and future careers?
 - What were challenges faced in the implementation of the practices and strategies used for underrepresented students' preparation for higher education and future careers?

6. How were these challenges to implementation of the practices and strategies for underrepresented students' preparation for higher education and future careers overcome?

A summation of 15 themes emerged in response to the two interview questions and three follow-up questions associated with this research question. Inclusive examples of the 15 themes are biases and self-interests, teacher facilitated pedagogy, student heutagogy, program operations, student-directed learning and support and school/community culture.

Research Question 3

Research Question 3 asked, "How do high school principals measure success in college and future career readiness programs?" Administered was one interview question for this question:

7. What are the formative and summative assessments used to measure success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?

Specific themes emerged from the interview question forming the overall themes to answer research question three.

Interview question 7: What are the formative and summative assessments used to measure success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers? Data analysis of responses to this interview question developed characteristics from which the following four themes emerged as presented here in alphabetical order: (a) culminating, (b) formative, (c) parent/community and

student criteria, and (c) summative admeasurements (see Figure 22).

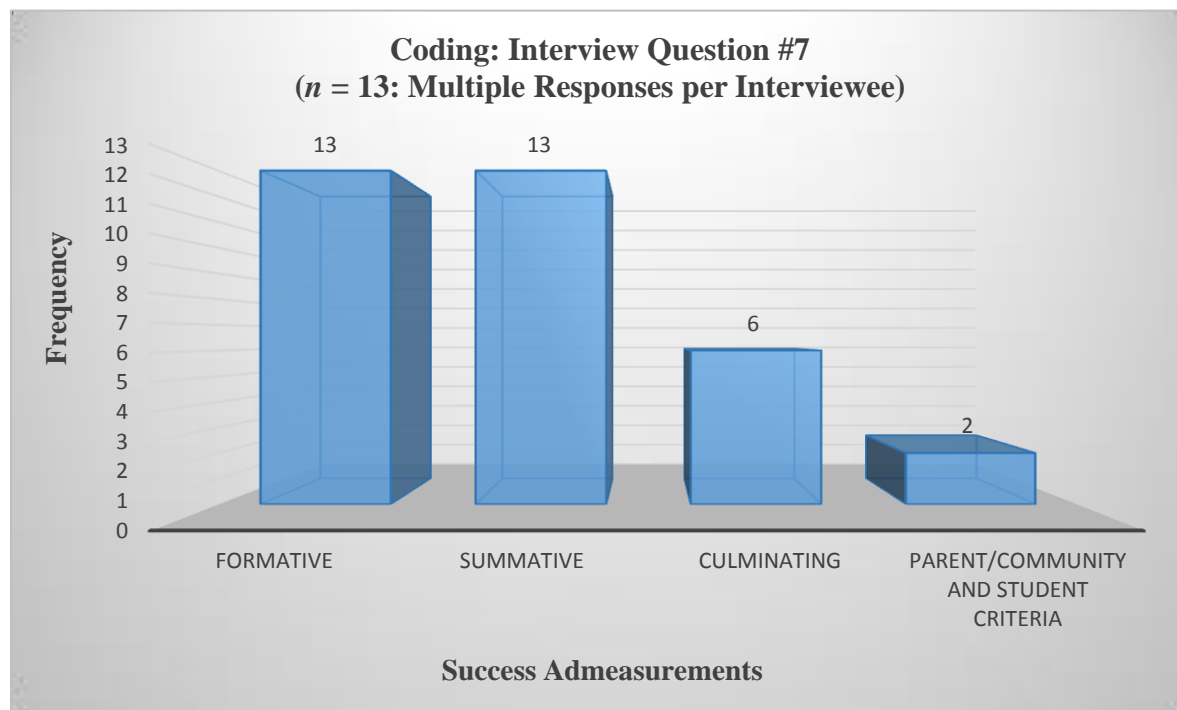


Figure 22. What formative and summative assessments measure success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers overcome?

Note. This figure demonstrates the four themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Summative admeasurements. This theme emerged as another response to interview question seven with 13 instances (38%) of direct or indirect responses by the research participants. This theme's relationship to research question three indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation require use of formative assessments as data towards evaluating program effectiveness. Research participants indicated use of formative assessments to evaluate program effectiveness, comparing student progress in improved scores and in comparison to other schools in the district. The most widely used formative assessment used for this purpose was the

California Assessment of Student Performance and Progress (CAASPP) implemented by the Smarter Balanced Assessment Consortium (SBAC); both terms used interchangeably. However, research participants, also, reported other forms of internal formative assessment measures. P1 and P13 reported the use of a project that encapsulates all learning during the semester or year as a presentation to others. P1 students present to middle schools in the district. P13 students present project portfolios on how they addressed a global issue at the end of their 12th-grade year, to community, teachers, staff and others in a forum atmosphere. Students on P9's campus, also, teach a science course to elementary school students as a culminating project.

Culminating admeasurements. This theme, also, emerged as another response to interview question seven with six instances (18%) directly or indirectly mentioned by the research participants. This theme's relationship to research question three indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation results in use of informal criteria that provides essential data regarding program effectiveness. Research participants were aware of the statistical evidence indicating the success of their early college high school program. All research participants expressed a 100% graduation rate. Other variables of program success represented were the appropriate number of transferrable college credits earned and the percentage of graduates matriculating to a four-year university. Offered by P9 was one example of program success based on culminating criteria, stating, "All 113 seniors are graduating with a grade point average of B or higher; 87 students are getting their AA's; 22 have multiple AA's, and four students have received the POSSE grant" (P9, personal communication, February 28, 2017).

Parent/community and student criteria. This theme, also, emerged as another response to interview question seven with two instances (6%) directly or indirectly mentioned by

the research participants. This theme's relationship to research question three indicates that the best practices and strategies employed by a high school principal for students' higher education and future career preparation uses relevant data to provide information that affects the program's success. Research participants mentioned other criteria by which collected data changed school policies and procedures.

Outstanding replies made by four research participants focused on two areas of importance in assessing program effectiveness. The first response, made by P5 and P6, indicated they collect data on attendance to determine program effectiveness. P6, also, stated, "The only way a student would learn is if the student was in class" (P6, personal communication, February 7, 2017).

The other outstanding replies came from how P4 and P10 engage the community in obtaining data to assess their programs. They both use their Local Control Accountability Plan (LCAP) to involve the community in evaluation of the school program's effectiveness. P10 states, "Parents and students are engaged in LCAP meetings once each year...through 30 minute discussions in which facilitators chart responses for analysis by the School Site Council and action" (P10, personal communication, February 28, 2018) P10 also uses the Healthy Kids Survey, an anonymous survey, on which students can express feelings about the school program. P10 says, "...results are shared with the staff and School Site Council and acted upon with observation of current patterns and trends" (P10, personal communication, February 28, 2017).

Summary of research question 3. Research Question 3 asked how high school principals measure success in college and future-career readiness programs. To answer this question, posed was one interview question:

7. What formative and summative assessments used measured success of the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?

A summation of four themes emerged in response to the one interview question with this research question. Inclusive examples of the four themes are formative admeasurements, summative admeasurements, culminating admeasurement and parent/community and student criteria admeasurements.

Research Question 4

Research Question 4 asked, "What recommendations do high school principals have for implementing college and future-career readiness programs?" To answer this question, posited was one interview question with three follow-up questions as follows:

8. What recommendations provided to another school principal/administrator in the planning, development and implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?
 - What recommendations provided to another school administrator in the planning of practices and strategies for underrepresented students' preparation for higher education and future careers?
 - What recommendations provided to another school administrator in the development of practices and strategies for underrepresented students' preparation for higher education and future careers?
 - What recommendations provided to another school administrator in the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?

Specific themes emerged from each of the interview questions forming the overall themes to answer research question four.

Interview question 8a: What recommendations provided to another school principal/administrator in the planning of practices and strategies for underrepresented students' preparation for higher education and future career? Data analysis of responses to this interview question developed characteristics from which the following three themes emerged as presented here in alphabetical order: (a) personal recommendations, (b) program operations, and (c) program sustainability (see Figure 23).

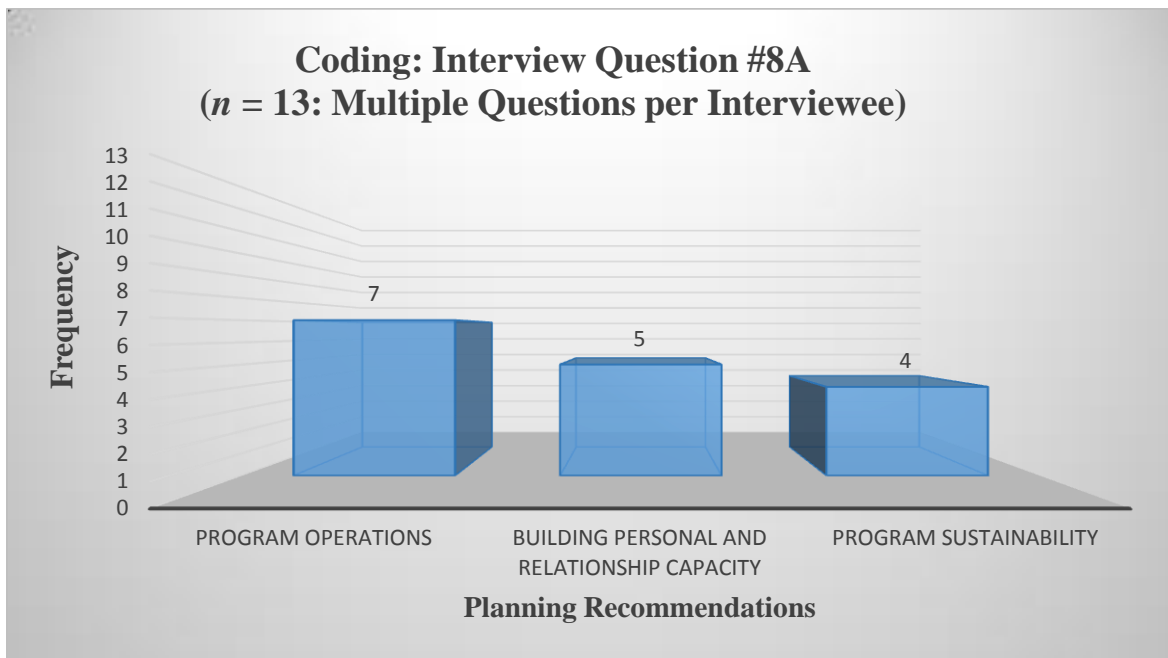


Figure 23. What recommendations may be provided to another school administrator in the planning of practices and strategies for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the three themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of time a direct or indirect statement made by an interview participant fell into the respective theme category.

Program operations. This theme emerged as the primary response to interview question eight with seven instances (44%) directly or indirectly mentioned by the research participants.

This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation as planning program operations, with appropriate policies and procedures. P8 recommends backward planning from the expected launch year; she also, recommends visiting model sites. Recommendations by P9 concur with those of P8 and include the following, "Obtain district support and get a good contract with the community college. Visit model sites and try to be on a college campus because you will be more successful" (P9, personal communication, February 28, 2017). Finally, P6 and P7 offered, respectively, "Know your available resources; plan their use" and "Give opportunity for all constituents to have a voice at the table to provide input", (P6, personal communication, February 7, 2017; P7, personal communication, February 23, 2017).

Building personal and relationship capacity. This theme emerged as the primary response to interview question eight with five instances (31%) directly or indirectly mentioned by the research participants. This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation in the planning of a program. Personal recommendations provided in response to this interview question came from P1, P4, P5, and P8. P1 said, "Move when you are ready. Gain unique experiences in different environments, with different populations to develop interpersonal skills. Work at a site you like and are passionate about" (P1, personal communication, January 24, 2017). P5 responded, "Obtain leadership experience, especially in the area of curriculum and instruction. The operations side can be learned on the job, not curriculum and instruction" (P5, personal communication, February 3, 2017). P4 responded, "build relationships; don't be afraid to step out of traditional roles" (P4

personal communication, February 1, 2017). Finally, P8 said, “Be conscious of what you are doing and why” (P8, personal communication, February 24, 2017).

Program sustainability. This theme, also, emerged as a response to interview question eight with four instances (25%) directly or indirectly mentioned by the research participants. This theme’s relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students’ higher education and future career preparation in planning for program viability. Comments made by P6 reflect his belief that planning program sustainability begins at the beginning; he states, “Knowing the vision of the board and superintendent will support the program in its early stages and as a result, only introduce into the program, what can be sustained” (P8, personal communication, February 24, 2017). P2, also, indicates that in planning, know the demographics of the district and the data on the needs of students in the district” (P2, personal communication, January 25, 2017). Finally, “Be an ambassador for kids. Provide success story data.” and “Do not give up”, states P4 and P13, respectively. (P4, personal communication, February 1, 2017; P13, personal communication, March 2, 2017).

Interview question 8b: What recommendations provided to another school principal/administrator in the development of practices and strategies for underrepresented students’ preparation for higher education and future career? Data analysis of responses to this interview question developed characteristics from which the following three themes emerged as presented here in alphabetical order: (a) program operations, (b) program sustainability, and (c) personal leadership and relationship building (see Figure 24).

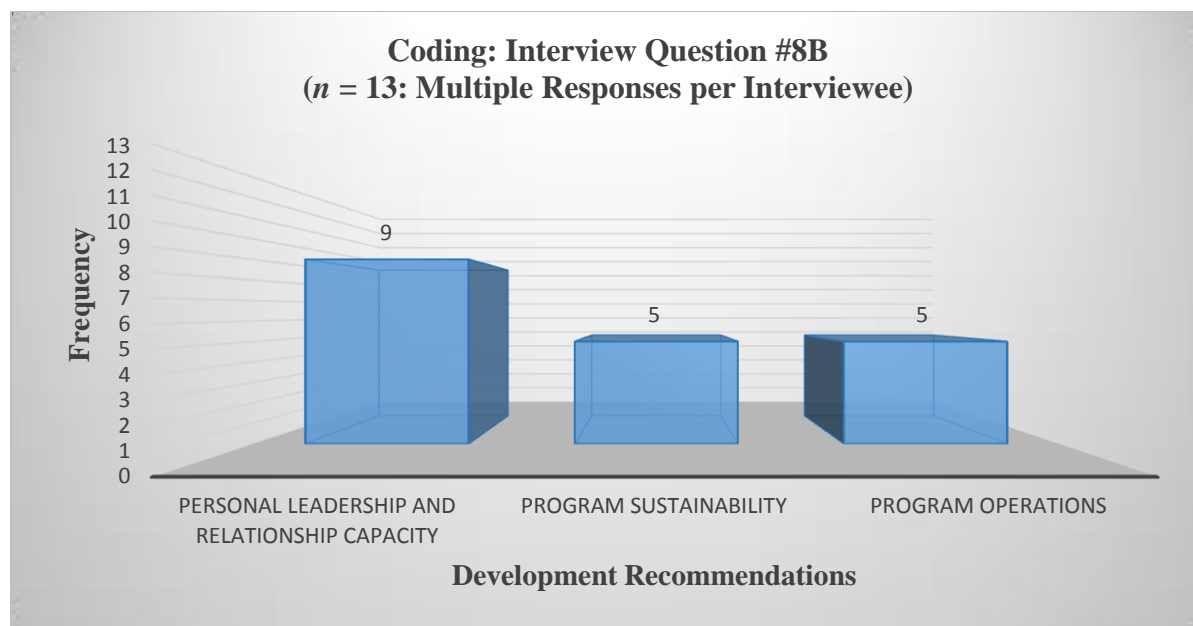


Figure 24. What recommendations may be provided to another school administrator in the development of practices and strategies for underrepresented students' preparation for higher education and future career?

Note. This figure demonstrates the three themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Personal leadership and relationship capacity. This theme emerged as the primary response to interview question eight with nine instances (47.4%) directly or indirectly mentioned by the research participants. This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation in the development of the program through effective leadership addressed in three areas by research participants. The first, effective program leadership values its staff as expressed by P9 and P10. P9 said, "Know your staff and find and use their strengths to benefit the program" (P9, personal communication, February 28, 2017). P10, also, states, "Discover staff gifts and find opportunities for them to be displayed" (P10, personal communication, February 28, 2017). Next, effective leadership collaborates with

staff. P10 and P8 concur, that as a leader, “Be collaborative and transparent” (P10, personal communication, February 28, 2017); “Be vulnerable and authentic” (P8, personal communication, February 24, 2017). Effective leadership, also, develops the leadership abilities of others. P5 states, “The responsibility of leadership is to develop the core values of the leadership team within an environment of trust” (P5, personal communication, February 3, 2017). Finally, P13 said, “Model expectations and develop teachers’ craft” (P13, personal communication, March 2, 2017).

Program sustainability. This theme, also, emerged as a response to interview question eight with five instances (26.3%) of direct or indirect mention by the research participants. This theme’s relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students’ higher education and future career preparation in the development of a program’s viability. Three areas of developing the program’s viability are evident in the research participant responses. These areas are leadership, resources, and culture. First, sustaining the program involves developing staff leadership. P9 uses distributive leadership with her staff because, as she puts it, “I may leave, as administrators do, and they will still be here. Therefore, I see each one of them as a leader” (P9, personal communication, February 28, 2017). Next, program capacity development occurs by managing available resources. P6 said, “Only introduce what can be sustained” (P6, personal communication, February 7, 2017). Finally, developing a sustainable program requires developing a culture of collaboration with all constituency groups. P7 states that, “all constituents should have a voice and every decision made from the ground-up” (P7, personal communication, February 23, 2017).

Program operations. This theme emerged as another response to interview question eight with five instances (26.3%) of direct or indirect mention by the research participants. This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation in program operation development. Evident in research participant responses are three areas of focus: program operations regarding instruction, staff, and resources. In developing the program operations, P6 provided the only response made about resources stating, "Be mindful of available resources" (P6, personal communication, February 7, 2017). Regarding program development and staffing, P6 was the only research participant who made a comment, saying, "Don't make staff comply with something they do not want to do; that is not sustainable. Let the staff do what they love and believe in" (P6, personal communication, February 7, 2017).

Made in the area of instruction was the largest number of responses in program operations development. Responses focused on the development of student access to instruction and teacher provision of instruction. P11 commented on student access saying, "Provide for their social-emotional needs; provide equity and access in rigor and don't shut doors" (P11, personal communication, March 2, 2017). Regarding teaching, P12 said, "Be intentional about teaching. Know how what we do supports or does not support instruction" (P12, personal communication, March 2, 2017).

Interview question 8c: What recommendations provided to another school principal/administrator in the implementation of practices and strategies for underrepresented students' preparation for higher education and future career? Data analysis of responses to this interview question developed characteristics from which the following three themes emerged as presented here in alphabetical order: (a) build leadership

capacity, (b) build instructional program capacity, and (c) increase program operations sustainability (see Figure 25).

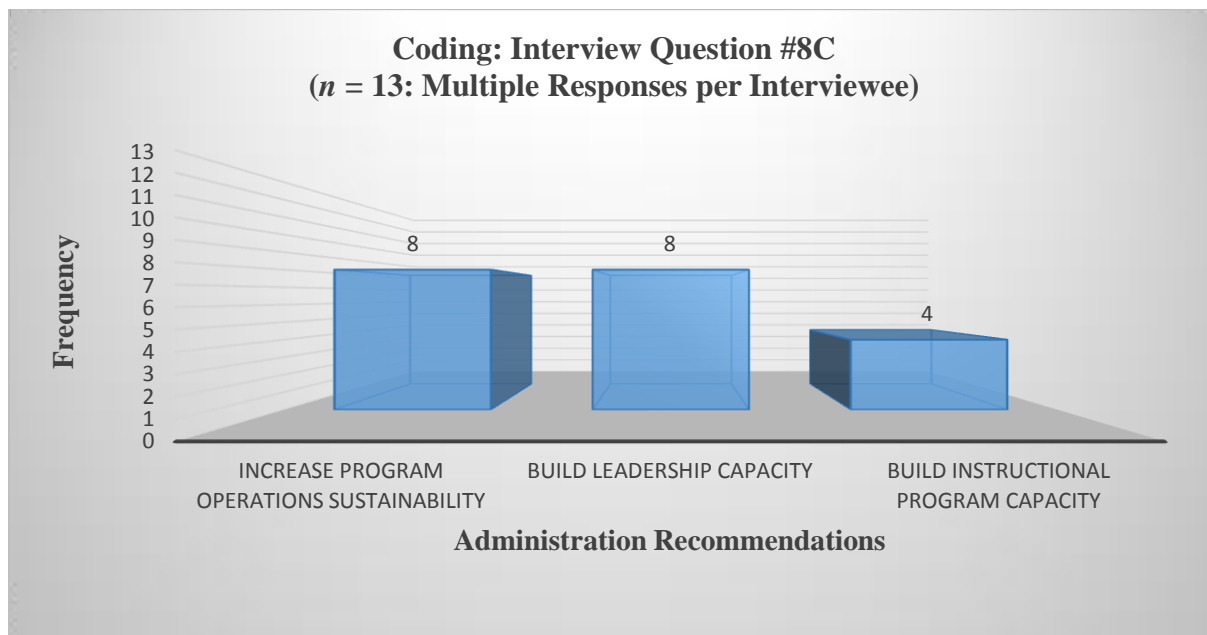


Figure 25. What recommendations may be provided to another school administrator in the implementation of practices and strategies for underrepresented students' preparation for higher education and future careers?

Note. This figure demonstrates the three themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

Increase program operations sustainability. This theme emerged as the primary response to interview question eight with eight instances (40%) directly or indirectly mentioned by the research participants. This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation in implementation towards program operation sustainability. An outstanding comment made by the majority of research participants is that we are family, a community with culture and traditions as expressed by P7. This comment focuses attention on the importance of hiring the right staff with the right fit for

program stability at a school that develops students' preparation for higher education as said by P6. P8 stated, "Hire the person with the capacity to follow the mission and vision, a person with the mindset, heart set, and system set to do the work" (P8, personal communication, February 24, 2017). P1 said, "If they don't have what it takes to stay, they leave after a year" (P1, personal communication, January 24, 2017).

Build leadership capacity. This theme emerged as another response to interview question eight with eight instances (40%) directly or indirectly mentioned by the research participants. This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation in implementation towards building leadership. According to P13, "building leadership capacity requires modeling the behavior you expect, then, develop teacher's instructional craft" (P13, personal communication, March 2, 2017). P9 extends the building of teachers' leadership capacity having said, "I can build that leadership and motivate them in order to just make those changes and improvements; I might change, but my staff will stay and they're the heart of the school" (P9, personal communication, February 28, 2017).

Build instructional program capacity. This theme, also, emerged as a response to interview question eight with four instances (20%) directly or indirectly mentioned by the research participants. This theme's relationship to research question four offers recommendations in the best practices and strategies employed by a high school principal for students' higher education and future career preparation in implementation towards program operation sustainability. Recommendations made in this area, by research participants, focus attention on students' preparation for higher education at the community college level. P1 states, "Instruction needs to be relevant, and students need to relate instruction to their lives" (P1,

personal communication, January 24, 2017). P10, also, agrees in the relevancy of instruction; as a result, created were two new career pathways in math and law based upon student survey results. P3 and P5 emphasize students' development of self-determined learning using technology and soft skills. Finally, P12 states, "Be intentional about effective teaching because good teaching can close or eliminate gaps" (P12, personal communication, March 2, 2017).

Interview question 9: Is there anything else you would like to add? Data analysis of responses to this interview question developed characteristics from which the following themes emerged as presented here in alphabetical order: (a) no, and (b) yes (see Figure 26).

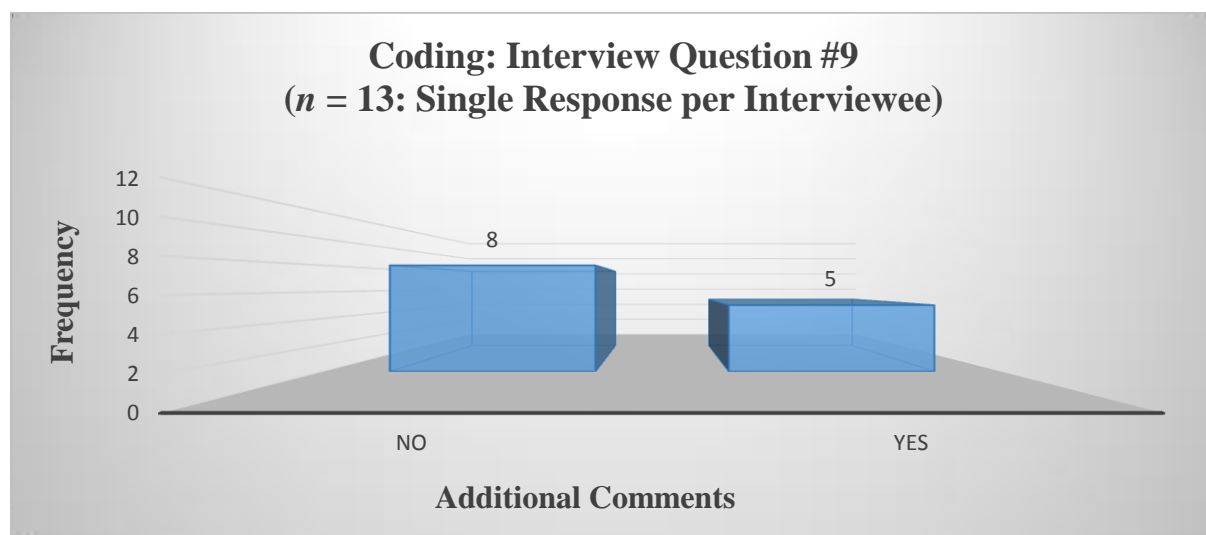


Figure 4. Is there anything else you would like to add?

Note. This figure demonstrates the themes that emerged from responses that answered the stated interview question, presented here in decreasing order of frequency. The numbers above each theme indicate the number of times a direct or indirect statement made by an interview participant fell into the respective theme category.

No. This theme emerged as the primary response to interview question nine with eight instances (62%) of being directly or indirectly mentioned by the research participants. This theme's relationship to research question four offers the research participant to add any relevant information not asked by the researcher regarding best practices and strategies employed by a

high school principal for students' higher education and future career preparation. In response to this question, P6 said, "Nothing else comes to mind" (P6, personal communication, February 7, 2017).

Yes. This theme emerged as the other response to interview question nine with five instances (38%) being directly mentioned by the research participants. This theme's relationship to research question four offers the research participant to add any relevant information not asked by the researcher regarding best practices and strategies employed by a high school principal for students' higher education and future career preparation. Most of the positive responses to this question focused on students' needs. In response to this question, P10 said, "Teach kids to handle stress. Teach them about mindfulness, how to breathe and take care of their bodies" (P10, personal communication, February 28, 2017). The response from P9, also, addressed providing an outlet for students because of stress stating, "Provide students the opportunity to get involved in activities. They need a physical outlet like athletics, clubs and organizations for mental health reasons" (P9, personal communication, February 28, 2017). Regarding students, P11 commented, "Hire staff who are flexible with kids and treat them like human beings. Monitor attendance because a student has to be present to learn. It's all about the kids" (P11, personal communication, March 2, 2017).

Other comments provided a reflection of the position as the principal. P10 commented, "Be prepared for the long hours; it's 24/7/365 days. However, there is nothing more rewarding than watching kids on graduation day" (P10, personal communication, February 28, 2017). After a brief pause, P3 said, "You have given me a lot to think about regarding my own practice" (P3, personal communication, January 26, 2017).

Summary of research question 4. Research Question 4 asked what recommendations do high school principals have for implementing college and future-career readiness programs? To answer this question, posed were two interview questions with three follow-up questions as follows:

8. What recommendations may be provided to another school principal/administrator in the planning, development and implementation of practices and strategies for underrepresented students' preparation for higher education and future career?
 - What recommendations may be provided to another school administrator in the planning of best practices and strategies for underrepresented students' preparation for higher education and future career?
 - What recommendations may be provided to another school administrator in the development of best practices and strategies for underrepresented students' preparation for higher education and future career?
 - What recommendations may be provided to another school administrator in the implementation of best practices and strategies for underrepresented students' preparation for higher education and future career?
9. Is there anything else you would like to add?

A summation of 11 themes emerged in response to the two interview questions and three follow-up questions associated with this research question. Inclusive examples of the eleven themes are personal leadership and relationship capacity; program sustainability; build leadership capacity and build instructional program capacity.

Hitt and Tucker Framework

The research by Hitt and Tucker (2016) is a framework developed through an extensive literature review, of peer-reviewed, empirical data that spans fourteen years, of effective practices exhibited by educational leaders. The Hitt and Tucker framework utilizes practices from three other frameworks: the Ontario Leadership Framework [OLF] (Leithwood, 2012), the Learning-Centered Leadership Framework [LCL] (Murphy et al., 2006), and the Essential Supports Framework (Sebring et al., 2006). The Hitt and Tucker framework systematically compiles twenty-eight practices of effective leadership, from the three other frames, into five areas. The five domains are (a) building professional capacity, (b) connecting with external partners, (c) creating a supportive organization for learning, (d) establishing and conveying the vision, and (e) facilitating a high-quality learning experience for students (Hitt & Tucker, 2016). Utilizing this framework provides the criteria that inform the analysis of key findings in the effective practices of high school principals' leadership in affecting student achievement towards development of students' higher education and future-career readiness.

The first domain of the framework by Hitt and Tucker is “establishing and creating the vision” (2016, p. 545). The five practices of effective educational leadership under this domain are:

- creating, articulating, and stewarding shared mission and vision,
- implementing the vision by setting goals and performance expectations,
- modeling aspirational and ethical practices,
- broadly communicating the state of the vision,
- promoting the use of data for continual improvement.

Evidenced by research participants' responses to the interview question of how they engaged constituent groups in the planning of the program was the area of "creating, articulating, and stewarding shared mission and vision" (Hitt & Tucker, 2016, p. 545). Five (38%) of the study's participants had some knowledge of the planning stages of their program. Only one had specific knowledge of the planning process and expressed this aspect of effective leadership practice of creating and articulating the vision stating, "They brought groups together, parents, teachers, professors, administrators, and said, 'We're thinking about this program. This is how we're envisioning it. How can we make it work?'" (P1, personal communication; January 24, 2017).

Another aspect of this domain is "modeling aspirational and ethical practices" (Hitt and Tucker, 2016, p. 547). The leadership models the behavior by doing the expected behavior. Research participant, P13, spoke of this behavior when she commented of teachers, "You have to model that. Ultimately, if you say something but don't do it, they catch on real quick. It's just like the kids; they know" (Personal communication, March 2, 2017). This principal had a vision of expected teacher behavior. Her comment implied the importance of modeling the expected behavior, to receive the expected behavior.

Another area of this domain exhibited by a research participant was in the field of "implementing the vision by setting goals and performance expectations" (Hitt & Tucker, 2016, p. 547). One way of putting action to the establishment of the goal and implementation of the vision is through communicating shared goals to the degree that the goals create shared meaning. In his role as a transformational leader, P1 stated, "My job is to work with the staff to decide what is next for us; how are we going to grow; how are we going to become better?" (P1, personal communication, January 24, 2016). His comment displays his action of creating shared

meaning. He works with his staff to develop the vision of what to do next to become better.

Another area addressed in this domain of conveying and establishing the vision exhibited by all research participants was in usage of data to promote continual school improvement. In the determination of the school's instructional needs, P6 said, "I am data driven. I use data for everything" (P6, personal communication, February 7, 2017). Additionally, formal summative and formative assessment data were not the only types of evidence used for continual school improvement. According to P10, analysis of student work, based on established rubric criteria, yields discussion of effective instructional practices for student achievement. Another way of collecting data offered by P4 was the informal use of parent attendance at parent education nights on FAFSA, Dream Act, and student academic presentation as evidence of school program progress.

One final area in this domain is the attention given to external accountability measures as a way to develop and visualize goals for student achievement. All research respondents mentioned the summative assessment tool of the SBAC as one formal measure that informs and drives instruction. All respondents reported scores that exceeded those of schools in their local area. However, high scores did not change the pursuit of better instructional practices implemented for student achievement. P1 stated, "We've done this. Now let's figure out how to do it better" (P, personal communication, January 24, 2017). The next area of effective practices based on the framework of Hitt and Tucker, 2016, is "building professional capacity" (Hitt & Tucker, 2016, p. 548).

In the framework, the second domain, "building professional capacity" (Hitt & Tucker, 2016, p. 548) covers the effective practices educational leaders exhibit in developing the leadership and instructional capacity of themselves and others. The building of professional

instructional capacity through professional development opportunities is standard in the field of education. Schools, districts, and educational organizations abound with opportunities for personal growth of the instructional practice. However, the framework indicates that an important aspect of this practice of effective leadership is that the leader takes part in the professional development of the staff. According to the framework, the benefits of learning together are increased knowledge of curriculum and instruction and the growing strength of the teacher's perception of the leader as an instructional leader and source of knowledge and support. The areas addressed in this second domain are as follows:

- selecting faculty and staff for the right fit
- providing individualized consideration
- building trusting relationships
- providing opportunities to learn
- supporting, buffering and recognizing individuals
- creating communities of practice engendering responsibility for learning.

As part of building capacity, strategic development through education was one theme indicated in the research results. In response to the interview question on engaging constituency groups in the development of best practices, this theme emerged as the primary response with ten instances (31%). Building capacity was also a consistent theme in the replies to the interview question four that asked research participants for recommendations. Research participant responses were in areas of building leadership capacity and instructional program capacity, as a matter of increasing teacher capacity in the areas of leadership and development of effective instructional practices.

Research participants, also, provided evidence of the numerous professional development opportunities offered to staff through professional organizations, the local district and on the school campus. P9 and P10 stated that they actively engage in professional development with their workforce on campus; P9 often takes staff members with her to professional development activities held by her school's intermediary partner. They both agree that collaborating in the context of professional development opportunities creates a shared leadership capacity that affects student instruction. Additionally, as the educational leader models the importance of continuous professional development and learning, the teachers follow the example. Again, as previously indicated, P13 has said to model, yourself, the behavior expected of staff. To that end, selection of the right team member is another aspect of capacity building.

Hiring the right staff as part of the early college high school program was of necessity to the research participants. They indicated that the early college high school model results in a few staff wearing many hats to accomplish the same instructional program of a large comprehensive high school. Additionally, P7 said that he does not hire employees with certain experiences. P9 said, "I like to hire younger teachers because they have knowledge of technology use and can relate to the kids" (P9, personal communication, February 28, 2017). Another area of building capacity is in leaders' provision of "individualized consideration" (Hitt & Tucker, 2016, p. 550).

According to the framework, individualized consideration involves the use of teachers' inclinations to teach to form collaborative groups in which teachers provide each other with professional development. In this way, leaders can use the strengths teachers have to support others' needs in areas of improvement. All, but one research participant, who was developing the capacity of the teachers before developing an instructional team, used an instructional

leadership team (ILT). P9 spoke of how the collaboration between faculty and their willingness to share in each other's development of instructional practices had improved student test score and resulted in school recognition in many areas. The previously mentioned examples of building capacity as actions of effective leadership were few of those expressed by research participants in this study.

Other participant responses evidenced other aspects of this domain. One response made by P5 was on building trusting relationships. Another response by P9 indicated that all teachers receive professional development in the AVID model, as an example of providing learning opportunities. Utilization of the ILT was another example by all research participants of creating communities of practice and engendering responsibility for learning. The next domain in the framework of effective practices used by the principal is "creating a supportive organization for learning" (Hitt & Tucker, 2016, p. 552).

According to the framework, the third domain of creating a supportive organization for learning includes the leader acting to complete tasks while maintaining authentic relationships. P7 testifies to the importance of building strong relationships in school leadership from the level of custodial staff to instructional staff support. He reports, "This is our school, and everyone is needed to keep our school functioning well for kids" (P7, personal communication, February 23, 2017). According to Hitt and Tucker, (2016), areas of practice included in this domain are:

- acquiring and allocating resources strategically for mission,
- building collaborative processes for decision-making,
- considering context to maximize organization functioning,
- maintaining ambitious and high-performance expectations and standards,
- sharing and distributing leadership,

- strengthening and optimizing school culture,
- tending to and building diversity. (pp. 552-555)

The area of creating a supportive learning environment was among the themes as key findings in this study. Evidenced by the response to the interview question of the recommendations to planning (24%), development (30%) and implementation (42%) of a program for students as contributed to by P6 was resource sustainability. The active practice of attending to resources aligns with the area in this domain of acquiring and strategically allocating resources for the program's mission.

The area of building collaborative processes for decision-making in this domain aligns with the theme in key findings, parent, community, and student admeasurement. Research participant responses to the interview question on types of assessment used for program implementation resulted in a response level of 8%. Used as a measure of program effectiveness by P4 are parent and community participation in school events. Parent and community member involvement in the yearly review of the local control accountability plan (LCAP) facilitates ongoing conversation about the school's program effectiveness.

The area of tending to and building on diversity and personalizing the environment to reflect students' backgrounds in this domain aligns with the culturally responsive leadership theme in key findings as one of the leadership styles expressed by research participants. Research participant responses to the interview question regarding their leadership style and practice produced a response level of 6% as one among other leadership styles of the servant and distributive leadership. In their replies to the interview questions was evidence of being mindful of providing equity and access to all students in the community environment served by their schools.

The fourth domain of the framework, “facilitating a high-quality learning experience for students” (Hitt & Tucker, 2016, p. 555), aligns with the themes of the study’s key findings of student-centered leadership, student directed learning and support and student heutagogy.

Aspects included in this domain are the following:

- maintaining safety and orderliness,
- personalizing the environment to reflect students’ backgrounds,
- developing and monitoring the curricular program,
- developing and monitoring the instructional program,
- developing and monitoring the assessment program.

Research participant responses to the interview questions resulted in student-centered leadership style response (6%) as among other leadership styles. The student directed learning and support were responses of administrative challenge (21%) and administrative solution (10%). An area of challenge expressed by research participants was development of student heutagogy (12%). Regarding the domain of developing and monitoring the curricular program, P12 said, “We are hardly in our office. We walk around the campus and into classroom to know what is going on, especially in teaching” (P12, personal communication, March 2, 2017).

One last area in this domain of the framework that coincides with a theme in key findings is developing and monitoring the instructional program. This domain aligns with the theme in key findings of teacher- facilitated pedagogy as a response (36%) to the interview question regarding challenges in program development. In monitoring classroom instructional practices, P12 expressed, “Sometimes it’s hard to get teachers to just try new things” (P12 personal communication, March 2, 2017). The final domain area of the framework is “connecting with external partners” (Hitt & Tucker, 2016, p. 558).

According to the framework (Hitt & Tucker, 2016) the fifth and last area, “connecting with external partners” (p. 558) is an effective practice implemented in some way by all research participants. The domain includes:

- building productive relationships with families and communities,
- engaging family and community in collaborative processes,
- anchoring schools in the community.

This domain reflects the responses of the research participants’ feelings of their campuses as small communities or families. P7 said, “No one gets lost here. The teachers and I know everyone; no one can hide” (P4, personal communication, February 1, 2017). Additionally, regarding engaging families and the community in collaborative processes, P10 uses a plan for the yearly LCAP review to host a mini-seminar where parents and students provide input to the school culture, program, and activities. Finally, greater community and family connections occurred with schools whose administrators identified with the community by living or having served at length in the community of the school campus. P8 said, “I know the community; I live here. I bring people from the community here to speak to students at all levels of life because they need to know the struggle, not just the glory” (P8, personal communication, February 24, 2017).

Summary

This study’s purpose was to determine the best practices and strategies high school principals employ to ensure students’ preparation for higher education and future-career. Recruited from various early college high school programs were thirteen principals as the research participants for this study. The study employed nine semi-structured and follow-up questions within a semi-structured interview that focused on the four research questions.

The researcher with two Pepperdine University doctoral candidates, as inter-raters, coded the data through analysis of the interview content. Presentation of findings related to the four research questions produced the summation of 60 themes (see Table 5). Chapter 5 presents the discussion of the themes, implications, recommendations, and conclusions from the research study.

Table 5

Summary of Four Research Questions Themes

RQ1. Administrative Strategies and Practices	RQ2. Administrative Challenges	RQ3: Success Admeasures	RQ4: Recommendations
Collaborative/Democratic	Program	Formative	Building Personal and Relationship Capacity
Relational Leadership	Bias and Self-Interests	Summative	Program Operations
Transformational Leadership	Financial	Culminating	Program Sustainability
Servant Leadership	Teacher Facilitated Pedagogy	Parent/Community and Student	Personal Leadership and Relationship Capacity
Low SES Student	School Culture		Increase Program Operations Sustainability

(continued)

RQ1. Administrative Strategies and Practices	RQ2. Administrative Challenges	RQ3: Success Admeasures	RQ4: Recommendations
English Language Learner	Program Operations		Build Leadership Capacity
Latino Student	Student Heutagogy		(table continues) Build Instructional Program Capacity
First Generation	Student Directed Learning and Support		
African American	School/Community Culture		
Special Education: GE Curriculum			
Homeless Youth			
Foster Youth			
Special Education: Modified Curriculum			
Curricular Access			
Student Development and Support			
Synergizing			
Activating			
Relationship Building			
Resource Sustainability			
Formal Meetings			
Informal Meetings			
Education			
Collaboration			
Instructional Leadership			
Collaborative School/Community Culture			

Chapter 5: Conclusions and Recommendations

In the search for scholarly articles on educational practice priorities, observed was an abundance of articles on leadership practices in education and higher education. Upon a closer look, there appeared a dearth of information on leadership practices in education and higher education as they affect the higher education and future-career preparation of students traditionally under-represented in higher education. The literature review illustrates the abundance of attention given to the state of the public educational system in the United States, with the educational and instructional practices required to provide opportunities for all students towards higher education and career. As a contribution to the literature, this research study provided invaluable knowledge of the leadership practices and strategies that influence instructional practices in the K-12 public schools to develop students' preparation for higher education and future-career. This study aimed to inform K-12 administrators, in general, and high school administrators, in particular, of practices and strategies that prepare students for higher education and future-career. This study provides insight to educational professionals, in all areas, of the strategies and practices that support students' acquisition of skills towards preparation and future-career. This study also informs institutions that train administrators of the skills required of them to prepare students for higher education and future-career. Finally, this study addressed the need for collaboration between leadership in the K-12 and higher education systems in utilizing effective practices to benefit equitable access to higher education for all students. The purpose of this chapter is to discuss study findings, conclusions, and make recommendations for future research.

Summary of the Study

Evolution of this study accomplished two objectives. First, the study determined the effective practices and strategies of high school principals' leadership in developing students' higher education and future-career readiness. Second, this study identified (a) challenges faced by high school principals implementing effective college and career readiness programs, (b) measurements of success used by high school principals in college and career readiness programs, and (c) recommendations that high school administrators have for implementing college and future-career readiness programs. Development of four research questions for this study provided the means for collecting data from the lived experiences of high school principals in early college high school programs. The study participants were principals who had been in an administrative position for a minimum of two years and the principal on the current school site for a minimum of two years. As indicated in Chapter 4, semi-structured interview questions provided responses that supported research questions' queries. The research questions were:

- **Research Question 1:** What best practices and strategies do high school principals employ that determine students' college and future-career preparation.
- **Research Question 2:** What challenges do high school principals face in implementing effective college and future-career readiness programs?
- **Research Question 3:** How do high school principals measure success in college and future-career readiness programs?
- **Research Question 4:** What recommendations do high school principals have for implementing college and future-career readiness programs?

Summary of Findings

Of the 13 participants, seven (54%) identified as male and six (46%) as female. Eight (61%) were high school administrators associated with schools in the local school district; three (23%) were from schools associated with larger charter organizations, and two (15%) were from schools from another school network. Two (15%) were principals of a combined middle school/high school program. Another was one of three assistant principals over an integrated complex of three programs in a large school district. All carried administrative credentialing licensure, had a master's degree as the minimum level of education and complied with the inclusion criteria outlined in Chapter 3.

Collection of data from each participant in the study occurred face-to-face through application of semi-structured interviews that consisted of nine questions with some follow-up questions. An outline of the collection and coding process utilized is given in Chapter 4. Fifty-eight themes developed from the responses to the nine interview questions. From the themes emerged ten that focused on the practices and strategies of high school leadership that develop students' higher education and career preparation as indicated by the literature. The themes are:

1. Culturally responsive, collaborative leadership as it addresses equity and access of diverse student populations and extensively involves the culture of the community into the culture of the school creating a school environment described as family and community.
2. Student-centered leadership as it focuses its decisions on what does or does not contribute to student instruction.

3. Student development and support as it addresses the leadership challenges in providing services for students' access to their educational program while addressing their social-emotional needs.
4. Program and resource sustainability as it strategizes leadership's investing in making current decisions that will sustain resources for the program in future dividends in time, money/resources and human capital.
5. Strategic development in education as it builds teachers' instructional and leadership capacity, utilizing data to inform instruction and promoting program successes as the program's principal educator ambassador.
6. Parent involvement as a collaborative school/community culture that connects the school with the culture of the community and vice versa in meeting the educational and social-emotional development needs of students and families in the community the school serves.
7. Teacher facilitated pedagogy in which leaders support and encourage teachers to use instructional practices that are relevant to and in collaboration with students.
8. Developing student heutagogy, life-long learning skills of self-advocacy and self-determined learning as they address challenges in school, career, and life.
9. Leaders' utilization of parent/community and student admeasurements as one of many ways to monitor the school program's success through parent, community and student involvement in campus activities.
10. Building capacity as one form of strategic leadership development that produces a sustainable program for students' access to higher education and success in career.

Key Findings

Research question 1. What best practices and strategies do high school principals employ that determine students' college and future-career preparation? Although teachers are responsible for students' academic instruction in the classroom environment, directly influencing student achievement, research indicates that the principal's role, as the instructional leader, does affect the quality of instructional practice of teachers on the school campus, indirectly influencing student achievement (Hitt & Tucker, 2016). As a result, an understanding of the practices exhibited by principals that affect teachers' ability to provide effective instruction will also influence student achievement. The framework of Hitt and Tucker (2016) provides a means of evaluation of principals' leadership practices that yield positive results in teacher instruction and, therefore, student achievement.

Utilization of the Hitt and Tucker Framework (2016) provides the criteria that inform the analysis of key findings in the effective practices of high school principals' leadership in developing students' higher education and future-career readiness. Five domains emerged from 28 themes as the composition of its research study's structure. The domains are: (a) building professional capacity, (b) connecting with external partners, (c) creating a supportive organization for learning, (d) establishing and conveying the vision, and (e) facilitating a high-quality learning experience for students.

The domain of building professional capacity was a key finding of this research as indicated by participant direct and indirect responses. The professional capacity building was an important theme:

- 41% for IQ #4C, regarding various constituencies in the implementation of best practices and strategies,

- 32% for IQ #5C, regarding challenges faced in the implementation of the practices and strategies,
- 28% for IQ #6, regarding solutions to the challenges faced in the implementation of the practices and strategies,
- 31%, 47.4% and 40%, respectively, for IQ's 8A, B, and C, regarding recommendations for the planning, development, and implementation of best practices and strategies.

Evidenced by program and resource sustainability as leaders strategize investments in current decisions that sustain program resources in future dividends in time, money and human capital was the building professional capacity domain. Building professional capacity was a key finding. In addition, leaders provide professional development opportunities for teachers to build instructional and leadership capacity through teacher participation on the school instructional leadership team in support of students' access to rigorous instruction. Finally, addressed as a key finding within this domain, was the leader's capacity to build program leadership over time through development and implementation of best practices to sustain the program for students' higher education and future-career preparation. Effective practice of secondary leadership required building program capacity, teacher instructional abilities, and leadership capacity to continue to meet the academic needs of students traditionally underrepresented in higher education.

Found in research participant responses and addressed in the domain of connecting with external partners were two key themes. The first was the secondary principal's use of parent and community involvement that seamlessly joined the school and neighboring community in meeting students' educational, social and emotional needs. The second was in the use of parent,

community and student measurements in monitoring the program's success. Evidence of connecting with external partners occurred as follows:

- 21% for IQ #3, regarding the planning of early college high school programs,
- 59% summation for IQ #4B as focused on the education and collaboration of constituency groups in the development of best practices and strategies for students in the early college high school program,
- 41% for IQ #4C in the implementation of best practices and strategies used in early college high school programs,
- 15% for IQ #5C, regarding the challenges faced in implementation of strategies and practices,
- 28% for IQ #6, regarding the connection with external partners as best practice in identifying and addressing challenges,
- 6% for IQ #7, regarding the engagement of external partners in assessing the early college high school program.

Effective practices of secondary school leadership towards students' access to higher education required connecting with external partners at every level of planning, development, implementation, and assessment of the early college high school program. The collaboration of the school with external partners provided students access to community resources that enhanced their academic instruction.

Indicated by three key themes in findings within research participant responses were the domains of creating a supportive organization for learning and facilitating a high-quality learning experience for students. The first evidenced teacher-facilitated pedagogy as the secondary school principal supports and encourages the use of effective instructional practices relevant to

and in collaboration with students, resulting in students' leadership capacity development. The second, development of student heutagogy as self-advocacy and self-determined learning, also indicated by the challenges faced by secondary principals was the provision of academic and social-emotional services to students. The third as parent/community involvement, in collaboration with the school in support of high-quality learning experiences.

Evidenced by participant responses, were key findings reflecting the domains of creating a supportive organization for learning and facilitating high-quality learning experiences:

- 100% for IQ #2C, regarding use of different strategies for the varied student populations on campus,
- 13% and 24%, respectively, for IQ's #5BC, regarding challenges faced in the development and implementation of best practices and strategies,
- 13% and 24% for IQ #5BC, regarding best practices in providing support to students,
- 14% for IQ #6, regarding solutions to challenges faced by secondary school principals in provision of supportive strategies for students' development,
- 41% for IQ #4C, regarding engagement of varied constituency groups in the implementation of best practices,
- 30% and 32%, respectively for IQ's #5BC, regarding challenges faced in program development and implementation of best practices,
- 28% for IQ #6, regarding solutions to challenges faced by principals in implementation of best practices,
- 20% for IQ8C, regarding support for teachers' through the provision of professional development as best practices towards developing instructional and leadership capacity,

- 41% for IQ #4C, regarding collaboration of constituency groups of parents and community members in implementation of best practices,
- 15% for IQ #5C, regarding challenges faced in implementation of best practices in collaborating with parents and community members,
- 28% of IQ #6, regarding solutions to challenges faced in collaborating with parents and community members,
- 6% for IQ #7, regarding assessments used to involve parents and community members in the early college high school program.

Although unspecified, responses to IQ #9, also, emphasized support of students' progress and development in providing measures to handle stress occurring from the rigorous learning environment and monitoring attendance. Secondary school principals are effective in creating a supportive organization for education and facilitating high-quality learning experiences for students as they engage parents and community in the program structure, provide professional growth opportunities for teachers' development of instructional practices, and address the academic instructional needs and social-emotional needs of students.

Addressed in the establishing and conveying the vision domain were findings in the two key themes as expressed by research participants. The first was of culturally responsive leadership as it addresses equity and access for diverse student populations, involving the outside community culture into the school community culture. The other was the effective leadership practice of making decisions that focus significantly on student instruction. Evidence of these two themes are:

- 20 % for IQ #1 at 20%, regarding leadership styles that attended to cultural aspects of students and the community in use of effective practices in student instruction,

- 100% for IQ #2C, regarding strategies and practices used for a diverse student population in accessing higher education in student instruction,
- 43% summation for IQ #5B, regarding cultural challenges in the development of best practices and strategies in student instruction,
- 39% summation for IQ #5C, regarding cultural challenges in the implementation of best practices and strategies in student instruction,
- 14% for IQ #6, regarding solutions to cultural challenges in provision of student instruction.

IQ #9 also included recommendations by participants that focused on providing health and counseling services to students that support their instructional program. High school administrator responses provided evidence of culturally responsive leadership in student access and equity in making decisions that focused on student instruction. The early college high school's design addressed the issues of traditionally underrepresented students in obtaining a higher education. The school leadership was attentive to ensuring culturally sensitive practices in support of students' academic and social-emotional growth. Research participants actively engaged in sharing the vision of the early college high school program as it addressed the needs of traditionally underrepresented student populations in pursuit of their college and career preparation.

Research question 2. What challenges do high school principals face in implementing effective college and future-career readiness programs? Based on responses to IQ #5C, challenges faced by research participants occurred in four areas. The first challenge was in the area of teacher-facilitated pedagogy at 32%; participants reported teachers' difficulty in making instruction relevant and relatable to students. The second challenge was program operations at

29%; participant responses indicate that problems exist in program staffing, funding and lack of time. The third area was student directed learning and support at 24%; responses indicated there was a need for students' self-directed and self-determined learning instruction which affected students' initial college integration and education in personal health and social-emotional care. The last was school community culture at 15%; participants reported active engagement of parents and community into the school community. Addressed in the research of Hase and Kenyon (2001) are three of the challenges of teacher facilitated pedagogy, student directed learning and support, and school community culture.

Hase and Kenyon heutagogy research. According to Hase and Kenyon (2001), heutagogical educational practices have foundations in the varied humanistic principles of Argyris And Schon (1996), Emery (1974), Emery and Trists (1965), Kemmis and McTaggart (1998), Rogers (1951), and Stephenson (1992). Hase and Kenyon provided indications for the heutagogical learning approach as (a) student directed, not teacher directed, (b) promoting self-worth and self-determined learning, (c) connected to the learning environment, and (d) a process of learning how to learn. Their research addresses themes in key findings regarding the need for teacher-facilitated pedagogy to be student directed and relevant. Additionally, students' self-directed learning develops self-worth facilitating an easier integration into college towards accessing future careers. Finally, school and community collaboration in students' learning promotes instructional relevance as students engage in solving problems observed in their community. Another area reflected in the research results and as a key theme was the topic of sustainability as indicated in the study of Warner and Elser (2015).

Warner and Elser sustainability research. Warner and Elser's (2015) research, also, supports the key findings as noted by the themes of teacher facilitated pedagogy, student self-

directed and self-determined learning, and school/community culture. As indicated by their research, academic instruction should involve relevant content and provide opportunities for students to collaborate to solve problems within their communities. Teacher facilitated pedagogy assists students in self-directed learning of relevant academic content in solving problems of students' interest, producing school and community connected learning as in project-based or action learning. The sustainability research of Warner and Elser (2015) corroborates the findings of Wiek et al. (2011), in which emphasis is on obtaining knowledge, developing skills and forming attitudes towards the task of solving a problem. Early college high school programs place greater focus on the development of teacher pedagogy towards students' self-determined and self-directed learning, connecting the school to the community in solving problems. Early college high schools' leadership is forward thinking, creating sustainable educational programs towards students' preparation for college and future-careers.

Research question 3. How do secondary school principals measure success in college and future-career readiness programs? Mentioned by research participants were four different ways in which measurement of program success occurred. Used by K-12 public education were two ways principals measure their program success, the formative and summative assessments, each at 38% of participant responses. The early college high school model's focus is on ensuring traditionally underrepresented student populations have access to higher education. Therefore, the third way principals measured success was by the number of students graduating high school, obtaining college credits and one or more associates degrees, receiving scholarships, and acceptances to four-year universities as culminating evidence at 18% of responses. Not as common, the last type of measurement of program success was the level of parent and community participation and involvement at schools that facilitated in connecting the school and

community at 6% of responses. Effective practices of secondary education leadership in developing traditionally under-represented students' access to higher learning include the use of varied forms of assessments that engage various groups to determine program effectiveness.

Research question 4. What recommendations do high school principals have for implementing college and future-career readiness programs? Research participant responses focused on three areas reflected as themes in key findings. The first area was the increase in program operations sustainability at 40% as shown in the key finding theme of program and resource sustainability. The second was building leadership capacity at 40% as indicated by the key finding theme of building capacity as one form of strategic leadership development towards elaboration of a sustainable educational program. The third was building instructional program capacity at 20% as reflected in the key findings theme of the strategic development of teachers' instructional and leadership capacity. Effective practices of secondary school leadership in sustaining their programs involve attention to the use of time, resources, money and human capital. Research results on the effective practices of high school principals' leadership in developing students' college and future-career readiness, also, provide implications in each of the areas studied as indicated by the research questions.

Implications of the Study

The primary intent of this study was the identification of the effective practices of high school principals' leadership that support the development of traditionally under-represented students' skills for higher education and future career. Major themes surfaced, as the research study progressed, from which significant implications were seen, as presented here.

Leadership practices and strategies implications. Results of this research study indicate that secondary school leadership practices and strategies effective in traditionally under-

represented students' access to higher education require more than possession of a particular leadership style. Current management styles, transformational, situational or transactional, leadership may efficiently provide a program framework for students' access to higher education. However, those leadership styles do not adequately offer support to traditionally under-represented student populations who are from various backgrounds and have many needs requiring exceptional services in accessing higher education. Educational leadership at the secondary school level requires attention to factors that go beyond addressing the traditional needs of students of low SES, English language learners and African American and Hispanic heritage. Different factors affect students' access to postsecondary education. These factors necessitate the high schools' leadership in the provision of a secondary school program that is inclusive of the students' culture, engaging of parent and community involvement, attentiveness to students' emotional and academic progress, and ensuring the programs' sustainability by building its parent, teacher, student leadership capacity.

Inclusiveness of culture focuses on each student's needs based on his/her background with access to resources regarding a low SES, ethnic/cultural identity, and cognitive and emotional health. Engaging parents and the community in students' academic pursuits encourages collaboration between home and school in meeting student needs to ensure student progress. As students' progress towards higher education and future-career preparation is the expected outcome product of K-12 education, instruction that is student-centered and provides varied opportunities for student growth and development is necessary. Finally, building teacher instructional capacity, program leadership capacity and resource capacity ensures students' benefit from academic and school activities that promote the development of the skills needed to participant successfully in postsecondary higher education, future-career, and other

opportunities. Implications in the area of developing educational leadership towards the use of effective practices and strategies towards students' access to higher education include leadership instruction in a) global cultural sensitivities and inclusive practices, and b) capacity building towards program sustainability in use of time, instructional materials, and human capital and leadership resources.

Challenges in program implementation implications. Indicated in two areas were challenges in program implementation. Teachers' limited knowledge or experience in usage of rigorous instructional practices that facilitated students' access to higher-level academic content resulted in the first area of challenge in providing student-centered instruction. Only directly mentioned by one secondary principal, the second challenging area was in developing program sustainability. These areas of challenge reflect the lack of knowledge provided to high school teachers and administrators in higher education training programs.

Teacher training and educational administrative programs are to provide instruction in students' life-long learning capabilities development and program sustainability development. Current teacher pedagogy is to be student-centered heutagogy. Heutagogical practices develop students' life-long learning using instructional practices that are academically challenging and engagingly relevant to students' lives. Current leadership training programs, also, do not provide knowledge of sustaining an educational program in regards to time, instructional and material resources and human capital. A new teacher preparation and administrative training model would address the knowledge gap to these challenges towards a school program's sustainability development for students' life-long learning in accessing higher education and future careers.

Success measures implications. Current active practices in preparing traditionally underrepresented students' for higher education requires the use of traditional formative and summative progress indicators with other measures of relevance to students' growth and development. Valid assessment of secondary school programs towards students' postsecondary success in higher education and future-careers attends to measures of parent and community involvement in students' educational program. Parent education and participation in student-led academic and extra-curricular activities positively affect student outcome in accessing higher educational opportunities. Community involvement facilitates students' access to community resources that can supplement the on-campus learning experience. Additionally, parents, students and community members contribute to the secondary school program by providing valuable information to ways of improvement and development. Student involvement in assessing their educational program lends itself to developing student self-determined, self-directed learning, an important part of students' growth and development as indicated by heutagogical instructional practices.

Implications for aspiring educational leaders. This study's findings have significant implications for those who desire to aspire to a position of leadership in education.

- The importance of relationship building. Disregarding the leadership style or practice espoused by the research participants, evident in their responses was the importance of having authentic relationships that support you, your leadership, and the program. Additionally, relationships with staff should be consistent at all levels of the organization. Finally, they are to extend beyond only task completion to the level of personal development through collaborative endeavors.

- The importance of building capacity. Develop ways to build staff individual and collective capacity in their respective positions. Augment teachers' instructional and leadership capacity through professional development, shared decision-making and other collaborative assignments. Establish ways for students to gain life experience through relevant learning experiences.
- The importance of program sustainability. Comments made by research participants emphasized attending to current resource use in planning for future resource needs. One commented on how a similar program in the same school district closed because it had exhausted its funding. Another said to start small and build based on necessary expenditures, only adding to those when extra resources available.
- The importance of recognizing successes. All research participants acknowledged the data sources developed through state and district testing. However, most significant and relevant to this study, the expressed pride in the stories of student successes.

Implications for district leaders. Utilization of this study's findings may assist district office leaders in providing support to school site leaders on the practices of school leadership that affect student achievement outside the use of formal test scores. School administrators would benefit from ongoing professional development as action research implementation to determine which of these practices is most useful in the school district. Then school district leaders would be strategic in use of strategies that produce the most benefit to student achievement in the district. Current practice is to assign management duties as related to the school's operation. However, a precise focus using effective strategies for principals on their respective campuses could improve overall student achievement.

Implications for universities and organizations providing training and professional development to school principals. It would have been advantageous for research study participants to have practical knowledge of what practices they could implement as instructional leaders to affect student achievement. The current practice of district and university programs is teaching the managerial side of administrative leadership, the operations side. Practical experience requires that school leadership is relational and collaborative in many aspects of the school leadership position. Therefore, universities and professional development programs should offer the knowledge of and practice in developing the effective practices that build leadership and program capacity to affect student achievement as indicated by this study.

Recommended program implementation implications. The implication for program implementation is instruction in developing students' life-long learning skills. Preparation for the rigorous instruction required in postsecondary education and future-career requires overcoming the challenges that exist in the K-12 system as it moves from a pedagogical approach of teaching to one that engages students in the learning process. The concentration of students' instruction continues to be content rather than process oriented. Students becoming aware of their process of learning while engaged in the acquisition of academic content in the process of learning is the goal of becoming a life-long learner. Use of heutagogical practices in the K-12 system, particularly in secondary school level, will provide the means by which students can learn how they learn in the preparation of entering postsecondary education.

Model of instructional practice in the secondary school classroom. Heutagogical instruction occurs best in the blended classroom or project-based learning environment that connects academic content to an authentic learning process. Heutagogical practices encourage self-determined learning, providing students with the opportunities to connect with others, as

individuals or as a group, in sharing and adopting collected knowledge using Web 2.0 and social media technologies. Elements of the design of a secondary school classroom using the heutagogical instructional approach would resemble the following concerning teacher and student roles (Blaschke, 2012):

- Learner-defined contracts that assist students in defining and determining their learning path.
- A flexible and negotiated curriculum based on learner needs.
- Flexible and arranged assessment following a rubric to assess content understanding and other factors as quality of work, discussion skills, collaboration, and outcomes.

The reflective aspect of heutagogical instruction consists of:

- Learning journals to develop students' cognitive and metacognitive skills.
- Action research as an individual or group that allows for experimentation with real life scenarios.
- Collaborative learning based on communities of practice in which the focus of learning is the process of learning.
- Formative and summative assessments in which the learner receives feedback and support in personal reflection development.

Systems thinking, heutagogy, and resiliency. The process of learning in the 21st century secondary school classroom extends beyond the acquisition of academic content and organizational skills development. Also required for postsecondary higher education and career preparation is competency in the process of personal reflection. Students must become adept in understanding themselves as the content knowledge and skills acquired transforms their self-perception, beliefs, and values in a complex and dynamic environment (Blaschke, 2012).

Within a complex environment, the student's perceptions, values, and beliefs form the individual's system of behaviors. These actions become the person's organizational system, subjected to constant change within and affected by uncertainties outside, in a dynamic global environment in which they are preparing to enter the workforce. As indicated by Emery and Trist (1965), "Individual organizations, however large, cannot adapt successfully simply through their direct interactions. An examination is made of the enhanced importance of values, regarded as a basic response, to persisting areas of relevant uncertainty..." (p. 31). Similarly, individuals cannot successfully adapt only through direct interactions with others. Successful adaptation requires personal reflection towards establishing resiliency within heutagogy.

Research on resiliency confirms the human organisms' desire for growth and development that occurs naturally in supportive environments. Considerate of supportive environs include the family, school, and community. These environments develop students' social competence, problem-solving skills, autonomy, critical consciousness, and a sense of purpose (Bernard, 1995).

Resiliency development addresses protective factors and processes within the family, school and community environments as "caring and supportive relationships, positive and high expectations, and opportunities for meaningful participation" (Bernard, 1995, p. 2). As critical aspects of a student's resiliency development, these protective factors and processes are external to students, meaning that they exist to affect the student from outside of themselves. The expectation is that these external factors and processes will have an impact on the student's resiliency development. Within systems thinking, external factors and processes only provide the platform by which the student's internal environment of resiliency may develop.

The external factors and processes, within systems thinking, are the strategies, tactics, and operations that provide students with stability within the family, school, and community environments. Security in these environs affords the student the opportunity to develop internal controls in formation of behaviors that address situations and circumstances in these existing surroundings. An internal locus of control forms through the process of reflection on one's beliefs, values, and behaviors. As the primary environment in the current practices of developing students' resiliency, the school does not adequately provide the student with the expert navigation required in resiliency development in the context of the family and community environments. Resiliency development is limited to what occurs at school; transference and generalization does not necessarily occur into the family and community environs. Within large and constantly changing environments, students require the expertise to navigate a path towards the formation of autonomy, problem-solving skills, and critical consciousness in development of an internal locus of control. The generalization of resiliency formation through the student's internal locus of control develops across environments through reflection as a heutagogical process.

Within systems thinking, the student presents as an individual system of values and beliefs as determined by and in interaction with the external factors of the family, school and community environments. In this symbiotic relationship, the student behaves and influences the family, school and community environs. Given the opportunity for personal reflection on behaviors and influences, the student will make the necessary adjustments to navigate these surroundings successfully. At first, these systems thinking changes occur externally. However, as the student has an opportunity for reflection, the process of life-long learning, heutagogy formation, occurs and begins to internalize adjustments in personal values and beliefs as

affecting family, school, and community. Maintenance of an external locus of resiliency occurs in the absence of opportunities for personal reflection. Development of an internal locus of resiliency through reflection facilitates the student acquiring the life-long learning necessary for future college and career success. On a continuum, personal reflection develops students' internal stability and resiliency within a changing environment of personal growth, learning and work. Development of internal resiliency is sustainable systems' thinking heutagogy.

As the primary forum for students' resiliency development, schools can use the Adkins-Barlow Model (2017) as a continuum of resiliency development through the heutagogical process of reflection. The Adkins-Barlow Model (2017) continuum of resiliency development through a systems' thinking approach to students' heutagogy of competencies towards preparation for postsecondary college and future-careers is as follows (see Figure 27).

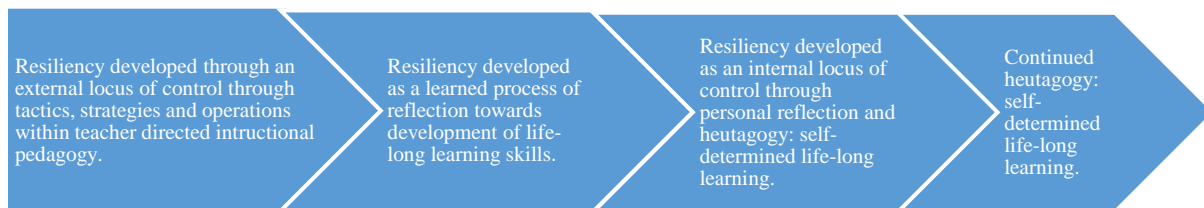


Figure 27. Adkins-Barlow Model: A systems thinking approach to students' resiliency development through heutagogical reflection.

A systems thinking approach to internal resiliency formation through the heutagogical reflective approach differs from the external process of resiliency skill development, supported by external variables through application of strategies, operations, and tactics. Enhanced through the process of reflection is the development of internal resiliency as sustainable systems' thinking heutagogy. Sustainable systems' thinking heutagogy reflects the importance of self-perception of personal values in response to a constant change in situations of relevance. Reflective knowledge of personal values and self-determinative behaviors through sustainable

systems' thinking heutagogy develops capable individuals ensured of postsecondary success in higher education and future-careers. Additionally, reflection on the relationships of the learning experiences to personal values and beliefs sustains the learner's internal motivation, as students connect to others in continuation of self-perceived reflections (Blaschke, 2012). As a result, heutagogical instruction produces the self-determined, reflective learning required in higher education and employees of a global workforce. The heutagogical process of reflective, life-long learning corroborates the research of McKenzie (2017) of Millennials and Gen Z's in global leadership positions. McKenzie's research indicates that Millennials desire relevant and continuous feedback as part of their reflective process of heutagogy, life-long learning (McKenzie, 2017). Effective instructional practices supported by secondary school leadership practices can facilitate the heutagogical process of life-long learning as indicated by the following framework (See Figure 28).

Adkins-Barlow Framework for Effective Practices of Secondary Education Leadership

Development of programs focused on students' higher education and career preparation requires attention to (see Figure 28):

- Leadership development that is inclusive of heutagogical instructional practices towards students' training in self-determined learning practices. Every student's assurance of an education that prepares him or her for postsecondary education and future careers is necessary for continued economic growth in a global society. Additionally, knowledge of methods in sustaining an educational program regarding resources, finances, human capital and students' instructional growth requires expertise in systems thinking. Schools and individuals are organizations affected by

the pace of constant change necessitating a systems approach in managing all the variables.

- Heutagogical instructional practices in which teachers provide opportunities for students' self-determined learning. Instructional practices must go beyond competence in academic content towards progressing in students becoming. Students' reflection on their learning produces academically competent and capable students and future workers.
- Sustainability training is the need for leaders in managing the pace of constant change within the school organizational environment. Efficient use of currently provided resources of materials, finances, and personnel for the instructional program and future possibilities in instruction requires future-oriented thinking and decision making as environmental factors affect the school organization.
- Assessment of students' academic progress must address areas such as students, parents and community access to and within students' learning process. School's collaborative engagement with parents, students and the community forms a supportive environment for students' academic growth towards postsecondary higher education and future-career success. Assessment measures are to consider the impact of the parent, student, and community relationships in progress towards active involvement and integration.

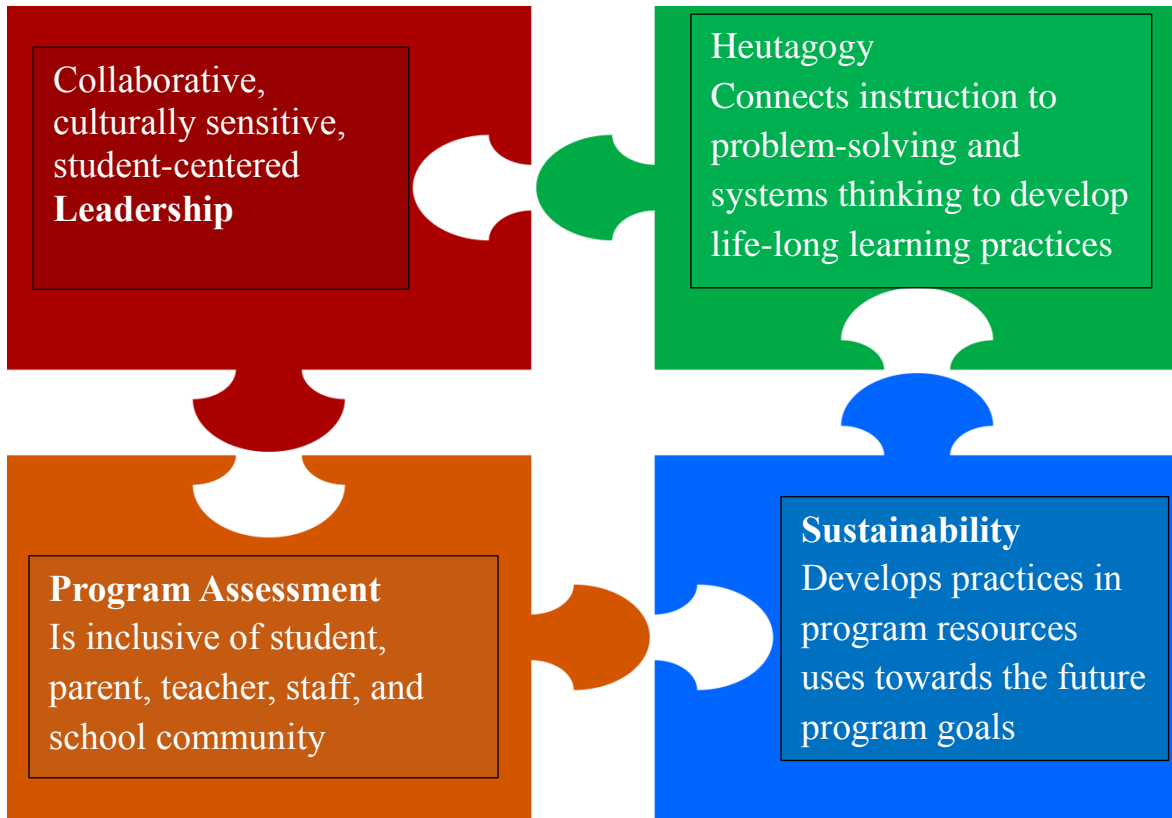


Figure 28. Adkins-Barlow framework for effective practices of secondary education leadership.

Training content for secondary teachers and administrators. Founded in the heutagogical research of Wehmeyer, Palmer, Agran, Mithaug, and Martin (2000) and Blaschke (2012) is the curriculum on heutagogy. The research of Burns (2013) and Wiek et al. (2011) form the basis of the sustainability curriculum (see Table 6).

Table 6

Curriculum Content for Effective Practices in Student-Centered Heutagogy Development and Sustainability

Heutagogy	Set a Goal Problem for Student to Solve: What is my Goal?	<ul style="list-style-type: none"> Contracts defined by student
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(continued)

Heutagogy	Take Action Problem for Student to Solve: What is my Plan?	<ul style="list-style-type: none"> • Curriculum content that is flexible • Student-directed questions • Action Research • Collaborative Learning
	Adjust Goal or Plan Problem for Student to Solve: What Have I Learned	<ul style="list-style-type: none"> • Negotiated and Flexible Assessment: Summative and Formative • Reflective Learning Journals
Sustainability	<p><u>Competencies:</u></p> <ul style="list-style-type: none"> • Anticipatory • Interpersonal • Normative • Strategic • Systems' Thinking 	<ul style="list-style-type: none"> • Content: Develop students' thematic/systemic understanding of relationships • Perspective: Develop consideration of varying viewpoints. • Process: Develop relationships with other learners through active participation and experiences. • Context: Develop understanding through connections with the community • Design: Develops previous areas in creating students' transformational learning experiences

Recommendations for Future Research

This study's design focused on the effective leadership practices of high school principals in affecting student achievement in developing students' higher education and career readiness. The study identified strategies and practices employed by high school principals in early college high school programs. The study explored their leadership styles, the challenges they faced and the recommendations made to the planning, development, and implementation of programs for students' higher education and future career readiness. While the current study is insightful, the researcher identified additional areas of study of benefit to future research in the areas of leadership practices,

The leadership framework of Hitt and Tucker (2016) delineated effective practices as compiled from a research review of three leadership structures. Current research determined a leadership framework that includes areas of the Hitt and Tucker framework and knowledge derived from the Adkins-Barlow framework (2017). Future research would use both frameworks to study the essential practices of leadership and the assessment criteria used in working with the untraditionally represented student populations in higher education of students with special education needs on a modified curriculum, foster youth, and homeless youth. The components of leadership that enable these student groups to attain higher education would add to the current knowledge of leadership practices. Another area of study regarding leadership practices and assessment tools used will be at the public elementary and middle school level of education to determine if the methods differ from administrators in the secondary school, in students' preparation for higher education and future careers. The third area of leadership to study would be in the specific practices and assessment measures used by private elementary programs designed to prepare students for higher education and future careers. A comparison of leadership practices and assessment means used by private and public schools, and public elementary and secondary schools would yield useful information regarding instruction for all students, at all educational levels, and within all educational systems. A comparison of leadership practices would include practices of sustainability as indicated by the framework of Wiek et al. (2011).

As a synthesis of sustainability literature, the framework on sustainability by Wiek et al. (2011) defines sustainability as “competence as problem-solving capacity” (p. 204). Their literature analysis used the conceptualization of competence as presented by de Haan (2006) as, “having the skills, competencies, and knowledge to enact changes in economic, ecological and social behavior without such changes always being merely a reaction to pre-existing problems”

(p. 22). Wiek et al.2011) use their literature review to integrate key competencies in problem solving towards achieving sustainability. The key competencies are as follows: anticipatory competence, interpersonal competence, normative competence, strategic competence and systems-thinking competence. Future research in administrative practices used in K-12 education that demonstrates these competencies would significantly add to the literature of sustainability within educational programs, towards leadership growth and development, and practices that sustain program growth and development as a product of sustainability pedagogy developed by Burns (2013). The Burns Model of Sustainability Pedagogy uses an ecological design model to transform learning in content, context, process, developing students' perspective using a reflective process through learning experiences. Another area of future research would be in the reflective leadership practices exhibited by school administrators as within the context of being life-long learners, valuing the heutagogical process of education.

According to Gerstein (2014), progress from traditional instructional practices of the teacher as knowledge giver/student as the receiver to the teacher as knowledge director/student as the influence to the teacher as facilitator/student as the leader, reflects the evolvement of educational technology use. Education 1.0 reflects Web 1.0; Education 2.0 resembles Web 2.0; Education 3.0 mirrors Web 3.0. Education 3.0 makes use of Web 3.0 social media technologies fostering students' growth in ways of learning, thinking, being, and doing. Students, already familiar with the use of social media, have developed processes of informal learning. Within the Education 3.0 instructional environment, students participate in self-directed, autonomous learning with Web 3.0 technologies. As a result, the learning process becomes unlimited in time and space as distance education takes place on the global technology platform, unlimited in information and access to others with knowledge. Therefore, distance learning fosters the

development of heutagogical instructional practices towards students' higher education and future career preparation. Future studies that connect heutagogical instruction using technology towards students' preparation for higher education and future careers would include a study of teachers' heutagogical instructional practice in the use of Web 3.0 technologies to affect students self-determined learning. Research by Yildez and Scharaldi (2015) re-examines current instructional practices offered in teacher training programs in addressing social inequities in the present curriculum as opposed to a transformative and collaborative curriculum. Proposed are ways in which self-determined teacher learning assists students in the development of self-determined learning towards students becoming globally literate. Another area for future research is the use of Web 3.0 technologies in developing students' life-long learning practices for higher education and future careers through the development of Web 3.0 competencies.

Allison and Kendrick (2015) present the skills required by students and education facilitators in students' use of distance learning. Student skills include "management of the learning process, scrutiny and filtering of sources, collaboration vis-à-vis the digital self, and problem-solving" (pp. 114-115). Reflected in students' management of the learning process is their time management. Determined by being able to prioritize relevant online knowledge sources is the area of scrutiny and filtering of sources. Collaboration vis-à-vis the digital self requires use of the Web 3.0 in ways that does not jeopardize future higher education and employment opportunities. The last student competency of problem solving is to occur with context teams and individually. Learning facilitator skills include "understanding the learner, using nontraditional feedback mechanisms and establishing clear communication and assessment criteria" (p. 115). Required by learner facilitators is the knowledge of the learner, provision of learning feedback that occurs in real-time, and standards for communication and assessment

using Web 3.0 technologies. In this regard, future studies would address the practical use of Web 3.0 technologies in distance learning as indicated by teachers, students, school administrators and district staff, respectively. According to Hew and Brush (2007), the majority of research on the integration of technology focuses on classroom use by the teacher. Other variables to include in future research would be effective practices of school administrators and district staff responsible for making decisions regarding technology integration at the school sites as relates to developing students' heutagogy towards life-long learning in preparation for higher education and future careers. Although, referring to use of distance learning in higher education, Howell, Williams, and Lindsay (2003) indicate that strength of distance-learning strategic plans occurs through identification and understanding of academic, economic and technological, faculty support and student enrollment issues. Future generations can contribute to the efficient use of Web 3.0 technologies when engaged to do so on college campuses (Swett, 2016).

Researcher's Observations

The researcher made several observations of participants during the interview interaction. First, all participants were relational. Second, all participants were passionate about their programs, their work with others for student success. Third, all participants put kids first. .

All participants were relational. They spoke highly of their staff and students, openly expressing their inability to complete any of the tasks they perform without their staff. Developing authentic relationships with staff and students, they spoke of the school staff and students as family and community.

All participants were passionate about their programs. They were excited to speak about program successes in terms of student accomplishments. They expressed that they would

not choose to work anywhere else. P1 said, “I enjoy coming to work every day, unlike my other administrator friends” (P1, personal communication, January 24, 2017).

All participants kids first. They exhibited much passion when discussing their programs and students who had opportunities for college because of the program. They were always aware of the kids, how they were doing and what they were doing. P7 said, “Students can’t hide because we go after them” (P7, personal communication, February 23, 2017). P12 said, “Kids are number one when making decisions” (P12, personal communication, March 2, 2016).

Final Thoughts

The principal plays a pivotal role in students’ acquisition of skills for higher education and future career success. As a result, the practices they exhibit in their roles as instructional leaders significantly influence instructional practices on their campuses. This study contributes to the research on the effective practices of high school principals’ leadership in developing students’ higher education and future-career preparation, especially those traditionally underrepresented student populations in higher education. Utilization of the effective leadership practices will promote these students access to higher education producing a citizenry that is educated and successful, as the result of providing effective school leadership to the United States’ greatest commodity, its children.

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APPENDIX A

Pepperdine IRB Approval Letter



Pepperdine University
24255 Pacific Coast Highway
Malibu, CA 90263
TEL: 310-506-4000

NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: January 23, 2017

Protocol Investigator Name: Vernita Adkins-Barlow

Protocol #: 16-09-391

Project Title: Effective Practices of High School Principals Leadership In Developing Students' Higher Education and Future Career Readiness

School: Graduate School of Education and Psychology

Dear Vernita Adkins-Barlow:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chair

APPENDIX B

Sample Recruitment Letter

Dear [],

My name is Vernita Adkins-Barlow and I am a doctoral student in the Education and Organization Leadership program at Pepperdine University.

I am conducting a research study examining the effective practices of high school principals in students' preparation for higher education and future careers. I invite you to participate in the study. If you agree to participate, you will be interviewed on the leadership practices that you employ towards students' preparation for higher education and careers.

The interview is anticipated to take no more than 60 minutes to complete and I am requesting that you be willing to have the interview audio-recorded. Participation in this study is voluntary. Your identity as a participant will remain confidential during and after the study. To ensure confidentiality, your identity will be protected by use of a pseudonym. The location of your interview will be at your discretion and all documentation will remain within a locked storage container.

If you have questions or would like to participate, please contact me at

Thank you for your participation.

Vernita Adkins –Barlow
Doctoral Candidate
Pepperdine University
Graduate School of Education and Psychology

APPENDIX C

Informed Consent

PEPPERDINE UNIVERSITY

Graduate School of Education and Psychology

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

EFFECTIVE PRACTICES OF HIGH SCHOOL PRINCIPALS' LEADERSHIP IN DEVELOPING STUDENTS' HIGHER EDUCATION AND FUTURE CAREER READINESS

INTRODUCTION

You are invited to participate in a research study conducted by Vernita Adkins-Barlow and Dr. Farzin Madjidi, Ed. D. at Pepperdine University, because you are a high school principal at an Early College High School, knowledgeable in effective practices in preparing students for higher education and future careers. Your participation is voluntary. You should read the information below, and ask questions about anything that you do not understand, before deciding whether to participate. Please take as much time as you need to read the consent form. You may also decide to discuss participation with your family or friends. If you decide to participate, you will be asked to sign this form. You will also be given a copy of this form for your records.

PURPOSE OF THE STUDY

The purpose of the study is to determine the best practices and strategies high school principals employ to ensure students' college and future career preparation. It also determines the challenges high school principals face in implementing effective college and future career readiness programs; how high school principals measure success in programs for students' preparation for college and future careers and the recommendations high school principals have for implementing effective college and future career readiness programs.

STUDY PROCEDURES

If you volunteer to participate in this study, you will be asked to participate in one interview at a location of your discretion and at your convenience. The meeting will be face-to-face and

consist of eight open-ended questions. The interview will take approximately sixty minutes. Your contact information will be kept confidential and your responses will be coded so that your name and identifying information will not be used within the context of the findings and report. You will have the opportunity to receive the findings of study. The interview will be audio-recorded unless you decline. You can participate in the interview whether you choose to be recorded or not.

POTENTIAL RISKS AND DISCOMFORTS

The potential and foreseeable risks associated with participation in this study include the time taken to participate in the sixty-minute interview. To minimize the potential loss of time, consideration will be given to ensuring the interview remains within the stated period. Since the early college high school programs received grants from Bill and Melinda Gates through the Jobs for the Future organization, it may be of concern that participant responses may be shared with the Jobs for the Future organization. If a charter school, it may, also, be of concern that responses may be shared with the charter school authorizing agency. However, each early college high school principal is directly contacted for participation in the research through the interview process.

To minimize the perceived risk of having principals' responses shared with administrative organizations, it will be made known that there is no need to contact any organization about those principals who choose to participate in the research. Additionally, if there were a breach in confidentiality, the research design and nature of the interview process does not put subject at more than minimal risk.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

While there are no direct benefits to the study participants, there is an anticipated benefit to society by providing school and district leaders and teachers with insight into the best practices that can be implemented in students' preparation for future careers and higher education. The insight may serve to influence current and future college and career readiness plans at other high schools.

PAYMENT/COMPENSATION FOR PARTICIPATION

For participation in the interview for this research study, you will receive a \$20 gift card for your time. The card will be given to you at the conclusion of the interview. You will also be entered into a drawing to receive a \$100 gift card. The drawing will be held at the end of the study and the winner notified via e-mail.

CONFIDENTIALITY

The records collected for this study will be *confidential* as far as permitted by law. However, if required to do so by law, it may be necessary to disclose information collected about you. Examples of the types of issues that would require me to break confidentiality are if disclosed any instances of child abuse and elder abuse. Pepperdine's University's Human Subjects Protection Program (HSPP) may also access the data collected. The HSPP occasionally reviews and monitors research studies to protect the rights and welfare of research subjects.

Any identifiable information obtained in connection with this study will remain confidential. Data from interviews will be stored on the researcher's password-protected computer, in the principal investigator's place of residence, in a locked office for a minimum of three years. The data collected will be coded with a pseudonym, and transcript data will be maintained separately. To respect the identity of those who choose to be interviewed, and safeguard data to protect identities, the researcher will refer to them as P1, P2, P3, etc. The audiotapes will be destroyed once they have been transcribed. All electronic data will be deleted, and any remaining documentation will be shredded after three years beyond the completion of the study.

SUSPECTED NEGLECT OR ABUSE OF CHILDREN

Under California law, the researcher(s), who may also be a mandated reporter, will not maintain, as confidential, information about known or reasonably suspected incidents of abuse or neglect of a child, dependent adult or elder, including, but not limited to, physical, sexual, emotional, and financial abuse or neglect. If any researcher has or is given such information, he or she is required to report this abuse to the proper authorities.

PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

ALTERNATIVES TO FULL PARTICIPATION

The alternative to participation in the study is not to participate. Your relationship with your employer will not be affected whether you participate or not in this study.

EMERGENCY CARE AND COMPENSATION FOR INJURY

If you are injured as a direct result of research procedures, you will receive medical treatment; however, you or your insurance will be responsible for the cost. Pepperdine University does not provide any monetary compensation for injury.

INVESTIGATOR’S CONTACT INFORMATION

You understand that the investigator is willing to answer any inquiries you may have concerning the research herein described. If you have any other questions or concerns about this research, you understand that you may contact:

Vernita Adkins-Barlow (Investigator) at vernita.adkins-barlow@pepperdine.edu
Farzin Madjidi, Ed.D. (Advisor) at farzin.madjidi@pepperdine.edu

RIGHTS OF RESEARCH PARTICIPANT – IRB CONTACT INFORMATION

If you have questions, concerns or complaints about your rights as a research participant or research in general please contact:

Dr. Judy Ho, Chairperson of the Graduate & Professional Schools Institutional Review Board at Pepperdine University 6100 Center Drive Suite 500
Los Angeles, CA 90045, 310-568-5753 or gpsirb@pepperdine.edu.

SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided above. I have been given a chance to ask questions. My questions have been answered to my satisfaction and I agree to participate in this study. I have been given a copy of this form.

AUDIO/VIDEO/PHOTOGRAPHS

- I agree to be audio-recorded.*

- I do not want to be audio.*

Name of Participant

Signature of Participant

Date

SIGNATURE OF INVESTIGATOR

I have explained the research to the participants and answered all of his/her questions. In my judgment the participants are knowingly, willingly and intelligently agreeing to participate in this study. They have the legal capacity to give informed consent to participate in this research study and all of the various components. They also have been informed participation is voluntarily and that they may discontinue their participation in the study at any time, for any reason.

Name of Person Obtaining Consent

Signature of Person Obtaining Consent

Date

APPENDIX D

Informal Blue Letter Contact

Vernita Adkins-Barlow
Doctoral Candidate
Pepperdine University
Vernita.adkins-barlow@pepperdine.edu

School Address

Dear Principal,

Towards completion of the requirements for my dissertation on early college high school programs, I would like contact you. In the near future, I look forward to providing you with further information and speaking with you in consideration of your participation.

Thank you, in advance, for your consideration to participate.

Respectfully,

Vernita Adkins-Barlow
Doctoral Candidate
Pepperdine University

APPENDIX E

Business Plan

C2C Jubilee Academie Prep

5555 West Business Town Street, Los Angeles

California

90043

May 11, 2017

Executive Summary

The Company

Founded in 2005 as a support to parents in providing community integration services to students with exceptional abilities to bridge the gap between K-12 education and postsecondary goals.

The Ownership

The Company will be structured as a sole proprietorship.

The Management

The current business owner handles management of the company as follows:

- 1) Personnel/Human Resource Acquisition
- 2) Personnel Training
- 3) Curriculum Development
- 4) Student Instruction
- 5) Facilities Management.

The Goals and Objectives

The Company's goal is to provide community integration services to K-12 students with exceptional needs by providing a consistent and continuous program that supports student development of independent, education and employment skills.

The company's objectives are as follows:

- 1) Complete proposal with Regional Center for community integration services.
- 2) Determine program location within a local library or on community college site.
- 3) Start a four-hour after-school/summer program.

The Product

Individual and group community integration services to include student development in employment, independent living, and education skills in pursuit of personal postsecondary goals and objectives.

The Target Market

A parent of a student with exceptional abilities under the age of 18 years.

Pricing Strategy

Services rendered on a case-by-case basis. The pricing approach is as follows:

Individual Student Services: \$60/hour

Small Group Student Services: \$30/hour for a group of 2 students; \$20/hour for a group of 3 students.

Large Group Student Services: \$15/hour for a group of 5 students.

The Competitors

Total Solutions Community Integration Services has contracted with 5 Regional Centers to provide services to student 18 years and above.

The Company

Business Sector

The owners would like to start a business in the following industry: education.

Company History

Founded in 2005 as a support to parents in providing community integration services to students with exceptional abilities to bridge the gap between K-12 education and postsecondary goals.

Company Goals and Objectives

The company's goal is to provide community integration services to K-12 students with exceptional needs by providing a consistent and continuous program that supports student development of independent, education and employment skills.

The company's objectives are as follows:

- 1) Complete proposal with Regional Center for community integration services.
- 2) Determine program location within a local library or on community college site.
- 3) Start a four-hour after-school/summer program.

Company Ownership Structure

The Company's structure: Sole Proprietorship.

Ownership Background

Mary Lamb (owner):

Twenty-seven years as an educator in the field of Special Education with six years of experience as a school administrator.

Company Management Structure

The current business owner handles management of the company as follows:

- 1) Personnel/Human Resource Acquisition

- 2) Personnel Training
- 3) Curriculum Development
- 4) Student Instruction
- 5) Facilities Management.

Organizational Timeline

Objective 1: Completed by June 30, 2017.

Objective 2: Completed by July 5, 2017.

Objective 3: Completed by July 30, 2017.

Company Assets

Initial assets will be obtained from grants.

The Product

The Product

Individual and group community integration services to include student development in employment, independent living, and education skills in pursuit of personal postsecondary goals and objectives.

Marketing Plan

The Target Market

A parent of a student with exceptional abilities under the age of 18 years.

Pricing

Rendered services occur on a case-by-case basis. The pricing approach is as follows:

- Individual Student Services: \$60/hour
- Small Group Student Services: \$30/hour for a group of 2 students; \$20/hour for a group of 3 students.
- Large Group Student Services: \$15/hour for a group of 5 students.

Advertising

Word of Mouth.

Competitor Analysis

The Competitors

Total Solutions Community Integration Services has contracted with five Regional Centers to provide services to student 18 years and above.

SWOT Analysis (Strengths/Weaknesses/Opportunities/Threats)

Strengths

Knowledgeable experienced and trained educators and staff.

Weaknesses

New to the implementation of community integration skills to students under high school age.

Opportunities

Larger opportunity to work with parents who would like students to learn appropriate independent, education and employment skills at an early age during summer, winter break and after-school.

Threats

Current programs offering similar services.

Operations

Staffing

Part-time employees to work with students on skill development. Employees include retired teachers, high school students, teacher interns, social work interns, psychology interns.