Educational redesign in rural Kansas secondary schools to promote postsecondary credential attainment

by

Audrey Ann Herbst

B.S., Newman University, 1999
M.S., Fort Hays State University, 2008

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2019

Abstract

A country's productivity and economic competitiveness relies upon education, specifically postsecondary training which is fundamental to students' upward mobility in a thriving and progressive economic culture (Hanushek & Kimko, 2000; Haunshek & Woessmann, 2012; Bureau of Labor Statistics, 2013; Bailey, Jaggars, & Jenkins, 2015). At least 71% of careers in the 21st century, and beyond, will require a minimum of a vocational certificate or licensure, associate's degree, or bachelor's degree by the year 2020 (Lindsay, J., Davis, E., Stephan, J., Bonsu, P., & Narlock, J. (2016). Despite several years of state and national efforts, the US is producing nowhere near enough adults with the prescribed postsecondary credentials to meet the national workforce requirements (Bidwell, 2015; Lumina Foundation, 2017). Higher levels of degree attainment must become a national priority (*Pathways to success: Integrating learning with life and work to increase national college completion. A report to the U.S. congress and secretary of education.*2012).

This study articulates (a) thick descriptions of transformational approaches to build a culture that is conducive to successful preparation of students for postsecondary credential attainment in rural secondary schools in Kansas; (b) a purposeful examination of approaches, programs, and strategies that are currently implemented within rural secondary schools in Kansas that promote postsecondary credential attainment of students; and (c) a description of proposed methods to support educators as transformational approaches to enhance postsecondary credential attainment by students in rural secondary schools in Kansas are implemented.

Keywords: postsecondary planning, postsecondary success, college and career preparation, school redesign, rural schools

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Major Professor
Dr. Debbie K. Mercer

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Acknowledgements

I wish to acknowledge the many people in my life and studies that have made a collective impact toward my desire to pursue a doctoral degree. My family has especially given me the courage to aspire toward greater possibilities. My husband, children, mother, siblings, aunts, uncles, and cousins have all served as the motivators behind every career decision I have made. I have been blessed with multiple professional experiences ranging from elementary teacher, to K-12 instructional coach, to higher education instructor, to preschool and primary administrator, to secondary assistant principal, and to my now current position as secondary junior senior high principal. Thank you to my family for giving me the courage to seek opportunity and for their support on the path of perseverance.

It is with the utmost appreciation and heartfelt gratitude that I thank and recognize my advisor, Dr. Debbie Mercer, who currently serves as the Dean of Curriculum and Instruction at Kansas State University, for her relentless encouragement and support of my educational goals. Dr. Mercer's expertise in research, positivity, flexibility, and motivational support while advising me toward my goals has made completion of this study possible. I sincerely thank Dr. Mercer for her monumental role in assisting me to reach my educational dream of securing a doctoral degree. I feel blessed to have had such an amazing major professor to work with on this study.

I would also like to thank the committee members who served during the process of my research, Dr. Paul Burden, Dr. Tonnie Martinez, Dr. Jan Middendorf, Dr. Sally Yahnke, Dr. Janine Duncan, and Dr. Lester Loschky of Kansas State University. Your guidance, dedication, and time commitment on my committee as I progressed through this study is greatly appreciated. In addition, I would like to express my gratitude to Dr. Janet Neufeld, Dr. Betty Summers, and Betsy Edwards for guidance and support during my doctoral program of study.

Dedication

Thank you to the many wonderful people in my life who have loved me unconditionally, inspired me, and supported me throughout my scholastic journey. To my wonderful, loving, and amazing husband, Chris, thank you for your patience, love, and understanding as many long days and nights were required to complete this dissertation. It wasn't easy joining our families together in June 2017 as I embarked upon the dissertation phase of my doctoral degree. This dissertation was a joint effort, and your love, support, and flexibility made this work possible. Thank you to my wonderful children, Courtney Nichele and Derek William who have always remained by my side and in my heart as a direct and positive force that fueled my will and desire to "do better." To my beautiful mother, thank you for showing me the value of hard work and persistence. Without internalizing these core values, I'm not certain I would have made it through this process. You have always inspired me to never give up, to work hard to reach my goals, and instilled the belief that nothing should ever be expected, but earned. Thank you, Tyler Lee, Alyssa Keeley, and Corbin Kade, and Breckin Ascher for your understanding as I spent many days and nights writing and researching. To the rest of my family and friends who have supported me in this journey, thank you. I recognize that I went off the "grid" for a while, but true friendship lasts even in absence. Thank you for your understanding.

I have always envisioned that one day I would attain a doctoral degree. Thanks to all of you, my vision has become a reality. Thomas Edison once said, "Vision without execution is hallucination." Thank you for inspiring and supporting me as I executed my vision in a quest to make my dreams come true.

<3 ~ With infinite love and gratitude for each and every one of you ~ <3

Preface

The foundation for this research originates from a strong passion to make the world a better place. I currently serve as a junior and senior high school principal in a small, rural community in Kansas. The research within this dissertation is relevant to my purpose for choosing to become an educator, to enhance the lives of others.

I hold a steadfast belief that anyone can achieve success and contribute in a positive manner to society, regardless of background. I grew up with a single mother who didn't complete ninth grade and three other siblings. My siblings and I witnessed first-hand how a formal education deficit can create challenges that are difficult to overcome. Though my mother did not graduate high school, she did a phenomenal job of instilling and developing self-efficacy skills in all of us. She taught us the value of hard work and always encouraged us to strive to reach our highest potential. I am filled with gratitude for the way my mother raised us. I wouldn't be the person I am today with an intense desire to persist toward my goals.

Persistence led me to embark upon a journey toward accomplishing career success due to my mother's strong influence. She ingrained within me the value of hard work, dedication, and unconditional love. I will always have a tremendous appreciation for my mother and the valuable lessons she taught me which spawned the motivation to pursue my doctoral degree. This research enhances my ability to inspire my children and students to internalize the same motivation, together, making the world a better place.

Chapter One: Introduction

Introduction to the Study

This case study specifically focuses on innovations utilized by rural secondary schools in Kansas to prepare students for postsecondary success after high school. Rural Schools play a major role in preparing a workforce to meet the credential demands for the 21st century. Rural schools represent a large number of students across the nation with more than 21 percent of the K-12 student population in the United States constituting more than 10 million students enrolled in rural schools (Johnson, Showalter, Klein, & Lester, 2014; Fowles, Butler, Cowen, Streams, & Toma, 2014). More than half of the school districts in our nation are located in rural areas, and one-third of public schools in our nation are considered rural (Ayers, 2011; Johnson et al., 2014; Morehead, 2015). This study provides specific insight into rural Kansas school districts since 72% of schools in Kansas are considered rural with 207 of the 286-total school districts classified as rural schools by the United States Department of Education (2017). Three of the four cases selected for participation in this study are further classified as rural remote. In addition, the Kansas State Department of Education (KSDE, 2015) has included and identified public school initiatives in Kansas inclusive of increasing the attainment of postsecondary credentials as a goal for accreditation purposes. This case study specifically focuses on how rural students in Kansas are prepared for postsecondary success in careers which contribute to overall quality of life as an adult. Preparation of rural secondary students to pursue postsecondary learning and success in careers will improve the nation's competitiveness, afford students a chance for success in their future, and strengthen rural communities (Alliance for Excellent Education, 2010).

Postsecondary success encompasses many definitions, but for the purposes of this study, postsecondary success refers to the acquisition of postsecondary certifications, licensures, or degrees that signify qualifications for successful matriculation into rewarding careers based upon student interest. Rural schools were chosen for examination based upon rural characteristics that possess the potential to create unique challenges or opportunities associated with the utilization of resources to minimize or maximize student learning and success after high school.

Elementary and Secondary Education Act (ESEA, 1965) to Every Student Succeeds Act (ESSA, 2015)

Since the mid-1900s, public education in the United States has undergone numerous transformations. These transformations have led to initiatives focused on ensuring our workforce for the 21st century has been provided proper education and training. These transformations are illuminated by notable federal mandates governing K-12 public education and how they have evolved. The Elementary and Secondary Education Act (ESEA) of 1965 is one such hallmark mandate that has evolved to include multiple revisions which reflect a 21st century vision for education. Klein (2015) explains that The Elementary and Secondary Education Act (ESEA), a civil rights law that governs the nation's K-12 schools at the federal level, has undergone various revisions since its launch in 1965 by President Lyndon B. Johnson. ESEA "dramatically ramped up Washington's investment in K-12 education, carving out a role for the federal government in educating the nation's poorest children" (Klein, 2015, p. 18). ESEA remains in place today as a fundamental mandate from which revisions have spawned to fulfill prescriptive attributes indicative of societal standards as time moves onward. Government support for public education is a driving force to ensure that our students receive the necessary education to sustain and promote economic stability and competitiveness on a global scale.

ESEA ensured K-12 schools were meeting the needs of all students regardless of obstacles that may impede learning (Schwahn & McGarvey, 2012, p. 13). This law ensured all students had free access to appropriate education absent of discrimination and provided a mandate that required public schools to give all children an opportunity to learn. ESEA included within the legislation a number of programs, which indicate that even in 1965, legislators recognized the need for change and innovation in education (Schwahn & McGarvey, 2012, p. 13). Change in education, referred to in this study as transformation or redesign, is needed to promote our current economic stability in our nation and globally (Bellanca & Brandt, 2010; Bennett, 2012; Stone & Lewis, 2012; Matthews & Powell, 2016; Vilorio, 2016).

One of the most recent, and longest standing revisions to ESEA was "No Child Left Behind" (NCLB), which was signed into law on January 8, 2002 by President George Bush (No Child Left Behind [NCLB], 2002). Historically, NCLB was the first revision to ESEA that not only required that schools give all children an opportunity to learn, but mandated accountability measures for learning (NCLB, 2002). NCLB represented significant improvement efforts to close the academic achievement gap with requirements that all students in elementary, middle, and secondary classrooms make adequate yearly progress (AYP) on state reading and math tests by scoring at proficient levels or above (NCLB, 2002). A school's effectiveness was determined by students' academic performance on state assessments in core subjects. Fletcher (2006) explains that all students and all schools faced harsh consequences for not scoring at proficient levels, including, but not limited to an inability to graduate, replacement of school administration, and offering parents other alternative school choices (p. 160). Consequently, educators placed priority on test-taking skills and test preparation year-round to meet the NCLB requirements, which seemed to detract emphasis on other important measures to be considered to

ensure high school graduates successfully contribute to society. Fletcher (2006) describes a nationwide survey disseminated by the National Board on Educational Testing and Public Policy found the study, "indicates that teachers sacrificed good teaching practices by focusing on test-taking strategies and studying the content mirrored on state assessments" (p. 160). "In general, teachers in high-stakes states reported significant decreases in time spent on instruction in the fine arts, industrial/vocational education, field trips, class trips, enrichment assemblies, and class enrichment activities" (Fletcher, 2006, p. 161). In addition, "frequent low performance on high-stakes testing may result in students dropping out of high school" (Fletcher, 2006, p. 160).

The intent of accountability to ensure students were learning was well-intentioned, but revisions were necessary to correct the implications of a sole focus on academic skills. NCLB was scheduled for revision in 2007, but congress could not determine appropriate revisions (*Blueprint for Reform of the Elementary and Secondary Education Act*, 2010; Klein, 2015). In response to inefficacies of NCLB, Klein (2015) cited that in 2012, President Obama's administration began to grant waivers to states for NCLB accountability in exchange for comprehensive state plans to boost rigor, develop or maintain equitable learning, improve instruction, and to increase student outcomes. Balfanz, Bridgeland, Bruce, & Fox (2013) conclude the issuance of these waivers created opportunities to focus on the improvement of student learning by increasing the quality of instruction which spawned the pursuit of a comprehensive educational approach aimed at promoting continued learning after high school. NCLB reigned as the ESEA mandate for thirteen years until President Obama signed into law on December 10, 2015, the "Every Student Succeeds Act" also known as ESSA (Every Student Succeeds Act [ESSA], 2015).

ESSA continues to reinforce the importance of academic success with inclusion of state assessments as one piece of criteria among other multiple measures of data (Coppes, M. 2016). ESSA reauthorized ESEA with requirements that emphasize equitable learning, increase in rigor, utilization of state assessment results to improve teaching and learning, encouragement for innovation in K-12 schools, increases in access to preschools for kindergarten readiness, a focus on high graduation rates, and includes a clear goal of student preparation for college and career success (ESSA, 2015). Coppes (2016) explains:

> "The enactment of ESSA marks a major step toward ensuring that all students are prepared to graduate from high school ready for college and careers. ESSA includes critical measures to strengthen the role of CTE in our nation's K-12 education system by promoting activities that integrate academic and CTE content in the classroom, expanding college and career guidance programs, improving the availability of CTE student performance information and recognizing CTE as a core component of a well-rounded education. Additional measures can include career-readiness indicators, such as student completion of a CTE pathway, performance on technical skills assessments, attainment of an industry credential, and completion of postsecondary credit through dual or concurrent enrollment programs" (p. 25).

Research indicates that the numbers of students attaining postsecondary credentials are not enough to fill our workforce to sustain a competitive global economy (Bidwell, 2015; Lumina Foundation, 2017). "Under ESSA, state plans must describe how the state will work with school districts to transition students from middle school to high school and from high school to postsecondary education effectively" (Alliance for Excellent Education, 2016, para. 1). Coppes (2016) further explains that many states utilize the indicators within ESSA to expand existing

initiatives that measure student career readiness. According to the Alliance for Excellent Education (2016):

> "Strategies for ensuring these effective transitions may include integrating rigorous academics, career and technical education (CTE), and work-based learning; mentorship or family-engagement programs, dual enrollment and early college high school programs; career counseling; and coordination with institutions of higher education and employers" (para. 1).

Kansas is one such state that has aligned accreditation processes with the outcomes identified by ESSA. In 2015, Kansas has launched a school redesign project to meet the demands of the 21st century workforce guided by ESSA.

School Redesign in Kansas

This case study focuses on rural secondary schools in Kansas who are officially designated as a redesign school by the KSDE. In 2015, Dr. Randy Watson, Kansas Commissioner of Education and KSDE representatives toured 20 communities in Kansas to gather input from community and business representatives on what they felt was critical for inclusion in Kansas schools to ensure young people were equipped for 21st century success. Upon compiling and analyzing the input from these tours, the KSDE announced the "Kansans Can" vision for success to "Lead the World in the success of each student" (KSDE, 2015). The "Kansans Can" vision reflects intentionality to transition from a sole emphasis on academics and assessments (such as the NCLB accountability system) to an educational system focused on each student that aligns with ESSA requirements.

Schools in Kansas are evolving with accreditation requirements that focus on goals to develop each high school graduate in accordance with the KSDE definition of a successful high

school graduate. The KSDE definition of a high school graduate is one who exhibits "the academic preparation, cognitive preparation, technical skills, employability skills and civic engagement to be successful in postsecondary education, in the attainment of an industry-recognized certification or in the workforce, without the need for remediation" (KSDE, 2019). Embedded within this vision is a strong focus for all schools to improve postsecondary success (credential attainment) in order to meet the demands of a skilled workforce necessary for the 21st century.

Kansas has identified a scaffolded approach to restructure learning environments that are student-centered to reflect development of academic and non-academic skills reflective of KSDE's successful graduate. Due to requirements of the Kansas state accreditation system, all schools are or will become involved in school redesign at the time of the study; however, some schools selected may not be involved as rigorously with regard to school redesign as other schools. Using an analogy consistent with NASA's historical spaceflight missions, KSDE identified the "Mercury 7" schools (seven schools) to begin the launch of school redesign beginning 2016-2017 after applying to KSDE for selection. In the following year, 2017-2018, the Gemini I schools were identified after applications were submitted to KSDE to join the "Mercury 7" schools in school redesign. Applications were accepted by KSDE in April 2018 to apply for and be accepted for the Gemini II group to join in redesign of school in Kansas. By 2026, all schools in Kansas will be involved with redesign aligned with the Kansans Can vision.

Though schools in Kansas are redesigning with or without Mercury or Gemini affiliation as accreditation requirements specify redesign outcomes, it is evident that schools in Kansas may be at various stages of redesign. A purposeful investigation into each case at the conclusion of data collection illuminates current progress toward the KSDE goal of increasing postsecondary

success and methods each case employs to reach the postsecondary attainment goal prescribed by our nation's workforce. The designation as a Mercury or Gemini school does not imply advanced methods or approaches of redesign for postsecondary success. What this designation indicates is that they applied to the KSDE for that title and have currently committed to begin rigorously pursuing school redesign for improvement of the KSDE's five measurable outcomes.

Statement of the Problem

The United States is not producing enough students with postsecondary credentials to fill the job requirements associated with the 21st century (Bellanca and Brandt, 2010; Balfanz et al., 2013; Carnevale, Smith, & Strohl, 2013; Hinojosa, Rapaport, Jaciw, & Zacamy, 2016; Lumina Foundation, 2017). At least 71% of careers in the 21st century, and beyond, will require a minimum of a vocational certificate or licensure, associate's degree, or bachelor's degree by the year 2020 (Lindsay et al., 2016). "Knowledge and skills remain paramount for the prosperity of our nation's economy, but as we move further into the 21st century, some form of postsecondary learning and credential attainment is necessary to hold a good job, contribute as a citizen, raise a family, and contribute in meaningful ways to communities" (Bailey et al., 2015; *Lumina foundation strategic plan for 2017 to 2020,* 2017, p. 3).

National Student Clearinghouse data provided to the Kansas State Department of Education indicates a Kansas state average of 52% of students achieving some form of postsecondary success or credential at least two years post high school graduation (National Student Clearinghouse [NSC], 2017; KSDE, 2017). The research and statistics available to our educational policy-makers is consistent with a 50% postsecondary attainment rate in our nation when considering margin of error (Lumina Foundation, 2017). It is evident there is a discrepancy in the numbers of students who are attaining a postsecondary credentials versus the

percentage of students required to fuel a workforce in the 21st century and beyond. "The failure of students to complete college represents a loss to the overall economy, which has prompted calls from the federal government, major foundations, and public intellectuals for a significant increase in the number of people with postsecondary degrees" (Bailey et al., 2015, p. 1).

ESSA's framework for school accountability in conjunction with projections for workforce requirements in the 21st century prescribe an urgency to prepare students on a national scale for success in careers and postsecondary credential attainment (ESSA, 2015). This study will provide a purposeful examination of preparation for college and career success in rural Kansas' secondary schools as prescribed by Kansas' accountability framework and as guided by ESSA.

Purpose of the Study

The purpose of this study is to provide purposeful insight into approaches rural secondary schools in Kansas utilize to prepare their students for postsecondary success. For the purpose of this study, postsecondary success is defined as a student's postsecondary educational attainment that leads to acquisition of a license, certificate, or degree. Therefore, postsecondary success and postsecondary credential attainment may be used interchangeably.

At the time of this study, an exact science had not been developed for secondary schools to implement with certainty that students will be prepared for guaranteed postsecondary success, nor would development of defined procedures to do so fit all districts as a "one size fits all" practice. This study will embrace the, "reality that the precise path forward is unlikely to be identical for any two schools," (Rouleau, 2018, p.1). This study will not presume that what is done in any specific secondary school to promote postsecondary success will be the only means for student success after high school.

Multiple factors influence a student's attainment of a postsecondary credential. The review of the literature calls for consideration of redesign of traditional models of secondary and postsecondary educational entities. For the purposes of school redesign, this study maintains a purposeful focus and intentional exploration of the plethora of practices secondary schools can implement to promote a heightened possibility of students attaining postsecondary success.

Schools with similar school classification criteria and geographical characteristics will be the focus of this study with the main objective being to examine current structures that are in place at rural secondary schools in Kansas deemed as redesign schools. This study will also specifically and purposefully explore innovative plans to enhance postsecondary success rates in rural Kansas's schools. The purpose of this study is to confirm approaches and implementations of programs as effective and to identify what transformations in the educational setting are necessary in rural secondary schools to secure a likely increase in postsecondary credential attainment.

The results of this study may not be transferable to all secondary schools as this study maintains a specific focus on rural school settings. The qualitative nature of the case study design will explore, in depth, the primary implementations for postsecondary success the study participants utilize in their schools. This purposeful study of approaches established to promote postsecondary credential attainment of the participants' students and their schools may divulge next steps to promote postsecondary success in other rural secondary Kansas schools, and may indicate transferability to other secondary educational settings not sharing the rural characteristics prescribed for the criteria in this study.

Overview of the Methods

The purpose of this study is to obtain a deep understanding of methods utilized to promote postsecondary credential attainment across the selected cases with adherence to a focus on the research questions. It is a possibility through the qualitative nature of the research design that transferability across the group extends theory across the rural secondary Kansas schools that participated in this study as findings emerge and are constructed. The key in an instrumental case study is the opportunity to learn (Encyclopedia of Case Study Research, 2010, p. 2), and the researcher's epistemological constructionist approach to learning dictates the findings from this particular study. Specific attention is given to how each rural school in Kansas selected for this study provides students and staff the tools necessary to establish a clear plan for postsecondary success endeavors.

Instrumental case study research is designed to develop a deep understanding of a phenomenon, and in this instrumental case study, as it applies to a specific group of rural secondary schools in Kansas. This instrumental case study primarily examined qualitative data secured through face-to-face interviews and was enhanced through analysis of multiple forms of data for triangulation of postsecondary preparation strategies, initiatives, and models of delivery enhancing the postsecondary credential attainment rates of students in selected rural Kansas's secondary schools.

Purposeful sampling was utilized with four rural secondary schools in Kansas being selected before the study commenced based upon specific criteria. "Purposeful sampling grew out of the constructivist paradigm because in qualitative research, samples are selected that have the potential for yielding information-rich cases that can be studied in depth" (Mertens & Wilson, 2012, p. 421). Commonalities in school classification criteria among the selected

schools were utilized in this study. Purposive sampling, widely used in qualitative research, was necessary to "inform discussion about the case as a general example" and to "provide enough of a description for readers to understand the contextual richness of the phenomenon under study" (Mertens & Wilson, 2012, p. 421; Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). Rural secondary schools in Kansas were selected based on the definition of a rural school from the National Center for Education Statistics (NCES) and the Census Bureau (Rural education in america - definitions). Additionally, school classification criteria consistent for each of the four schools were identified from the Kansas State High School Activities Association (KSHSAA).

Data for this study has been collected primarily through interviews of selected participants who serve rural schools in Kansas. Thick-rich descriptions of this instrumental case study were formulated through analysis and interpretation of the data obtained primarily from interviews, and may be supplemented with field notes, observations, and artifacts. A description of the data collections and analysis are described in further detail in chapter three.

Conceptual Framework

In this instrumental case study, the researcher's purpose was to provide insight into the topic of what factors promote postsecondary credential attainment by secondary school students in rural Kansas. The instrumental case was designed strategically, and the researcher chose formal purposive-criterion sampling to acquire rich information which enhanced the study findings. Formal purposive-criterion sampling was provided to ensure the factors described were indicative of the topic being examined. Transferability of the results may occur with fruitful findings from a pre-determined, intentional, sampling of a group representative of similar

demographics yielding applicable findings. These findings may be transferred across the samples, similar rural secondary schools, and potentially urban counterparts.

Triangulation of the data collected from the participants within each case study revealed emerging themes. Qualitative researcher Robert Stake describes, "in qualitative case work triangulation, (e.g., drawing upon multiple perceptions, sources of data) is a common means through which researchers increase their trustworthiness of their representation of the case" (Encyclopedia of Case Study Research, 2010, p. 2). Careful coding of the interview transcripts revealed potential patterns and themes across the participants of this study that may be transferred to schools of similar demographics. In addition, it may be possible to transfer practices used by the cases in this study to prepare students for postsecondary credential attainment in other schools regardless of demographics but is not guaranteed as resources and demographics do influence each school's capacity for implementation of specific practices.

Research Questions

In this instrumental case study, one guiding question will serve as the fundamental question at the core of the purpose for this study. From this guiding question, sub-questions as they pertain to the guiding question are depicted below. The guiding question for participants in this study is:

1) What innovations are rural high schools in Kansas implementing to increase postsecondary credential attainment as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

The following sub-questions will guide this study:

a) What innovations are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?

b) What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary credential attainment, and how do they overcome them?

Limitations

"Case study research is a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) over time, through detailed, in-depth data collection involving multiple sources of information" (Creswell, 2013. p. 97). Time allotted for conducting this study was two semesters, and thus limited the amount of time to explore the case over time.

The methodology for this instrumental case study allows for potential transferability across the formally selected, criterion-based samples, but is not expected with a constructionist epistemology. Instead, a deeper understanding of how each case implements approaches to increase postsecondary attainment may emerge that may not be transferable. The researcher in this study allows for themes to emerge constructively, which may provide transferrable insight into other school environments. The qualitative design of this study defers from empirical studies aiming at generalization. Schools that do not fit the demographic model for exploration within this case study may attempt to transfer the findings to their school(s), but this can pose the possibility of irrelevance.

Additionally, the findings in this study relied heavily on selected participants' perceptions. Primary data in this case study incorporated thick-rich description of the transcribed interviews. Though the researcher did not have an established relationship with the participants prior to the study, the role of the researcher may have influenced the study. During the introduction phase of the research, the researcher's role as a principal in a rural redesign school was divulged. This may have impacted the participants' willingness to share detailed

descriptions as they were interviewed. Accordingly, the researcher was intentional about building relationships with each participant based on trust, and ensured trust be established prior to conducting interviews to strengthen data collection.

Credibility of this study was enhanced by validation within thick rich description strategies, collection of artifacts and observation with interview data, researcher positionality, and peer debriefing of the coded data to enhance the reliability and validity of this study among schools with similar demographics. Analysis of multiple sources of data increases the credibility and trustworthiness of the representation of each case with careful coding focusing on aggregate analysis of the cases as each relate to the research question and as common themes emerge (Mills, Durepos, & Wiebe, 2010).

Summary

This instrumental case study provides an in-depth analysis of initiatives and practices utilized by rural secondary schools in Kansas to prepare students for postsecondary credential attainment. A 21st century vision of preparing students for postsecondary credential attainment and preparation for 21st century careers is becoming recognized as a priority in secondary schools as projections estimate 71% of jobs or careers in 2020 will require a postsecondary credential (Lindsay, et al., 2016; KSDE, 2015; Carnevale et al., 2013). Though academic success remains an important key to success of high school graduates, a paradigm shift revising the primary focus for students to be well-rounded and prepared for a rapidly evolving social landscape serves as the basis for this in-depth study. In addition to academic preparation, a 21st century student must also exhibit proficiency in cognitive, technical, civic, and employability skills (KSDE, 2019).

This study provides a purposeful examination of preparation for college and career success in rural Kansas' secondary schools. This study also proposed clarification on the over-arching research question and sub-questions (1) what innovations are rural high schools in Kansas implementing to increase postsecondary credential attainment as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"; (a) what innovations are rural high schools in Kansas utilizing to facilitate Career and Technical Education; (b) what challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary credential attainment, and how do they overcome them? In Chapter Two, the literature review focuses on (a) prescriptions for a 21st century workforce; (b) the Kansans Can Vision for education in the state of Kansas; (c) innovation in education; (d) the role of Career and Technical Education (CTE) in secondary schools; (e) challenges rural secondary schools may face when facilitating learning for postsecondary credential attainment and how the challenges are overcome; and (f) gaps in the research.

Chapter Two: Review of the Literature

Introduction

The literature review provided for this study is inclusive of topics emphasizing the imperativeness for education to fuel a 21st century workforce which ensures our nation's economic stability and global competitiveness. The review of literature is categorized into six overall major themes that provide insight into 21st century needs: (a) a prosperous nation; (b) "Kansans Can" vision for education; (c) innovation in educational design; (d) the role of career and technical education; (e) dynamics facing rural schools, and (f) gaps in the research.

Current research provided in this literature review reveals the relationship between education and how education influences the nation's economic stability. Kansas's statewide model and vision for fueling a 21st century workforce and dynamics facing rural schools are also included due to a specific focus in this study with regard to rural secondary schools in Kansas. This review of the literature provides various attributes and innovative educational practices of which could potentially boost postsecondary credential attainment. Innovative practices in education were included in the literature review as this study maintains a specific focus on postsecondary credential attainment after high school which indicates a paradigm shift in the purpose of education. The Every Student Succeeds Act (ESSA) provides specific focus on preparing secondary students for college and career readiness versus an academic approach focused solely on high school graduation. Career and Technical Education (CTE) has undergone various revisions throughout its existence and plays a critical role in providing students with opportunities for career exploration and experiences to assist with matriculation into postsecondary programs. Dynamics of rural schools in the 21st century are included in the literature review as rural secondary schools in Kansas were intentionally selected as cases for

this study. Gaps in the research are included to provide insight into future considerations for study. This chapter concludes with a suggested synthesis of all research analyzed as it pertains to the core research question for this study and the sub-questions below:

1) What innovations are rural high schools in Kansas implementing to increase postsecondary credential attainment as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

The following sub-questions will guide this study:

c) What innovations are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?

d) What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary credential attainment, and how do they overcome them?

A Prosperous Nation

A prosperous American economy is inextricably linked to student learning in American schools (Bailey et al., 2015). As Americans, we have a duty to "ensure that every student in our country graduates from high school prepared for college and a successful career which is central to rebuilding our economy and securing a brighter economic future for all Americans," (White House Briefing Room, 2010, para. 1). At least 71% of careers in the 21st century, and beyond, will require a minimum of a vocational certificate or licensure, associate's degree, or bachelor's degree (Lindsay et al., 2016). Accordingly, 71% of high school graduates should obtain some form of postsecondary credential if educational entities maintain they are preparing students for successful contributions to our national economy and workforce.

According to the American Institutes for Research ([AIR], 2013) and Research from the Center for Education and the Workforce at Georgetown University (2013) there is job growth in the 21st century, but a lack of efficiently trained and educated individuals to fill the newly acquired positions. To ensure prosperity as a nation, Carnevale et al., (2013) conclude, "the appropriate skills for the job is critical if the United States is to remain competitive, attract the right type of industry, and engage the right type of talent in a knowledge-based and innovative economy" (p. 22). Carnevale et al. (2013) further note "the United States has been under-producing workers with postsecondary education since the 1980s," (p. 21). Carnevale et al. (2011) project a shortfall of required postsecondary-educated Americans will approach 20 million by the year 2020. Providing a deeper sense of urgency for postsecondary credential attainment, (Carnevale et al., 2013, KSDE, 2017) report "between 1989 and 2012, job openings that require a high school degree, or less, dropped by 14 percent. Jobs that require some college or associate degree grew by 41 percent and jobs that require at least a bachelor's degree grew by 82 percent" (KSDE consolidated state plan for ESSA, 2017, p. 21). A Pew Research survey (2016) reveals that most Americans vote according to numerous issues, but the state of the nation's economy is top priority when other issues are considered. This indicates an urgency to ensure individuals entering the 21st century workforce receive and complete adequate education and training to enable economic stability.

ESSA brought a renewed focus for postsecondary credential attainment in the United States (ESSA, 2015). According to The White House Briefing Room (2010) the Obama Administration introduced the goal of having the U.S. become the world's most educated nation as measured by percent of postsecondary degree holders in the population by 2020 (Boylan, Calderwood, & Bonham, 2017, p. 3). Further findings conclude that six-in-ten Americans in

regard to workforce preparations believe, "K-12 schools should have a lot of responsibility" (Pew Research Center, 2016, p. 15). Special attention should be given to retention in postsecondary programs by means of better preparation or alignment of career interests with appropriate postsecondary programs. Lindsay et al. (2016) dismally report that 93% of high school graduates plan to enroll in college, while 75% actually enroll in college within two years of high school graduation, and of that 75%, less than 60% complete a credential. A report to the U.S. Congress and Secretary of Education (2012) concludes:

> College completion rates are stagnant or falling today, particularly among young Americans, a trend that threatens to undermine the nation's global competitiveness and further exacerbate inequality in the nation's income distribution. At the federal level, the goal to have the world's highest rate of college completion is now front and center. Achieving this important goal by 2020 will require formidable effort (Advisory Committee Student Financial Assistance, p. iii).

Throughout history, technological advances have vastly shifted the composition of employment in our nation, from agriculture and the artisan shop, to manufacturing and clerking, to service and management occupations (Frey & Osborne, 2013, p. 13). The Lumina Foundation recognizes shifts in the nation's employment landscape by the description below:

> The enormity of the forces that are driving the need for millions more Americans to obtain quality postsecondary credentials should not be underestimated. For generations, Americans could reach the middle class with a high school-level education or even less, but millions of the jobs that made this possible in industry as diverse as manufacturing, mining, and energy-have been lost through technology or global competition. The good

> jobs that remain require postsecondary credentials and the increased levels of knowledge and skill they signify (*Strategic plan for 2017 to 2020,* p. 6).

Though the landscape of employment is evolving, skilled human workers are needed, but with different preparations than required with traditional education. Fry and Osborne (2013) explain "When comparing job requirements in the nation's future, the threat of computerization to overcome the need for skilled workers in the future, human labor will prevail as humans adopt and acquire new skills by means of education" (p. 13). Researchers at the University of Oxford report that 47% of current jobs will become obsolete over the next 10-20 years due to computers and automation, and that "many of the remaining jobs will require creativity and social skills" (Frey & Osborne, 2013, p. 38). In addition, the Pew Research Center (2016) reports:

> Educational attainment is a clear and consistent marker when it comes to feelings about job security and future prospects. One-in-five (20%) of those with a high school diploma or less believe it would be possible for their boss to use technology to replace them (p.13).

In addition to technological advances, the social demographics of our nation have significantly shifted over the past century. The Lumina Foundation, one of many major private independent national research foundations, advocates for global competitiveness by working to ensure postsecondary attainment is accessible and equitable for all of our nation's citizens. The goal of their work is to ensure that all postsecondary experiences lead to informed citizenship to increase our country's productivity. Lumina Foundation (2017) reports "College credential attainment is the key to ensuring a bright future for our nation and its citizens" (p. 1). "With the growing expectation that all students participate in postsecondary education to be prepared for

the future, it is vital to focus on student learning in K-12, especially at the high school level" (Fletcher, 2006, p. 157).

The Lumina Foundation (2017) also reports that the nation's average for high-quality postsecondary credential or degree attainment for individuals between the ages of 25 and 64 years is 45.3%. Despite a gradual increase in postsecondary credential attainment within ages of 25 and 64 years old, a sense of urgency is needed to expand college success dramatically in order to successfully fill available job openings with qualified personnel (Bidwell, 2015). Though the research indicates a gradual increase in high quality postsecondary credential attainment between the ages of 25-64 years, research indicates that younger Americans are stagnant or falling in numbers of those who pursue and complete some form of postsecondary educational attainment (Bidwell, 2015; Lumina Foundation, 2017). This indicates a need to re-evaluate how secondary education and planning for postsecondary credential attainment is delivered. Increasing the percentage of Americans who possess the education, skills, and training necessary to fuel a workforce of the 21st century requires teaching and learning in secondary schools to be more rigorous, relevant, and engaging (Bidwell, 2015). Secondary schools must graduate more students who are prepared for both college and career, graduation rates must increase, communities should ensure youth are granted career exposure, and smooth transitions from secondary to postsecondary institutions must be in place (Balfanz et al., 2013).

Aside from fueling the workforce, increased revenues attained from higher levels of earned income results in a prosperous nation. "Federal, state, and local governments enjoy increased tax revenues from college graduates and spend less on income support programs for them, providing a direct financial return on investments in postsecondary education" (Baum, Ma, & Payea, 2013, p. 5). Our nation's global economic competitiveness relies on producing tax-

payers to increase revenues. Individuals who have attained a postsecondary education are also more likely to receive health insurance and pensions, limiting the need for reliance on social support programs which can drain our economy with overwhelming numbers (Baum et al., 2013). Adults who have attained postsecondary education are also more likely to become engaged citizens. Baum et al., (2013) report that 80% of adults with a postsecondary education regularly vote; while only 59% of adults with a high school diploma or less vote. "Substantial evidence indicates that the associations described above are the result of increased educational attainment, not just of individual characteristics" (National Research Council, 2012; Baum et al., 2013, p. 6).

Research also indicates clear evidence that our postsecondary education system supported by our nation's social context and economy must evolve to maintain our global competitiveness and improve the general well-being for Americans (Hanushek & Kimko, 2000; Haunshek & Woessmann, 2012; Bureau of Labor Statistics, 2013; Carnevale et al., 2013; Bailey, Jaggars, & Jenkins, 2015). Equitable opportunities for all students must be established to ensure the privilege gap does not widen, and all students regardless of race, ethnicity, or socio-economic status, obtain support for clear pathways into a postsecondary education program (Organization for Economic Co-operation and Development [OECD], 2012). Though a postsecondary education does not guarantee financial security or a secure lifestyle, evidence overwhelmingly suggests that obtaining a postsecondary education significantly improves the chances of employment in a stable career with a high earnings trajectory (National Research Council, 2012; Baum et al., 2013; Carnevale, 2013; Lumina Foundation, 2017). A postsecondary education also provides the means to live a satisfying and healthy life, to obtain the means to create

opportunities for children, and to become civically engaged citizens; which promote the well-being of our society (National Research Council, 2012; Baum et al., 2013).

Balfanz, Bridgeland, Bruce, & Fox (2013) explain "Despite the size of the challenge, we are seeing progress at the national, state, and local levels" (p. 62). However, the progress being made does not satisfy the current prescriptions to meet the demands of our current workforce. Despite progress to increase postsecondary attainment to meet the demands of a job market prescribed by the 21st century, the current data does not indicate the demand of the job market is being fulfilled. Lumina Foundation's *Strategic Plan for 2017 to 2020* (2016*),* reports a gradual increase since 2008 in high-quality postsecondary credential achievement, noting that 4.2 million more Americans have achieved attained higher education degrees after decades of stagnancy, but the nation is not yet on track to fuel a workforce required of the 21st century, "nor is there a sufficient sense of urgency about the action that needs to be taken" (p. 3). Bellanca and Brandt (2010) summarize the need for a paradigm shift in education from the goal of high school graduation to ensuring high school students successfully matriculate into and complete postsecondary education:

> The global economy, with its emerging industries and occupations, offers tremendous opportunities for everyone who possesses the skills necessary to take advantage of them. There has been a dramatic acceleration in global competition and collaboration over the past thirty years, spurred by information and communications technologies. Doing well in (high) school no longer guarantees a lifelong job or career as it did for previous generations of Americans. The new social contract is different: Only people who have the knowledge and skills to negotiate constant change and reinvent themselves for new situations will succeed (pp. xvi-xvii).

Kansans Can

In response to current research and an internal qualitative study conducted by the Kansas State Department of Education (KSDE), postsecondary success was identified as one of five outcomes that is now measured for public school accreditation in Kansas. All five measurable outcomes for public school accreditation in Kansas will support the capstone outcome of increased postsecondary success rates as defined by KSDE. KSDE defines the criteria for postsecondary success as "enrolling in, persisting in, and completing a postsecondary major or degree" (Hinojosa et al, 2016; KSDE, 2017). Additionally, the KSDE defines postsecondary success, as within the first two years after high school graduation, students will (a) obtain an industry-recognized certification earned while in high school, (b) acquire a postsecondary certification, (c) earn a postsecondary degree, or (d) be currently enrolled in a postsecondary program in both the first and second year after high school graduation (KSDE, 2017).

The Kansas State Board of Education (KSBE), the KSDE, and Kansas Commissioner of Education, Dr. Randy Watson, launched the "Kansans Can" vision for Kansas's public K-12 schools in the fall of 2015. The Kansas state vision is "Kansas will lead the world in the success of each student" (KSDE, 2015). This vision for education was launched due to the results of KSDE's very large qualitative study conducted in 2015. Dr. Randy Watson and officials from KSDE toured twenty communities in Kansas and asked three questions to over 1,800 participants in focus groups which included educators and representatives from business and chambers of commerce in Kansas. The same three questions were posed to focus groups:

- What are the skills, attributes, and abilities of a successful 24-year-old Kansan?
- What is K-12's role in developing this successful Kansan, and how would we measure success?

- What is higher education's role in developing this successful Kansan, and how would we measure success? (KSDE, 2015)

Feedback from the questions asked during the tour of the state was qualitatively analyzed in cooperation with researchers from Kansas State University. Current trends for postsecondary completion and remediation were also included in the analysis. This study confirmed that Kansans believed the most critical skills needed to be acquired by Kansas students is not based solely on academics or test scores. Characteristics or skills cited as to what Kansans deemed important for success after high school included 23% academic, 70% non-academic, 3% mental and physical health, 2% credentials, and 2% employed (KSDE, 2015). The feedback overwhelmingly eluded to the need for instilling non-academic skills as well as academics in Kansas schools to adequately prepare each student for postsecondary success. Upon collecting input and analyzing feedback, the vision for education in Kansas was born from what Kansans deemed necessary in education.

The state of Kansas has transformed a vision for student success with constituent input from a sole focus on academic progress as the exclusive measure of accountability to a student-focused vision. This student focus incorporates intentional measures to monitor a school's effectiveness as each school works to improve each student's success after high school. The Kansans Can vision calls for a, "more student-focused system that provides support and resources for individual success through rigorous, quality academic instruction, career training, and character development according to each student's gifts and talents" (*Revised State Template for the Consolidated State Plan,* KSDE, 2017, p. 6). Since state agencies and local boards of education manage K-12 schools within the constructs of ESEA, now deemed as ESSA, Kansas's commitment to increase high-quality credential attainment is the capstone for all components of accreditation and is also included in the state's consolidated state plan for ESSA:

> The KSDE desires that all students succeed in post-secondary education, in the attainment of an industry-recognized certification, and in the workforce. The KSDE recognized that the attainment of a high school diploma, by itself, no longer opens the door to a successful livelihood and career (*Revised State Template for the Consolidated State Plan*, KSDE, 2017, p. 8).

Accordingly, schools in Kansas are ramping up momentum and intentionality to prepare students for college and career success. Empowerment of staff and students in regard to innovation is critical as systems are launched within each local school district to coincide with a statewide goal to accomplish the mission of, "Kansas leads the world in the success of all students" (KSDE, 2015).

"Kansans Can" encompasses a complementary approach inclusive of success skills students should master. Success Skills that students are expected to develop while attending public school in Kansas include (a) academic preparation, (b) cognitive preparation, (c) technical skills, (d) employability skills, and (e) civic engagement. Kansas Education Systems Accreditation (KESA), Kansas's accreditation system, identifies measurable outcomes that indicate effectiveness in regard to the success skills outlined above to include accountability by each Kansas school district with regard to (a) kindergarten readiness, (b) high school graduation rates, (c) independent plans of study focused on career interest, (d) social and emotional development with employability and citizenship components, and (e) has integrated efforts to focus on improvement for ensuring students are successful in postsecondary endeavors (KSDE, 2019).

To ensure Kansas schools are transitioning from a traditional, agrarian, system of education designed to meet the needs of the 20th century and redesigning to a system reflective of

21st century needs, KSDE provides the Kansas Education Systems Accreditation (KESA) framework for all school districts in Kansas. This "5 R" framework is used as a guide for school district accreditation, improvements, and needed change in the following areas at the system (district) level.

Table 2-1 Kansas Education Systems Accreditation (KESA) 5 R's Framework (KSDE, 2019)

5 R's	Definition	Components
Relationships	"A state of interconnectedness - among people, curricula, programs, projects, and communities - is critical in establishing connections that result in high-performing learning environments."	Staff Students Families Community
Relevance	"The power and ability of specific information to meet the needs of its user - strengthens learner motivation and allows learning to become more engaging, empowering, connected, applicable to the real-world, and socially significant."	Curriculum Instruction Student Engagement Technology
Responsive Culture	"One that readily reacts to suggestions, influences, appeals, efforts, or opportunities - empowers all stakeholders to become respectful of, responsible for, and involved in learning, the learning process, and the learning community."	Leadership Early Childhood District Climate Nutrition and Wellness
Rigor	"A relentless pursuit of that which challenges and provides opportunity to demonstrate growth and learning - is essential in addressing the needs of our rapidly expanding society and world."	Career and Technical Education Professional Learning Resources Data
Results	"evidence of growth and learning - allows curriculum and instruction to be delivered in a timely fashion based on the needs and desires of the individual learner."	(Measurable Factors) Social-Emotional (measured locally) Kindergarten Readiness Individual Plan of Study High School Graduation Postsecondary Completion/ Attendance

Schools in Kansas who are deemed an official "Redesign" school such as Mercury 7, Gemini I, or Gemini II are also provided support with 4 Principles of Redesign that coincide with the 5 R's Framework. While the 5 R's Framework (See Table 2-1) is a guide for redesign at a systems or district level, the 4 Principles of Redesign serve as the basis for designing an educational system at the building level. The 4 Principles of redesign ensure integrations into a school's culture necessary for a learning environment matching 21st century requirements for success after high school and are provided for schools identified as a redesign school to expedite transformations in their school building that focus on each student's success. (See Table 2-2).

Table 2-2 Kansas's 4 Principles of Redesign (KSDE, 2019)

4 Principles of Redesign	**Definition**	**Rationale**
Student Success Skills	"integrated approach to develop social-emotional growth"	"academics are and will remain important, students who lack success skills, such as self-regulation, empathy, self-efficacy, self-awareness, perseverance and the ability to collaborate and communicate, will struggle both in the pursuit of postsecondary education and in the workforce. It's important for schools to include an intentional focus on identifying and developing the skills each student needs to be successful in education, in their personal life, and after graduation."
Community Partnerships	"partnerships are based on mutually beneficial relationships and collaboration"	"The level of supports provided by schools, parents and communities influences the success of each Kansas student. Community partnerships provide an essential opportunity for bringing real-world experiences to students and ensuring schools are teaching students the skills needed to be successful in the workplace. When structured correctly, partnerships will enhance student success, not impede it."
Personalized Learning	"teachers support students to have choice over their time, place, pace, and	"Personalized learning provides students the opportunity to develop self-efficacy and self-regulation skills to ensure they stay on track with their learning. Students who master content easily can move ahead. Those who

	path"	need more supports can work at a steadier pace, without the pressure of feeling as if they're holding back others. We believe that when students have control over their learning, they are more likely to remain in school as engaged learners."
Real-World Applications	"project-based learning, internships, and civic engagement makes learning relevant"	"What Kansans told us they want in their education system requires more than delivering traditional academic learning. They want students to be able to develop and apply their skills and knowledge in practical ways. For older students, that means having them learn through internships, job shadowing and projects that demonstrate their application of knowledge. Learning shouldn't just take place within the classroom. Learning experiences need to be connected to the community."

Schools in Kansas who have applied to be and designated as a redesign school have committed to being progressive and implementing change at a faster pace than other schools not designated as a redesign school. The 4 Principles for Redesign is a framework that helps at the building level to focus succinctly on practices that directly align with the first 4 R's of the 5R's Framework, and consequently will have direct correlation with the 5th R (Results) when practices are implemented in alignment with the 4 Principles for Redesign. In addition, when schools and school districts design a learning environment matching the "5 R's" and the 4 Principles of Redesign, KESA's measurable outcomes will improve.

Table 2-3 KESA Outcomes for Measuring Progress (KSDE, 2019)

KESA Measurable Outcome	Definition	Tool for Measurement
Social / Emotional Growth	KSDE standards provide the framework for integrating social-emotional growth (SEG) with character development so that students will learn, practice and model essential personal life habits	Local measurement tools should be identified and reported

	that contribute to academic, social-emotional, and post-secondary success.	
Kindergarten Readiness	Ensure that each student enters Kindergarten at age 5 socially, emotionally & academically prepared for success	developmentally appropriate snapshot tool - Kansas must have common kindergarten entry data sets across all elementary schools
Individual Plan of Study	A formal plan documented with each student reflecting program of study plans with career interest(s)	Measured locally – each student should have one
High School Graduation Rate	Graduation percent based upon number of students graduating with school issued diploma	School reports data to KSDE
Postsecondary completion/attendance	Students within the first two years after high school graduation (a) obtain an industry-recognized certification earned while in high school, (b) acquire a postsecondary certification, (c) earn a postsecondary degree, or (d) be currently enrolled in a postsecondary program in both the first and second year after high school graduation	National Student Clearinghouse (NSC)

KSDE's "5R" framework, KESA's measurable outcomes, and KSDE's "4 Principles of Redesign" framework are complementary in nature and reflect a paradigm shift from sole accountability being monitored on academics only to a focus on each individual student. A complementary emphasis is placed on academic performance, development of cognitive skills, development of social/emotional skills (employability traits), and civic engagement to assist in

promoting the likelihood of student success after high school. When all components are integrated and schools in Kansas are accountable for these components through the KESA process for accreditation, the likely outcome is a higher percentage of high school graduates attaining postsecondary credentials, and thus, fueling the prescribed workforce requirements.

To monitor postsecondary success rates, Kansas incorporates monitoring of enrollment data collected from the National Student Clearinghouse (NSC) to determine each school district's success with a postsecondary career focus. Kansas defines postsecondary success as students within the first two years after high school graduation (a) obtain an industry-recognized certification earned while in high school, (b) acquire a postsecondary certification, (c) earn a postsecondary degree, or (d) be currently enrolled in a postsecondary program in both the first and second year after high school graduation (KSDE, 2017). Accordingly, the KSDE has established an accountability goal of 71 - 75% postsecondary success rate of Kansas high school graduates securing a postsecondary credential by the year 2020 (KSDE, 2017). The most recent gauge of students securing a postsecondary credential or working toward a credential is from 2016 with a state average of 52% (KSDE, 2018). Recent acquisition of new available data from the National Student Clearinghouse (NSC) in the spring of 2017 assists districts with aiming toward a 71– 75% benchmark goal for postsecondary success by 2020 (KSDE, 2017). Recent acquisition of data to assist with monitoring postsecondary success will be described further with the Integrated Postsecondary Education Data System (IPEDS) and how it contributes to NSC data.

The Integrated Postsecondary Education Data System (IPEDS)

The Integrated Postsecondary Education Data System (IPEDS) collects survey data from all postsecondary institutions that participate in federal student financial aid programs (National

Center for Education Statistics, NCES, 2017). Various forms of data are collected including, but not limited to institutional characteristics, institutional prices, admission criteria, disaggregated enrollment data, financial aid, institutional resources, and the focus of this study which are "credentials conferred and student persistence which ultimately leads to higher student success rates" (Schoenecker & Reeves, 2008, p. 47). IPEDS serves as the data collection tool by National Student Clearinghouse (NSC); thus, provided to educational agencies across the nation to determine postsecondary success. Though NSC was primarily established to guide secondary institutions in decision-making efforts for improvement, Dundar and Shapiro (2016) explain the NSC as a "self-sustaining, independent nonprofit organization, built as a voluntary data ecosystem that provides administrative services directly to nearly all reaches of the educational community" (p. 1). A specific tool launched by NSC, DataTracker for High Schools, was released to secondary schools in Kansas in May 2017 (KSDE & NSC, 2017).

National Student Clearinghouse (NSC) StudentTracker Data

Schoenecker and Reeves (2008) explain "The National Student Clearinghouse (NSC) is a non-profit agency that was established in 1993 to provide higher education enrollment verifications to lenders for financial aid purposes and has since transformed to include various forms of higher education data" (p. 47). Dundar and Shapiro (2016) further explain that NSC has undergone significant transformation during the last quarter of a century to serve as the data infrastructure for education in the 21st century. Since 1993, NSC data has evolved to provide tracking of student enrollment and credential verification. "The NSC developed StudentTracker, which enables secondary schools to improve their measurement of educational outcomes by tracking students across institutions using the NSC enrollment and degree database" (Schoenecker & Reeves, 2008, p. 48). NSC's StudentTracker for High Schools can track

postsecondary credential attainment, thus is the tool that Kansas uses to determine postsecondary success (National Student Clearinghouse, 2018).

StudentTracker for High Schools is a "unique program designed to help high school districts more accurately gauge the college success of their graduates" (National Student Clearinghouse, 2019). As defined by the NSC, StudentTracker for High Schools determines how many high school graduates enroll in college, the persistence and graduation rates, the length of time to obtain postsecondary credentials, which colleges are attended, and if any student who began ninth grade in a high school went to college without receiving a credential (National Student Clearinghouse, 2019). NSC's StudentTracker for High Schools tracks students' college attendance nationwide and is inclusive of 98% of all public and private U.S. postsecondary institutions measuring graduates' persistence in college, public, private, trade, and vocational (*Considerations in using NSC StudentTracker for high schools,* NSC, 2014, p. 3).

Some limitations are present with the NSC StudentTracker Data. Schoenecker and Reeves (2008) explain the NSC operates on a quid-pro-quo basis, and that only organizations that submit their student data will be able to utilize the data services (p.48). Dunbar and Shapiro explain:

> Unlike a governmental agency NSC cannot enforce levels of participation or unilaterally disclose what is ultimately privately held data and increasing the incentives for institutions to participate would strengthen the existing public-private partnership that has created the national postsecondary ecosystem we have today" (2016, p. 1).

In addition, data obtained through the NSC StudentTracker for the purpose of tracking high school graduates' endeavors after high school, though not perfect, has faced scrutiny by some

public educators due to some limitations as evidenced by KSDE. The Postsecondary User's Guide (KSDE, 2017, pgs. 1-10) notes the following:

- This data service is Family Educational Rights and Privacy ACT (FERPA) compliant (student opt-outs not included).
- Pulled from more than 3,300 collegiate institutions that enroll more than 93 percent of all U.S. higher education students.
- The data does not include approximately 3 percent of students enrolled in a postsecondary institution that does not report to NSC.
- Data includes two-year, four-year, graduate, public/private, trade, vocational, etc., institutions in every state, D.C. and U.S. territories.
- This system does not account for certificates or dual college credit students earn in high school. All NSC data represents student postsecondary enrollment after high school graduation.
- This system does not track students who earn a GED.

  Data will not include students NSC is unable to match due to data discrepancies.
- This system does not track students who enlist in the military or enter the workforce after high school graduation.
- This system does not track nondegree seeking students.
- This system does not include certifications earned by students in postsecondary graduate/completion percentages.
- The graduates represented in all data sets are those students who graduated within four years from an accredited Kansas high school with a regular high school diploma.

- The first set of data available to Kansas high schools is for the high school graduating class of 2010

Though dissemination of NSC data is permissible according to The Family Educational Rights and Privacy Act (FERPA, 2004), "the act does not permit colleges and universities to disclose directory information about students without their consent, although a small percentage of students may decline participation" (Schoenecker & Reeves, 2008, p. 48). Schoenecker and Reeves (2008) also explain that "some institutions do not participate in the NSC core service" (p. 55). Students who are not included in the NSC StudentTracker data system include most of the US military academies, most tribal colleges, and many very small institutions (*Considerations in using NSC StudentTracker for high schools,* NSC, 2014, p. 4). As of 2017, 98% of public and private postsecondary institutions nationwide are included in NSC data, so gains in effectiveness have been made since NSC's launch in 1993 (National Student Clearinghouse, 2017). The NSC reports that the StudentTracker system reports are the best available, "short of a lot of manual detective work" (*Considerations in using NSC StudentTracker for high schools,* NSC, 2014, p. 8).

The National Student Clearinghouse (NSC) can be utilized to serve as a national measurement tool to determine postsecondary credential attainment, and Kansas uses NSC data to track and monitor the progress of most high school graduates for two years after graduating from high school. Though NSC data reflects a small margin of error, this data provides the KSDE a gauge to determine the average success rate in Kansas for postsecondary credential attainment is approximately 52% (KSDE, 2017). The KSDE's vision for success, "Kansas leads the world in the success of each student" includes raising the postsecondary success rate from an average of 52% to 70-75% of students securing some type of high-quality postsecondary

credential by the year 2020. Comparisons of the projected percentage of Americans necessary to acquire credentials necessary to fill the demands of a job market in the 21st century and the current percentage of Kansans completing credentials reveals a discrepancy in postsecondary preparation, as they do nationwide (Carnevale et al., 2013; Lindsay et al., 2016; Molefe, Burke, Collins, Sparks, & Hoyer, 2017).

Graduation Rates and National Student Clearinghouse Data in Kansas

In Kansas, multiple measures define a school's success in preparing students for fulfilling and successful lives after high school graduation including, but not limited to NSC and graduation data. Graduation rates may appear to be a simple calculation as to who receives a high school diploma and who does not. Though it truly is that simple, KSDE utilizes four and five-year cohorts to determine graduation rates. Meticulous tracking of data is needed to determine accurate graduation rates that assist KSDE with calculating postsecondary success rates from available NSC data. NSC calculations (See Appendix G), such as success averages, effective averages, and estimated effective averages, require the use of a 4-year adjusted cohort graduation rate. KSDE (2018) defines a 4-year cohort as:

> The cohort begins with the incoming first-time ninth graders in a given year at a school or district. This cohort is continually adjusted: students who transfer into the school or district are added to the cohort, while students who transfer out of the school or district are removed from the cohort. It is important to note that students who drop out are not removed from a cohort. The cohort at the end of the four or five-year cohort time frame is called the "adjusted cohort" for the school or district, and the graduation rate for this cohort is defined as the percentage of students in the adjusted cohort who received a regular high school diploma (p.7).

As one can see from the definition above, students who move to private schools or home schools also count as a non-graduate in the state of Kansas, regardless of whether they graduate or not, as do students who obtain a GED.

Innovative Education Design

Nothing is more meaningful than empowering all learners to succeed in a rapidly changing world (Schwahn & McGarvey, 2012, p. xv). Innovation in education to empower learners and develop skills have been a topic for many Kansas educators since the introduction of the Kansans Can Vision for learning, "Kansas leads the world in the success of each student" (KSDE, 2015). As (Noonan & Erickson, 2018) explain:

> "Across the country, education efforts are shifting from a narrow focus on accountability and testing to a broader focus of better preparing students to be college and career ready. The trend of high academic expectations and measurement to the exclusion of all other skills is being displaced" (p. 2).

ESSA confirms acknowledgement of the need to spark innovation in schools, and commits to supporting innovation by investing in innovation, transforming communities for learning, and re-envisioning Career and Technical Education to ensure equitable learning environments. "We must strengthen the pipeline of education – from early education through career" (Balfanz et al., 2013, p. 66). The demands of the 21st century workforce calls for more skilled workers so we must see a significant shift in how we prepare our future workers.

> "Modest, incremental improvement will not suffice. Indeed, fundamental redesign is required. We must move from a system that is centered on institutions and organized around time to one that is centered on (all) students, organized around high-quality

learning, and focused on closing attainment gaps" (*Lumina foundation strategic plan for 2017 to 2020*, 2017, p. 4).

In response, Schwahn and McGarvey (2012) explain:

> Technology and the Information Age have changed our world from an Industrial Age, and much of the way our secondary schools are designed continue to remain in place without change from the initial "Committee of Ten" who designed and structured schools in 1892" (p. 8).

Leaders in education must re-evaluate to stay in touch with students' needs, or like businesses, we will fail if we don't keep up with changing student needs in the 21st century (Couros, 2015, p. 4). In a YouTube video presented in 2010 by Dan Brown, "An Open Letter to Educators", Brown describes that Industrial Age education is not working in the 21st century. Brown (2010) further explains that, "schools don't "have" to change anything, but schools should realize that if they do not change with the world, the world will decide that schools are not needed any longer as they currently exist" (http://teacher2point0.blogspot.com/2010/02/dan-brown-open-letter-to-educators.html). Education cannot sit in an increasingly customized world as an island, embracing the Industrial Age, and expect to survive (Schwahn & McGarvey, 2012, p. xii). According to Schwahn and McGarvey (2012):

> We have walked by too many high school classroom doors, looked at students sitting in rows, listening but not hearing what the teachers were saying, telling us with their posture and their eyes how they felt. We have watched too many enthusiastic first graders turn into bored fourth graders (2012, p. xiii).

As our world transforms, our schools must transform from traditional designs to meet the needs of a society indicative of the 21st century.

Public school administrators face the daunting task of school redesign as research indicates the need for transformation. Jim Collins (2001) indicated the first critical job of a leader is to identify and to face reality. Educational leaders must assess current structures in place and how these structures or approaches align with a focus on increasing postsecondary credential attainment by their high school graduates.

Traditionally, K-12 schools have operated by giving great attention to measuring a student's academic progress and completions of high school core academic courses for credit. Grades and academic performance typically serve as the chief measurement to determine if a student's candidacy for high school graduation with little attention given to postsecondary plans for success or non-academic skills (Fazekas & Warren, 2010). Though academic skills associated with the core curriculum are necessary, multiple components and methods aligned with student interest and planning for a future career are necessary to prepare students in K-12 schools for postsecondary success.

"Many schools in our nation are "Industrial Age" organizations existing in an "Information Age" world, and the delivery system is an assembly line where time for learning is the constant and the quality of learning is the variable" (Schwahn & McGarvey, 2012, p. 5). Couros (2015) notes the need for reform and secondary education to move away from a "culture of compliance (traditional settings) to create engagement and, ultimately, empowering learners in our schools in order to fit the needs of a 21st century society" (p. 5).

As dialogue in many circles among educators in Kansas revolves around developing educational systems reflective of 21st century needs, many educators and students are being encouraged to move from a traditional "fixed" mindset to a "growth" mindset. According to Couros (2015) a, "fixed mindset is the belief that abilities, intelligence, and talents are fixed

traits; where a growth mindset is the belief that abilities, intelligence, and talents can be developed" (p. 33). Not only is a growth mindset crucial to empower students to learn, it can eliminate the stratification of identifying students as "college-going" students and "non-college-going" students when adopted by educators. A growth mindset can shape the belief that all students are capable of attaining postsecondary success and assist with school redesign efforts to empower learners to personalize matriculation into postsecondary education programs. "The reality is that the experiences we create often make students dependent upon the teacher for learning, but we should embrace the idea that everyone (teacher and learner) can create cultures that learn from and teaches one another" (Couros, 2015, pgs. 40-41).

Dialogue in secondary schools in Kansas encompasses some integrations of the subcomponents researched below to be items for consideration as schools seek to transform from traditional settings to promote student preparedness toward college and career readiness. The subcomponents below are reflective of the four principles of redesign in Kansas (KSDE, 2017). (See Table 2-2).

Student Empowerment

Schwahn and McGarvey (2012) contend that "personal learning needs of students does not begin until students are assigned a teacher in most current school settings, and then only if the teacher chooses to personalize instruction does the student-centered learning occur" (p. 6). A recent paradigm shift toward student-centered learning seems to be transpiring in 21st century schools. In traditional settings, "we forget that our responsibility isn't solely to teach memorization or the mechanics of a task, but to spark a curiosity that empowers students to learn on their own, to wonder, to explore, to become leaders" (Couros, 2015, p. 4). Couros (2015) explains that what we teach kids in traditional settings instead, is compliance. Couros (2015)

explains “compliance does not foster innovation, in fact, conformity does quite the opposite. If we want innovative students, we will need innovative educators” (p.5). If we are to move away from a culture of compliance, we must engage learners and ultimately empower learners, educational leaders, teachers, and students, in our schools (Couros, 2015).

Most students’ excitement declines with decreased intrinsic motivation to prosper in school settings by grade four (Schwahn & McGarvey, 2012; Couros, 2015). In reality, only students can make their own decisions, but schools can create the conditions for students to want to continue education (Couros, 2015).

> If we can create school cultures in which values such as originality, creativity, critical thinking, collaboration, and an unquenchable thirst for knowledge are the norm of our students, our teachers, and ourselves, other organizations will look to education as an industry that leads in innovation, rather than one that is trying to catch up with the rest of the world (p. 10).

Schawahn & McGarvey (2012) and Couros (2015) suggest that students will reach a level of empowerment through intrinsic motivation when they as students are emerged in student-centered, student-driven learning. This restructures the current design of education where the teacher serves as the center of all knowledge in the classroom, and instead creates student-centered environments. In student-centered environments, students are empowered to create meaningful learning experiences applicable to their interests and relative to real-world application.

Social and Emotional Character Development (SECD)

To ensure that young people are adequately equipped to reach their full potential to promote the prosperity of the nation by success in employment, engagement in communities, and

healthy lives, students must be explicitly taught knowledge and skills, academic and non-academic, that can be transferable to real-world settings and to increase academic performance (National Research Council, 2012, KSDE 2018). Non-cognitive abilities and their effect on skills and skill formation in the workplace have not been included in academic discussions in research until the past decade (Heckman & Rubinstein, 2001; Kyllonen, 2013). Heckman and Kautz (2012) report, "success in life depends on personality traits that are not well captured by measure of cognition" (p. 452). Standardized tests reflect the data that traditionally would suggest who was academically competent to succeed in higher education and careers, but other social and emotional factors influence the success of young adults (Heckman & Kautz, 2012). A recent example of a prioritized focus on academics to prescribe success in careers and higher education is the No Child Left Behind (NCLB) mandate that stood from 2002 through 2012 (Heckman & Kautz, 2012; Kyllonen, 2013). Academic results from high-stakes assessments that measure student performance or compare with other nations attract media attention and even drive educational policy which consequently suggest the prioritization on such academic factors (Heckman & Kautz, 2012). Academics may influence college and career success, but often social and emotional factors are left out of the equation in traditional school settings. In fact, recent research has found that as little as 20% of the employment success students experience can be attributed to cognitive abilities reflective of their academic proficiency (National Research Council, 2012; Kyllonen, 2013). Traditionally, students had only been allowed to enroll in credit-bearing coursework if they passed an academic placement exam. Responding to recent research, the Educational Testing Service (ETS) intends to provide non-cognitive assessments for admission into credit-bearing coursework because, perhaps, non-cognitive skills

can compensate for possible academic deficiencies because that student demonstrates the persistence and determination required for successful completion of the course (Kyllonen, 2013).

Recognizing that non-cognitive skills are important, how do schools measure progress with skill development related to intangible skills? "Much of the neglect of non-cognitive skills in analyses of earnings, schooling, and other lifetime outcomes is due to the lack of any reliable measure of them" (Heckman & Rubinstein, 2001, p. 145). Yet, it is evident that non-cognitive, social, and personality traits are important to employers as they screen worker before hiring to gauge their social aptitude. Human-capital theories that describe the workforce's cognitive skills, abilities, dispositions, knowledge, interests, and aptitudes, are now appearing in research literature that indicate awareness of the importance non-cognitive skills and their impact on job success (Kyllonen, 2013). In response to recent emphasis on social and emotional factors that influence preparedness for college and career, the Educational Testing Service (ETS) is currently developing soft-skill assessments to supplement traditional academic placement tests for admission into colleges (Kyllonen, 2013).

Most careers require social proficiency, even the lowest wage jobs typically not deemed as skilled profession (Gatta, Boushey, & Appelbaum, 2009). Frey and Osborne (2013) state that as the evolution of technology races ahead in a global job market, "workers will reallocate to tasks that are non-susceptible to computerization, i.e., tasks requiring creative and social intelligence" (p. 45). As our society transcends further into the 21st century, implications "for workers to win the race (vs. computerization of jobs), they will have to acquire creative and social skills" (Frey & Osborne, 2013, p. 45).

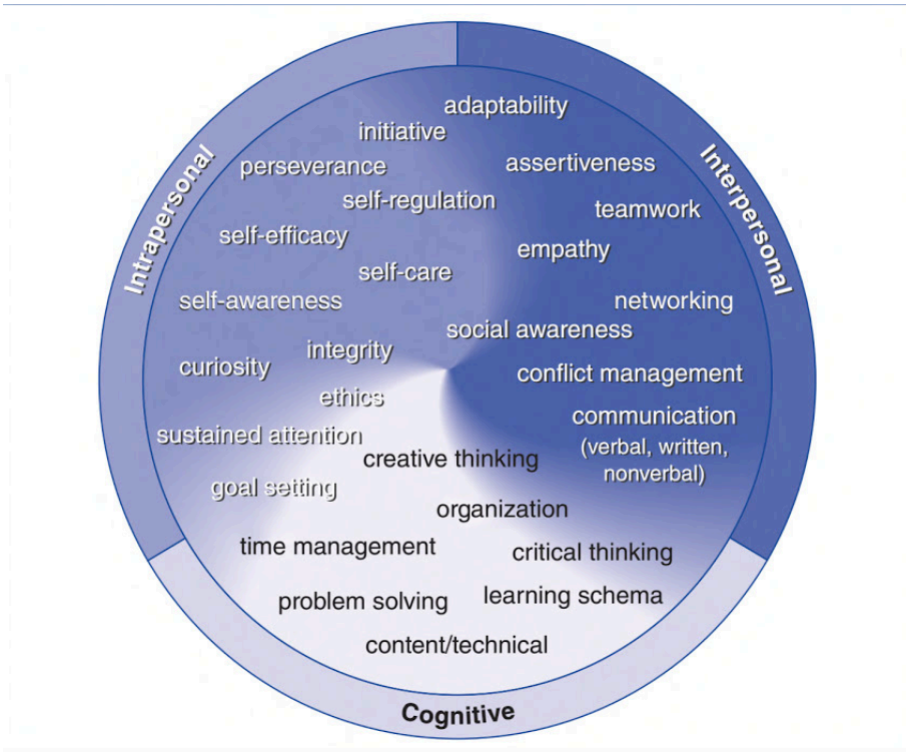
It is increasingly common for employers to seek workers who exhibit social competencies, then train new workers in the technical skills and knowledge necessary for the job

description (Gatta et al., 2009). Service jobs that require face-to-face contact are the highest growing occupations in our nation and are less susceptible to computerization or off-shoring (Gatta, et al., 2009; Carnevale et al., 2013). Service work often challenges workers to perform and respond quickly in plain sight of the consumer which requires critical thinking and non-academic social proficiency to adjust to a micro-social context (Gatta et al., 2009). Frey and Osborne (2013) found in their research that, "social intelligence is important in a wide range of work tasks, such as those involving negotiation, persuasion, and care" (p. 26). School has been found to enhance non-cognitive skills as a byproduct, but schools should integrate targeted interventions to give a larger boost to non-cognitive development (Kyllonen, 2013; Noonan & Erickson, 2018). Many secondary schools are responding to research that supports development of non-cognitive skills often referred to as soft skills necessary for employment success. As a result, intentional delivery of soft skill instruction is now being implemented or explored in many schools across the nation.

In response to a rising trend that efforts in secondary schools shift from a sole focus on academics and assessment to preparing each student for higher education and the workplace, the Kansas State Department of Education has specifically addressed social emotional character and development (SECD) by including this component in accreditation of schools. To provide a framework for integration of these important skills, KSDE revised the SECD standards in 2018. Additionally, in collaboration with the Technical Assistance System Network (TASN), a network to support implementation of evidence-based practices in Kansas, associate researchers Patricia M. Noonan, Ph.D. and Amy S. Gaumer Erickson, Ph.D. (2016) published a framework inclusive of non-academic soft skills. These non-academic soft skills are necessary for student success after high school. In response to the Kansans Can Vision including emphasis on student

success skills to be intentionally embedded within the systemic structure of education, TASN provides support for Kansas educators embedding this framework. (See Figure 2-1).

Figure 2-1 Erickson, Noonan, & Soukup (2016) College and Career Competency Wheel (3rd ed.)



The college and career ready framework depicts various interpersonal, intrapersonal, and cognitive skills that are sought within the Kansans Can Vision for "Kansas leads the world in the success of each student" (KSDE, 2015). Accordingly, "Student Success Skills" are identified as a component for intentional integration in school redesign in Kansas and is included in the "4 Principles of Redesign" for schools identified as a redesign school in Kansas. (See Table 2-2). Erickson and Noonan (2018) note that "it's important to understand that competencies cannot be absorbed through the normal school structure without purposeful instruction" (p. 9). This study will describe how each case intentionally teaches skills provided in this framework.

Advisory in Secondary Schools

Advisory periods in secondary schools serve as a platform with time during the school day carved out to integrate multiple strategies connecting students to their current learning and how it will apply to future educational or career goals. These advisory periods (often referred to as homeroom or communities) also provide the structure to solidify individual plans of study, facilitate student-led conference preparation, and provide a resource for employability preparation (Champeau, 2011). Champeau (2011) explains advisory periods serve as a support for students who are at risk of dropping out or failing with a systematic approach to building positive relationships, which are vital for student success. Advisory periods are important to facilitate the growth and learning of the whole child (Champeau, 2011).

Traditionally, the role of advising students to navigate through a postsecondary admissions process and assistance with planning for postsecondary learning predominantly came from overworked guidance counselors (or parents) and that is if the guidance counselor were well-versed in the process (Fazekas & Warren, 2010; Stephan & Rosenbaum, 2013). The "counselor-centered" model serves as a fragmented approach to guiding students for their future and is inconsistent. To successfully change a culture, "the whole school will need to take responsibility for preparing all of its students for postsecondary success in college and careers" (Fazekas & Warren, 2010, p. 1; Champeau, 2011).

ACT data indicates a lack of college knowledge, such as the information and behavioral skills necessary for successful matriculation in academe, which in turn, is a major requirement for college success (Boylan et al., 2017, p. 16). Stephan and Rosenbaum (2013) indicate that much of the college completion discrepancy noted by Lindsay et al. (2016) may be attributed to a lack of access to college assistance, missing key deadlines, or perhaps an indication of

undesirable college options due to poor planning. "College actions appear to be an important mechanism for reducing gaps in the enrollment process" (Stephan & Rosenbaum, 2013, p. 214).

Career planning and advising for the future is also necessary for students in secondary and postsecondary institutions to make well-informed decisions regarding curricular choices, and to be informed of pathways that lead to postsecondary credentials; ultimately leading to careers that match student interests. According to Lindsay et al., (2016), 93% of students aspire to enroll in college, 75% actually enroll, but less than 60% complete college. This is an indication that many students may: (a) have an inadequate plan for postsecondary attainment in the form of career or college choice as indicated by an individual plan of study; (b) have limited knowledge of enrollment processes; or (c) have other personal reasons that perhaps adequate advising could assist with.

Due to budget restraints in public education, career guidance and counseling is severely limited, and most counselors only have time to focus on test preparations and college admission processes (American Institutes for Research [AIR], 2013; Stephan & Rosenbaum, 2013). Though secondary schools may benefit from adding career guidance counselors or career coaches, it is not likely that all schools will add these positions with a decline in funding and resources (AIR, 2013). Consequently, schools and colleges encourage staff to advise students regularly regarding postsecondary plans and careers. In response to the conundrum of one, or few, persons responsible for advising students for their futures, the idea of a collective approach was conceived, and thus, advisory periods in secondary schools.

The National High School Alliance (2005) encourages secondary schools to integrate a regular advisory period into the student daily schedule. Advisories are often classes during which small groups of students meet with a staff member serving as the role of advisor to discuss

academic, social-emotional, soft-skills, and advisory curricula to map out plans to accomplish postsecondary goals (AIR, 2013, p. 10; Fazekas & Warren, 2010). Champeau (2011) explains:

> When (advisory periods) linked with student learning plans, portfolios, student-led conferences, project-based learning, and student exhibitions, the advisory becomes the hub of quality relationships that catalyze student learning in school. Unfortunately, advisories are too often not used to their potential because they are isolated from academics. When that happens, skeptical adults take it as confirmation that advisories are too labor-intensive to be successful (pp. 38-39).

The relatively new concept of advisory periods for all students goes beyond the traditional framework employed in most schools to providing structure, direct support, and the on-going dialogue necessary for all students to learn from college-going activities (Fazekas & Warren, 2010). Stephen and Rosenbaum (2013) confirm with their study that students who are considered disadvantaged benefit from an integrated advisory model; where they may not have with a standard counselor-centered model. Integrated or hybrid advisory models differ from the standard, counselor-centered model. An integrated (hybrid) advisory model replaces the counselor-centered model where a high workload of the counselor often constitutes students being required to ask for assistance when they feel it is needed, and consequently, results in a small number of students receiving valuable guidance on college-going activities. A counselor-center model typically results in only the high-performing students receiving assistance (Stephan & Rosenbaum, 2013). Students who are considered low socio-economic status often require more detailed assistance, but a high student-to-counselor ratio provides little time for one counselor to meet with multiple students effectively, and moreover, students are less likely to seek out help when assistance is needed (Stephan & Rosenbaum, 2013).

Fazekas and Warren (2010) explain that a model for advising students requiring collective responsibility of secondary staff with multiple messengers is essential to establish high school as a pathway into the future, and furthermore urge intentionality for advising approaches to be absent of stratified pathways that may, "destine students for unequal outcomes" (p. 3). Fazekas and Warren (2010) suggest a collective, or hybrid model of advising students to facilitate an equitable college-going culture that traditionally mirrored a stratified pathway to postsecondary success. Typically advising for college was only available for those students demonstrating proficient academic success deemed as necessary for success in higher education. A hybrid approach removes the "fragmented" system for advising students and fosters an on-going collaboration toward a college-going culture. Fazekas and Warren (2010) also explain that a comprehensive approach utilizing guidance staff, parents, teachers, alumi, community members, and students enhances guidance for postsecondary success, which will be discussed further in detail below. Fazekas & Warren (2010) explain:

> The mentality in today's high schools must send this collective message to students: "Your postsecondary success is the goal – we are all oriented around this objective and expect everyone to work to achieve it. This is what we will do to support you in reaching this goal and this is what we will expect from everyone as you work toward this goal" (pgs. 2-3).

In an integrated, whole-school advisory model (or hybrid model), staff collectively share responsibility for the preparation of all students for postsecondary success, and the support tasks beginning in middle grades or at the beginning of their high school careers, continue through their matriculation into their postsecondary path (Fazekas & Warren, 2010). In order to ensure all students obtain a rich college-preparation program of study, a comprehensive, rigorous

advisory framework ensures student success in high school and also sets students up for success in postsecondary success. This framework is inclusive of rigorous academic programs to prepare for the cognitive demands of higher education in English and mathematics, combined with fundamental cognitive strategies, such as reasoning, critical thinking, and problem-solving (provided in most Career and Technical coursework). Fazekas and Warren (2010) explain this framework should be supplemented with purposeful postsecondary preparation standards in advisory periods inclusive of (a) persistence; (b) course selection; (c) engaging parents; (d) exploration of postsecondary options; (e) understanding of college admissions procedures; and (f) navigating financial aid processes.

Teacher as Advisor – A New Role

Statistics associated with postsecondary success indicate the economic stability of our nation depends on an urgent and intentional challenge to ensure all students are receiving guidance and assistance with plans for postsecondary training and attainment. "Choosing an academic major is a decision many students are not equipped to make, yet it is one that all must make during their college years" (Pizzolato, 2008, p. 19). Advising students to plan for their future is evolving in secondary schools, and no matter what model is integrated to advise students, educator's must be prepared for new roles aside from delivering core content.

Pizzolato (2008) describes that an academic advisor is someone "who has built a one-on-one relationship with a student over an extended period" and "is in an ideal position to become a partner in helping shape the advisee's academic experience" (p.18). Pizzolato (2008) and Boylan et al. (2017) explain that since relationships are important, it is beneficial for the student to remain with the same advisor over an extended period of time, preferably throughout the students' high school years. Pizzolato (2008) explains differentiated models for advising are

most beneficial and "when advising interactions are rooted in students' own experiences rather than generic skill set exercises, students are more apt to use the resulting personally constructed strategies in new academic situations" (p. 22).

As integrated (hybrid) advisory periods are implemented, teachers are often asked to serve as advisor in secondary schools. Though educators are most certainly capable of advising students for postsecondary endeavors, not all feel comfortable with this new role and will require training. "This new role goes beyond traditional guidance practices by providing structure, time, and direct support for all students to participate in college-going activities" (Fazekas & Warren, 2016, p. 3). In addition, this is a different role than the traditional "teacher-of-content only" role. Though research concludes this is an important role for secondary educators to assist with in the 21st century, there is limited research regarding support for the transition into roles as advisors (Boylan et al., 2017).

Individual Plans of Study

Students in some schools maintain formal plans of study in efforts to transform toward creating student-centered learning and empowerment in the learning environment. These formal plans lend to individual accountability to develop plans and goals for matriculation into college and careers. These are often referred to as Individual Plans of Study (IPS), and are inclusive of a student's academic, social, and postsecondary goals (KSDE, 2015). The IPS is developed by each student with guidance from an advisor, parent, or other significant adult, and is an ongoing snapshot of goals throughout the student's secondary school experience (Osofsky & Schraeder, 2010). The IPS is a tool that should be revisited frequently throughout the school year and serves to monitor progress toward individual goals which can also be utilized for future revisions to the IPS (Fazekas & Warren, 2010). An IPS assists students with verbalizing their goals and

serves as a tool to guide the student to reflect on progress and refine a commitment to short and long-term action plans for future success (Fazekas & Warren, 2010). School redesign efforts will be effective when the redesign is intentional and tailored to individual student interests; merging independent plans of study with the end goal (postsecondary credential attainment) considered (Couros, 2015). Some schools utilize the IPS as a tool for student-led conferences.

Student-Led Conferences

Though communication between the school and parent may happen intermittently throughout the school year, student-led conferences may be a design that some schools pursue to replace the traditional parent-teacher conference. Student-led conferences differ from traditional parent-teacher conferences in that students lead the conference with the teacher serving as facilitator versus the teacher leading the meeting (Boazman, 2014). Often, the student is absent from the conference in traditional parent-teacher models (Kinney, 2005; Fazekas & Warren, 2010). Student-led conferences require students to plan and lead the conference, determine what content will be shared, what artifacts will be shared; while taking ownership of the conference and the progress that they have made. Historically, performance on academic (cognitive) assessments played a major role in what was reported by the teacher to the parent (caregiver). In contrast, student-led conferences serve as an "authentic practice that puts the emphasis on student participation and accountability" (Kinney, 2005, p. 33). Student-led conferences put the student at the center of the collaboration helping the student become accountable for current progress and to help the student devise goals or plans for future performance (Kinney, 2005). In a student-led conference model, "students become active participants rather than passive learners in the classroom" (Jackson, 2012, p. 10).

Student-led conferences require much planning and intentionality to enable the teacher to serve as facilitator (Kinney 2005; Shulkind, 2008; Jackson, 2012). Schools who choose to conduct student-led conferences must ensure that students are prepared to "take the lead" at the conference, and therefore, must be prepared with a framework for delivery (Kinney, 2005; Jackson 2012). Students may choose to share artifacts that are meaningful to deliver an accurate presentation of current progress in school and to communicate future goals, and signify differentiation as an authentic practice (Shulkind, 2008; Jackson 2012). Therefore, selection of the artifacts to be shared may vary from school to school or student to student (Jackson, 2012). Shulkind (2008) indicates that student-led conferences enable students to assess their learning through refection, feedback from advisors, and teacher feedback. Advisory periods serve as a platform for students to prepare for these student-led conferences by student evaluation of progress, goal-setting, and practice with communicative soft skills (Shulkind, 2008).

Parent Involvement

A partnership with parents (or caregivers) and school is critical to communicate the urgent message that postsecondary attainment is a gainful decision that will impact quality of life and enhance economic stability (Boyer, 1986). "High-quality parent involvement is fostered when parents feel they are partnering with an adult in the building (school) who knows their child well and is invested in his or her progress" (McDonough, 1997; Fazekas & Warren, 2010, p. 25). Parent involvement plays a pivotal role to provide motivation for students to successfully complete academic work and is instrumental in the encouragement for students to aspire toward higher levels of achievement and postsecondary education (Boyer, 1986; Fazekas & Warren, 2010). Fazekas and Warren (2010) indicate parents should provide messages regarding the importance of postsecondary education as it relates to their future success consistently with the

reassurance financial help is available to defray the costs of higher education. Parents, and particularly parents with low levels of postsecondary attainment, may need orientation from school staff regarding essential activities associated with postsecondary attainment (Fazekas & Warren, 2010).

The expense of higher education may influence some parents to urge students to enter the workforce directly in lieu of paying for education, and some may be hesitant to encourage their student to acquire debt with financial assistance. "It is important that we not allow the financial returns to college to obscure the other benefits of a college education" (Baum et al., 2013, p. 8). It is critical that parents remain informed with regard to how postsecondary attainment will enhance the lives of their students (long-term) if the sentiment is such that their child will join the workforce without postsecondary education following high school (Fazekas & Warren, 2010; Baum et al., 2013). The median income of full-time employment by a student who persists through a bachelor's degree can expect to earn 38% more than a student with only a high school diploma (Baum et al., 2013). Baum et al., (2013) conclude:

> Compared to a high school graduate, the median four-year college graduate who enrolls at age 18 and graduates in four years can expect to earn enough by age 36 to compensate for being out of the labor force for four years, as well as for borrowing the full amount required to pay tuition and fees without any gran assistance. As workers age increases, earnings rise more rapidly for those with higher levels of education. For example, the gap between the earnings of full-time workers whose highest degree is a bachelor's degree and those of high school graduates grows from 54% for 25-29-year-olds to 86% for 45-49-year-olds (p. 5).

Evidence supports that securing a postsecondary education will benefit enough people, "to pay back their loans and not suffer a diminished standard of living" (Baum et al., 2013, p. 8). Parents or caregivers are generally concerned about the long-term welfare of their children, so it is critical to inform parents of the long-term gains a postsecondary education will most likely provide. Therefore, strong parental involvement and partnerships with schools is necessary to deliver uniform messages regarding the importance of continuing education post-high school.

Career and Technical Education

Career and technical education (CTE) integrations provide youth with technical, academic, and employability skills that are necessary to prepare students to pursue postsecondary education and training to enter a career field (Partnership for 21st Century Skills, Association for Career and Technical Education, National Association of State Directors of Career Technical Education Consortium, 2010). "The role of vocational education in our nation has evolved from a design in the 20th century to prepare some students for work and others for college, to preparation of all students for both college and careers" (Visher & Stern, 2016, p. 2). The economy and demands of a better educated workforce with specific skill-based, complex knowledge today requires more preparation and intentional delivery of education than prior vocational programs of the 20th century.

ESSA provides the framework for schools today to focus not only on college preparation or career preparation, but to prepare students for both college and career. The Perkins legislation, the over-arching federal mandate that governs CTE, "faces the challenge of meeting the needs of a diverse student population who attend a variety of schools across different locales, for example, urban, suburban, and rural, and who all represent challenges unique to their demographics and location" (Bozick & Dalton, 2013, p. 11). The U.S. Department of Education

(2012) and the American Institutes of Research [AIR] (2013) report that "increased emphasis on innovation supported by systemic reform of state policies and practices to support career and technical education (CTE) implementation of effective practices at the local level" are necessary to promote postsecondary attainment to fuel our nation's economy (AIR, p. 4).

A review of the literature indicates the federal government, throughout history, has maintained a strong support for the relevancy career and technical education has provided to enhance our national economy through citizenry and job preparedness. In 1917, passage of the Smith-Hughes National Vocational Education Act represented the first act marking a federal investment to provide funding to states for the purpose of agriculture, home-making, trade, and industrial education (U.S. Department of Education, 2017). Since establishment of the Smith-Hughes National Vocational Education Act in 1917, it is evident the federal government has a long history to support the vital role vocational education provides to enhance economic sustainability and citizenry in the early 20th century and has been advancing ever since (American Institutes for Research, 2013, p. 2). Since 1917, multiple federal revisions with regard to vocational education have transpired in efforts to support and ensure relevance to societal needs. In 1963, the Perkins-Morse Bill, also known as the Vocational Act of 1963, was passed. Gordon (2003) explains this legislation included an opportunity for all individuals to be able to participate in vocational training, and was an attempt to, "find solutions to the nation's social and economic problems" (p. 85). In 1990, President George H. Bush signed the Carl D. Perkins Vocational Act of 1984 and renamed it as the Carl D. Perkins Vocational Act and Applied Technology Education Act; where, President Bill Clinton reauthorized the bill in 2003 renaming it the Carl D. Perkins Vocational Act and Technical Education Act (Fletcher, 2006, p. 163). In 2016, the U.S. House of Representatives passed the Strengthening Career and Technical

Education for the 21st Century Act. The Strengthening Career and Technical Education for the 21st Century Act provides flexibility and funding support for states to integrate innovative approaches focused more on local needs identified to prepare students for college and career opportunities (U.S. Department of Education, 2017). (See Appendix A for a comprehensive list of CTE Acts). Thereupon, the state of Kansas enacted Senate Bill 155 (KSDE, 2019). KSDE provides useful information regarding SB 155 (https://www.ksde.org/Agency/Division-of-Learning-Services/Career-Standards-and-Assessment-Services/CSAS-Home/Career-Technical-Education-CTE/Initiatives/Senate-Bill-155):

> Senate Bill 155, or the Governor's CTE Bill, was passed into law on July 1, 2012. The main purpose of the bill is to stimulate growth in Career & Technical Education at both the secondary and post-secondary level in Kansas. The Kansas workforce will increasingly demand a more highly-technical and highly-skilled worker and Senate Bill 155 is aimed at meeting those future demands. There are several parts to Senate Bill 155. The four financial aspects of Senate Bill 155 are:
>
> - Tuition reimbursement for high school students enrolled in college-level CTE courses
> - Incentivizing high school students graduating with an industry-recognized certification that lead directly to high-demand occupations in Kansas through a certification incentive program
> - Transportation reimbursement to school districts transporting high school students off-campus to complete college-level CTE coursework
> - CTE Marketing campaign to promote the positive impact of CTE on education and the workforce

As Gordon (2003) explains, Career and Technical Education (CTE), formerly known as "Vocational Education," has origins that date back to the 20th century and may even be traced back to ancient times (Fletcher, 2006, p. 162). Traditionally, vocational education was primarily established to prepare more students for "blue-collar" careers by preparing students with practical skills for the nation's farms, homes, and factories. The National Center for Education Statistics (2000) describes the purpose of vocational education in the 20th century was to prepare students for entry-level jobs not requiring a baccalaureate degree. "CTE is transforming vocational education consisting of low-level coursework and job training, replacing it with academic rigor, integrated, and sequential learning that aligns with and leads into postsecondary credential attainment" (American Institutes for Research, 2013, p. 2). "Career and technical education must reposition itself not just as a vocational alternative to college prep, but as a pathway into postsecondary programs that links degrees and credentials to occupations" (Visher & Stern, 2016, p. 1).

Often CTE coursework is overlooked in academic discussions, but "CTE programs are stepping up to offer students a rigorous and relevant education, rich in literacy content and strategies" (ACTE, 2009, p. 1). As CTE has transformed in the 21st century from vocational education to career and technical education, CTE courses are merging content with academic subjects in efforts to prepare students for both work and postsecondary credential attainment (Visher & Stern, 2016, p. 2). Literacy and core academic skills are integrated into CTE coursework, in fact, "many of the skill sets that business marketing students are required to master involve analyzing, summarizing, interpreting, and predicting" (Gillis, Jones-Moore, Haynes, & Van Wig, 2016, p. 639). Integrations of academic and technical skills impact relevance as "disciplinary literacy projects that leverage the literacy practices in careers and

apply them in authentic contexts have been effective in helping learners acquire the career-appropriate literacy practices they need to be successful" (Gillis et al., 2016, p. 640; Kohnen, 2015). Recognizing the importance of academic and technical integrations of content, "CTE teachers must understand how experts in their field use literacy to create projects and/or solve problems" (Gillis et al, 2016, p. 638). According to the U.S. Department of Education (2014), disrupting a pattern in perceptions of the purpose of career and technical education from the twentieth century is a challenge many educators and employers are now trying to meet (Visher & Stern, 2016, p. 2). "High-quality CTE programs and pathways ensure that coursework is simultaneously aligned to rigorous academic standards and postsecondary expectations and informed by and built to address the skills needed in specific career pathways" (Brand, Valent, & Browning, 2013, p. 2). In school redesign, "CTE can be viewed as both a structural and instructional approach that can inform the design of schools, programs, and classes as well as the delivery of curriculum and instruction" (Brand et al., 2013, p. 4). In addition, the Perkins Act emphasizes the urgency to integrate academic and technical knowledge so that core curricular content can be applied in the context of a career, and "through contextualized learning, students' core content knowledge is enhanced and augmented, and they can immediately apply it to problem solving" (Brand et al., 2013, p. 6). Common project-based learning instructional strategies used in CTE courses and programs are, "multidisciplinary, integrating multiple core academic areas" (Brand et al., p. 6). Project-based learning includes, "rigorous projects [that] are carefully planned, managed, and assessed to help students learn key academic content, practice 21st Century Skills (such as collaboration, communication, and critical thinking), and create high-quality, authentic products and presentations" (Buck Institute for Education, 2012; Brand et al., 2013, p. 6).

Stone and Lewis (2012) maintain that career readiness requires (a) academic knowledge in core subjects such as reading, writing, and mathematics; (b) employability skills; and (c) technical skills. When academics are merged CTE, it can "aid in reducing remedial education and training expense for postsecondary educational institutions and employers, as well as, assist with closing a skills gap to place more Americans in available jobs" (Balfanz et al., 2013, p. 9). Confidence that academic learning is integrated with skills-based training, CTE requires educators to be proficient in both components. The American Institutes for Research (2013) report that, "well-qualified educators are essential to providing high-quality CTE programs as teachers must meet more stringent certification requirements than core academic teachers; credentials required must possess appropriate occupational as well as educational requirements" (p. 8). In addition, the Perkins Act of 2006 states a new focus such that CTE programs should be "promoting the development of services and activities that integrate rigorous and challenging academic and career and technical instruction that link secondary education and postsecondary education" (2006, para. 2). In 2014, the Common Core State Standards Initiative placed emphasis on students becoming both college and career ready. Kitchel (2015) explains:

> The standards place an emphasis on the need for schools to prepare students to be college and career ready. Although the Common Core State Standards (CCSS) focus on mathematics and language arts, their emphasis on career readiness and application of academic subjects to real world problem solving is congruent with the mission of CTE. To be college and career ready requires more than mathematics and language arts knowledge alone. It also requires the capacity to think, solve complex problems, be creative and inventive, and apply technical and academic knowledge to an in the workplace (p. 20).

Bozick and Dalton (2013) explain, "CTE is typically designed to facilitate the school-to-work transition. The organization of a school's curriculum usually aligns with skills and training needed in the local labor market which can emphasize or lessen the importance of academic skills" (p.11). Implementation of CTE programs within a school can impact the economic stability of the community in which it serves. For example, Morehead (2015) describes a declining enrollment in CTE in rural California, but reports "higher levels of poverty and unemployment" (p. ix). Morehead (2015) continues to explain that "CTE, however, is believed to have the potential to play a vital role in reversing negative socioeconomic trends for rural communities" (p. ix). "Given the relationship between education/training and job security, it is perhaps not surprising that many states with lower rural adult high school diploma rates also have higher unemployment rates" (Johnson et al., 2014, p. 14). A correlation between education/training and job security and also low graduation rates and unemployment rates illuminate a need for a focus on tailoring educational programs to fit the career interests of students and especially in rural areas. When CTE programs are designed to suit student interest in diverse rural school settings, the potential to positively impact the local rural community and economy increase. One example of the benefit of CTE in rural settings is how rural schools in Kansas are addressing the challenge of recruiting highly qualified teaching staff. Some rural schools in Kansas have met this challenge by integrating teaching and training CTE pathways as a "grow your own" teacher approach where students feel strong ties to the community. There is very little research to understand the potential of these programs, and strong partnerships with postsecondary institutions is necessary to support teaching credential attainment (Schafft, 2016). "Greater political motivation will likely be needed at state, regional, and national levels to

support such programs, highlight their need and utility, and counter the perceptions that educators within rural contexts are of lower status" (Schafft, 2016, p. 148).

Career Pathways

The term career pathways, or pathways for short, is indicative of the merging of 21st century skills or transferable skills with academe necessary for both college and career success (Visher & Stern, 2016). Students must be able to envision a clear and concise path to follow with regard to their interests and educational plans to ease the transition from education and training to career. When career pathways are implemented efficiently, schools will witness "increased alignment between academic and labor market needs, improved collaboration among secondary and postsecondary institutions, stronger accountability for schools and students, and support for innovative programs at the local level" (Balfanz et al., 2013, p. 59).

"High-quality CTE programs of study, aligned with academic and technical workplace standards, not only have the potential to reduce high school dropout rates, but help students to see the relevance of what is learned as it relates to a potential career" (Balfanz, et al., 2013, p. 9). One such avenue to enhance relevance of school-to-work programs and enhance engagement by students is to incorporate career and technical student organizations (CTSO's) with CTE pathways offered in schools. CTE programs with their associated CTSO are considered to be an important component to develop student leadership coupled with a transparency into a relevant career (Kitchel, 2015). CTSO's are "just as effective as other well recognized forms of leadership development such as student government or athletics" (Kichel, 2015, p. 28). CTSO's are generally available to all students, not just a few, and furthermore, "serve a dual purpose and can enhance the learning of both technical and academic subjects that are part of being college and career ready" (Kitchel, 2015, p. 28).

Principal Perceptions of Career and Technical Education

A school culture that fosters collaboration between academics and CTE and integrations of both better prepare students for both college and careers, and better preparation for the workforce (Kitchel, 2015). Principals in the 21st century are in a unique position to ensure they lead a school, often in a redesign phase of the 21st century, to ensure students are college and career ready. Principals should understand the integral goals of the application of academic subjects and the integration of them inside CTE courses; however, there is limited research regarding how this message is conveyed, understood, or valued by educational leaders (Kitchel, 2015). "Understanding principals' perceptions of the contribution that CTE programs make to the goals and culture of the school may contribute to these programs' abilities to respond effectively to a changing educational environment" (Kitchel, 2015, p. 21). It is necessary for school leaders to understand the chasm associated with the purpose of CTE established in the 20th century and the purpose of CTE in the 21st century. CTE programs and purpose in schools will be in a better position with principal support and understanding of such programs to be established as an integral component of a school's educational mission (Kitchel, 2015).

A study in a rural setting in Idaho, conducted by Kitchel (2015) found that principals consider career readiness to be important for students. Though the principals who participated in this study found CTE to be an important part of school programs, the evidence concludes that collaboration between academic and CTE teachers is an area to improve upon. Kitchel (2015) indicates the importance of the role principals play to ensure collaboration time is provided. Since the school principal influences the culture and the framework for collaboration among teachers, "it is therefore important for policy makers to provide incentives for school administrators to work towards this goal" (Kitchel, 2015, p. 28).

According to the American Institutes for Research (2013), "CTE integrations provide students with the opportunity to work with local employers, which gives students direct learning experiences from those who have established themselves as professionals within the field" (p. 9). Schafft (2016) reports a need for an expanded vision of rural education policy and leadership roles to go well beyond the conventionally defined frameworks for schooling and educational provision. Schafft (2016) reports, "this vision of educational leadership is carefully attuned not only to the educational roles of schooling, but also the ways in which schools represent a critical facet of rural community economic development, social well-being, and community sustainability" (p. 145). In consideration of the link between rural schools and rural communities, school leaders in rural communities should consider enhancements of the partnerships with communities that can enhance the linkage between school and community to capitalize on strong connections to foster a rural community that young people value (Schafft, 2016). School leaders' perceptions of the value of partnerships with the community can directly and indirectly influence the effectiveness of the delivery of career and technical education

Relationships with Postsecondary Institutions

Low college completion rates have not "gone unnoticed by policymakers who have called for more transparency in and accountability for postsecondary performance" (Bailey et al., 2015, p. 1). Bailey et al., (2015) also note that "students are confused by a plethora of poorly explained program, transfer, and career options; moreover, on closer scrutiny many programs do not clearly lead to the further education and employment outcomes they are advertised to help students achieve" (p. 2). In order to improve postsecondary credential attainment rates, partnerships with secondary and postsecondary institutions are necessary to establish clear pathways to student success, improving completion rates (Bailey et al., 2015). Partnerships between high school and

colleges improve seamless opportunities for students to enter an advantageous career pathway in all educational settings. Collaboration between higher education and secondary education in rural communities are especially important, where institutions of higher education may unintendedly overlook rural youth because they are not representative of a large market for college-aspiring youth (McDonough, Gildersleeve, & Jarsky, 2010).

Ernest Boyer (1986) concluded that one of the most disturbing aspects of our nation's educational system is the discontinuity between higher education institutions and public schools. Traditionally, high school students have selected their college "almost blindly" with limited college campus visits only consisting of the social aspect colleges offer versus the academic benefits (Boyer, 1986; Bailey, et al., 2015). A model that has also relied heavily on the guidance counselor for college-going information has proven to be ineffective as most guidance counselors report having limited knowledge regarding college possibilities, especially colleges at a distance (Boyer, 1986; Bailey et al., 2015). This would indicate a need for collaboration between higher education entities and secondary entities to promote seamless transitions for students who have methodically selected a college representing the right "fit" for their postsecondary plans.

Once students enroll in a higher education program, it has been common practice that postsecondary institutions "are responsible for creating contexts for learning and development that help students make a smooth transition into the collegiate environment and on to the new set of responsibilities they will assume after graduation (Pizzolato, 2008, p. 19). Though this has been a common response to place this responsibility solely on postsecondary entities upon student enrollment, secondary institutions' intentions to begin to explore the inclusion of advisory periods and focus on postsecondary success fosters a collective responsibility between

secondary and postsecondary schools. "Without successful academic transitions, students may find themselves invited to leave their institution, unable to major in the subject of their choice, or unable to complete their undergraduate degree" (Pizzolato, p. 19).

Relationships with postsecondary institutions can also be leveraged to supplement instruction when a CTE instructor is not available, and often, postsecondary institutions hire adjunct faculty who are professionals within specific industries. AIR (2013) found that collaboration with community colleges to develop dual enrollment courses with these professionals "provides instructional settings for high school students with experts in specific career fields" (p. 8), and consequently serve as pathways into desired fields of interest. CTE pathways are often articulated between secondary and postsecondary institutions as ESSA renewed a focus on CTE. "Efforts are underway to align high school course curriculum with criteria associated with admissions to postsecondary education through models such as early college high schools, grades 9-14, that graduate students with a high school and associate degrees in six years", (Balfanz et al., 2013, p. 61).

It is increasingly common that postsecondary institutions and secondary institutions build partnerships with community resources. "Collaboration between agencies in the service of college completion should not be limited to public schools and colleges" (Boylan et al., 2017, p. 19). Boylan et al. (2017) report that student retention rates are higher when postsecondary institutions collaborate with secondary institutions and community stakeholders. Community stakeholders are also important in that students sometimes face adversity creating challenging circumstances for college completion. In any given community, there are numerous social services and organizations that can assist with college success, including, but not limited to, healthcare, mental health, financial and legal services, and shelters (Boylan et al., 2017).

Accessibility to Real-World Experience

CTE coursework lends an opportunity to merge classroom-based instruction with real-world, work-based learning, job-shadowing opportunities, internships, or apprenticeships. According to the American Institutes for Research [AIR] (2013), these integrations provide students with the opportunity to work with local employers, which "gives students direct learning experiences from those who have established themselves as professionals within the field and assists students to establish how academic content is applied in real-world settings" (p. 9).

Though rural areas experience challenges with CTE implementation, CTE educators and institutions are well versed at flexibly addressing the challenges of the rural ecosystem (ACTE, 2015). In some instances, CTE opportunities in rural settings are offered in a centralized location accessible by schools within the region (ACTE, 2015).

Rural schools also often utilize online learning to enable attainment of college credit where rural students might see possibilities of postsecondary education (ACTE, 2015). Molefe et al. (2017) conclude in their study that, "the rise in online learning options has reduced logistical impediments to attaining a postsecondary degree, particularly for rural students" (p. 1).

Community Partnerships with Schools

A strong school in any community represents a strong asset to the entire community. Schools, especially in rural communities, influences not only the decisions made in households with children, but also the local economy by working in purposive ways which may influence development, opportunity, and sustainability (Schafft, 2016). Schafft (2016) concludes, "the very idea of the school as a community institution suggests that the school and those who work within it are accountable to the community they serve" (p. 145). The idea of school employees being accountable to the community is far removed from the conventional ways current

educational policy contexts operationalize accountability (Schafft, 2016). Furthermore, Schafft (2016) notes, "if we take roles of rural educators seriously, and see them as part of what makes communities strong and socially and economically vital, then enhancing these roles – and the school as a central rural community institution – only makes sense" (p. 145).

Schools in each local district have a unique opportunity to accelerate student achievement within their specific school district. In order to create unique opportunities for achievement, "stakeholders at every level require a set of appropriate solutions for its unique needs" within each community (Balfanz et al., 2013, p. 44). By providing access to employability skills with academic integrations to students, schools in rural areas contribute to a competitive workforce that can represent a strong asset to local businesses (Schafft, 2016). School-community partnerships can assist to merge career and technical education with academe and real-world experiences in a multitude of ways with mentoring, job-shadowing, service learning, school-to-work programs, internships, apprenticeships, and service in an advisory role to career and technical programs (Schafft & Harmon, 2011).

21st Century Rural Schools

Rural schools are included in the literature review due to a sole focus on rural secondary schools in Kansas and differing dynamics of rural schools compared to urban schools. Rural Schools play a major role in preparing a workforce to meet the national demands for the 21st century. More than half of the school districts in our nation are located in rural areas, and one-third of public schools in our nation are considered rural (Ayers, 2011; Johnson et al., 2014; Morehead, 2015). More than 10 million students are enrolled in rural schools, and account for more than 21 percent of K-12 students in the United States (Johnson et al., 2014; Fowles et al.,

2014). In addition, current trends project the saliency of rural education with increasing enrollment numbers, where, urban counterparts' enrollment is decreasing (Johnson et al., 2014).

At the same time enrollment is increasing in rural schools, the demographic traits of rural schools are also shifting to represent larger numbers of students, "historically not served effectively (i.e. the students for whom performance is described in terms of achievement gaps)" (Johnson et al., 2014, p. 28). Demographics in rural communities today are fundamentally different from the rural communities of decades past. Rural communities are also transforming culturally, economically, and socially as "technological advances and globalization promise more transformation for the industries and trades that have traditionally defined rural places, bringing challenge, but also giving rise to new economies and opportunities" (Tieken & San Antonio, 2016, p. 131). These seismic shifts in the dynamics of rural communities today will affect the nearly twelve million children living in these communities whom will be responsible for securing a viable future for their communities (Johnson, 2013).

Multiple national initiatives urge educational institutions to prepare all students for college and career, but often this is a one-size-fits-all approach. Often, models and practices intended as a uniform system for public education in our nation is geared toward the dynamics of urban schools; where rural schools are expected to conform, or urbanize rural schools (Tieken & San Antonio, 2016; Schafft, 2016). One example of a one-size-fits-all approach is the school choice portion associated with No Child Left Behind where families could choose their school of choice if their local school was under-performing. In this example, Schafft (2016) describes how this approach was ineffective as there are a limited number of schools, or no other school, within the rural area.

Research confirms rural school districts do face unique challenges when rising to the challenge to integrate academics with career and technical education to promote college and career readiness with intentions of fueling a 21st century workforce. The Association for Career and Technical Education [ACTE] (2015) identifies one such challenge as "serving small populations that are geographically dispersed, making it difficult for school districts and community colleges to offer robust education programs" (p. 1). Over the past century, school consolidation in rural areas continues to threaten rural schools' viability by increasing distances for student commutes and opportunities for stakeholder involvement, including extracurricular involvement, when surrounding local schools are closed (Schafft & Harmon, 2011).

In rural schools, it is often difficult to find teachers who hold the necessary credentials to teach CTE coursework (ACTE, 2015). Furthermore, rural schools face the difficulty of retaining (or recruiting) teachers and administrators, and often the poorest rural schools tend to have a larger number of inexperienced educators (Fowles et al., 2014; Schafft & Harmon, 2011; Schafft, 2016). Due to full-time equivalent funding (FTE) and lower tax bases, often small rural school district salary schedules do not compete with higher salaries of urban or suburban counterparts. Poverty rates are more prevalent in rural areas causing difficulty in offering a wage that compares with urban or suburban counterparts (Fowles et al., 2014). "There is little reason to believe that local governments in remote, economically depressed areas will be more successful in attracting highly credentialed, well-trained individuals from outside those regions" (Fowles et al., 2014, p. 517). Distant commutes also limit the appeal of employment within rural areas (Lowe, 2006; Fowles et al.,2014). High turnover rates in rural schools among administrators and teaching staff are attributed to an increase of high-need student populations, aging infrastructure, and limited resources (Schafft & Harmon, 2011). According to Fowles et al., (2014), "the

quality of public service workers in these areas is likely to continue to lag those of the more privileged regions" (p. 517). In response to a challenge to recruit and retain high quality teachers in geographically challenged areas, many school rural school districts are developing innovative methods to attract high quality educators to the area, including, but not limited to, sign-on bonuses, increased salaries, housing arrangements, quick advancement opportunities, and a fundamental restructuring of job requirements associated with the contract (Lowe, 2006; Fowles et al., 2014).

There are also challenges for rural schools to implement extensive CTE programs and career pathways that reflect the interests of all students when employing a small staff (ACTE, 2015). Due to small teaching staffs, rural students are more likely to experience a narrow school curriculum with limited access to career counseling and college preparatory programs (Provasnik, Kewel-Ramani, Coleman, Gilbertson, Herring, Quingshu, 2007; Byun, Meece, & Irvin, 2012). When providing career exploration and work-based experiences to students, resources for partnerships indicative of a multitude of career possibilities are limited due to many rural areas representing only a few employers or industries (ACTE, 2015).

Though postsecondary learning and success in careers offer improvement on the forefront of the nation's competitiveness, the returns of educational investment in rural locales tend to be weaker in relation to metropolitan areas' individual earnings and potential careers (Brown & Schafft, 2011; Schafft, 2016). Overall, rural students compare favorably with students in urban and suburban settings with regard to high school achievement and secondary completion, but postsecondary achievement and completion do not indicate the same results (Byun et al., 2012; McDonough et al., 2010). Thirty percent of adults over age 25 in suburban areas hold a 4-year degree; while only nineteen percent of students in rural areas possess the same level of

postsecondary education attainment (Provasnik, et al., 2007). “This suggests the contradictions inherent in efforts to increase educational attainment within rural areas without an attendant effort to enhance rural opportunities for those who make the investment in obtaining a postsecondary degree” (Schafft, 2016, p. 144). A student may be less likely to pursue a postsecondary degree if they see no need for it, especially if they do not wish to make a move from the rural area.

Schafft (2016) reports that economic development in rural areas is a key factor that would motivate rural students to pursue a postsecondary education with increased employment opportunities. Rural economies are changing and often cannot sustain livable wages for high school graduates, nor do many of these rural communities, “offer numerous employment opportunities for those with college degrees” (Schafft, 2016, p. 148). Research confirms a correlation between low socio-economic students in rural areas where postsecondary attainment is low and limited employment opportunities is high (Byun et al., 2012; Schafft, 2016). It only makes sense to offer more affordable and logistically sound choices for postsecondary education or training through a community college or virtual programs (Schafft, 2016).

Gaps in the Research

Limited research exists to determine principals’ perceptions of career and technical education and how it can contribute to the overall goals of schools (Kitchel, 2015). To ensure value is placed on the goals and objectives of CTE, professional development for principals and school leaders might assist them with appropriate and fruitful integrations of the curriculum (Rayfield & Wilson, 2009). There are some studies that indicate principals are supportive of CTE in general, “but many of them predate the early 21st century’s focus on accountability, traditional academic subjects, STEM, and college and career readiness” (Kitchel, 2015, p. 21).

There are a multitude of studies related to achievement and college attainment gaps with regard to social, racial, and ethnic groups in the United States, but "less attention is focused on differences in educational attainment related to rurality" (Byun et al., 2012, p. 413). "Considering rural students (or schools) as a homogenous group may be problematic because there is great variability in occupational structure, median income, ethnic composition, population density, geographical isolation, and school quality across rural communities in the United States" (Provasnik et al., 2007; Byun et al., 2012). Despite the variation recognized across rural schools and communities, rural students tend to experience serious challenges that may limit postsecondary attainment (Byun et al., 2012). This study reveals how rural secondary schools in Kansas address these demographic and logistical challenges.

The majority of rural school research emphasizes lower socio-economic status (SES), less effective high school preparation, and lower parental support for postsecondary attainment, but Byun et al., (2012) report rich social resources and strong connections between community and schools in rural areas. In addition, much of the prior research in rural secondary schools focuses on high school graduation rates. Many studies do not include how rural students fare post-high school graduation which eludes to a traditional focus on high school graduation versus postsecondary credential attainment. This study is intended to provide insight into dilemmas and advantages faced by educational leaders in rural schools, specifically in rural secondary schools in Kansas, as we work toward the national goal of preparing more students for postsecondary attainment as prescribed to fuel the 21st century workforce. Though rural schools do face unique challenges when compared to suburban or urban counterparts, Byun et al. (2012) report that rural students have many advantages in social resources and supports. Small class sizes and small teacher to student ratios can also enhance preparation for postsecondary success as well. There

is limited research on the advantages of rural schools, and heavy research on the challenges of rural schools. Further study on the advantages of rural schools in regard to postsecondary attainment is needed.

It seems no study has yet quantified a specific, concrete method to generalize across the nation's schools to increase high quality postsecondary credential attainment. Although there are indeed a plethora of approaches and frameworks that can be utilized when preparing students for college and career success in secondary schools, a specific guide as to how to accomplish the task has not been created, furthermore, many decisions on how to accomplish improved postsecondary success rates are left up to each local district. As Balfanz, et al. (2013) indicate, it is fortunate; "we know where to channel our efforts and can learn from increasing examples of success" (p. 2). A purposeful study focused on the approaches each selected case utilizes may illuminate the need for further exploration by other rural school districts, and potentially, suburban or urban schools.

Stephan and Rosenbaum (2013) indicate a need for further study to explore the effectiveness of advisory programs. According to Stephan and Rosenbaum (2013), many advisory programs have been found to improve college enrollment, but further study is needed to determine if these programs are providing support for student success or completion in higher educational settings. In addition, there is limited research regarding how to support secondary teachers as they assume new roles as postsecondary advisors.

Summary

The review of the literature reveals a strong need to improve postsecondary attainment nation-wide. This study intends to bridge the gap in the literature as purposeful examinations of each case may illuminate possible frameworks for success as findings are constructed from the

data. Rural schools may experience opportunities and challenges that may not be present in suburban or urban settings. This chapter focused on components in educational settings that research supports as beneficial to increasing postsecondary success, and the researcher will focus on these components throughout the study.

Chapter three identifies the research design chosen to conduct this qualitative instrumental case study. The researcher provides a description of the epistemology, theoretical perspective, methodology, and methods employed with the design of the study. Selection criteria for each case and participant are also identified. Researcher positionality and trustworthiness of the study are also included with the description in chapter three.

Chapter Three: Methodology

Introduction

This instrumental case study examines approaches rural secondary schools in Kansas utilize to prepare students for postsecondary success by student attainment of degrees, licensures, or certifications to satisfy the job qualifications as prescribed by a 21st century workforce. Specifically, this study examines with thick-rich descriptions, the components and frameworks participants selected for this study deem as necessary to promote postsecondary success by their high school graduates. A qualitative case study approach to research is "used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context" (Crowe, Creswell, Robertson, Huby, Avery, & Sheikh, 2011, p. 1). This study is "naturalistic" in nature; thus, "is in contrast to an "experimental" design (such as randomized controlled trial) in which the investigator seeks to exert control over and manipulate the variable(s) of interest" (Crowe et al., 2011, p. 1).

This instrumental case study is intended to produce rich findings that may emerge as constructed learning that may be transferred to other settings that are rural and potentially non-rural. The researcher in this study purposefully explores the phenomena in the natural contexts in which they occur which is an attempt to explain links which result in improved postsecondary attainment by graduates of rural secondary schools in Kansas (Crowe et al., 2011). It is the researcher's intention that new findings may be transferable to other school sites for postsecondary improvement efforts. "Generalization is not a goal in case studies, for the most part, because discovering the uniqueness of each case is the main purpose" (Hays, 2004, p. 218). However, Hays (2004) reports that generalizability "is quite possible when based on several studies of the same phenomenon" (p. 219). All four cases involved with this study are likely to

be reflective of their individual local school districts' needs combined with the Kansans Can vision for postsecondary credential attainment depicting a common goal of increasing postsecondary attainment. Mills, Durepos, and Wiebe (2010) explain:

> Instrumental case study does not permit generalization in a statistical sense; however, it does attempt to identify patterns and themes and compare these with other cases. In this way, the researcher will use the instrumental case to explore in depth a particular phenomenon and then compare this case with other cases so that the reader can see the transferability of the case findings (p. 2).

The following research question and sub questions below provide the over-arching questions which guide the direction of this study for data collection and analysis:

1) What innovations are rural high schools in Kansas implementing to increase postsecondary credential attainment as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

The following sub-questions will guide this study:

a) What innovations are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?
b) What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary credential attainment, and how do they overcome them?

This chapter describes the research methods, the criteria utilized for the selected schools, data collection, data analysis, rigor and quality of the study, researcher positionality, and concludes with a summary of each of the following components.

Epistemology, Theoretical Perspective, and Methodology

The epistemological stance taken by the researcher in this study is constructionist in nature. Researchers' views regarding production of knowledge, "their epistemological bent in brief, underlie the inquiry project they conceptualize and operate" (Yazan, 2015, p. 136). Accordingly, the researcher maintains the view that, "all knowledge, and therefore all meaningful reality as such, is contingent upon human practices being constructed in and out of interaction between human beings and their world and developed and transmitted within an essentially social context" (Crotty, 1998, p. 42). Crotty (1998) explains the constructionist epistemology in such that meaning is constructed from the study of cases and is not positivistic in nature; where meaning would be discovered to confirm a theory. Interpretations are constructed intentionally with awareness of how the researcher's subjectivity can influence objectivity. Findings from this study will be objective in nature. In this study, findings are not discovered to prove a theory, but rather, constructed from each case to justify meaning while non-biased interpretations of the data are employed. Critical inquiry is utilized by the researcher as a theoretical perspective as ideas, information, and assumptions from multiple perspectives by each case produce comprehensive analysis and understanding. Charmaz (2016) explains "constructivist grounded theory relies on developing and maintaining methodological self-consciousness, which calls for reflexivity of a depth researchers may not routinely undertake" (p.3).

This constructed understanding from a critical inquiry perspective exposes new questions, ideas, and applications for further research pertaining to increasing postsecondary educational attainment in rural secondary schools in Kansas. The researcher in this study maintains a position that all individuals possess biases consciously or subconsciously. An

individual's inherent, environmental, or experiential circumstances contribute to biases that may be formulated intentionally (consciously), unintentionally (subconsciously). The relevance of this belief regarding researcher bias indicates significance to the research at-hand as it may influence findings from a study not grounded in theory (Khan, 2014). Justification of the selection of methodology utilized in this study reflects the assumptions concerning reality that the researcher beholds (Crotty, 1998). The critical inquiry may provide valid and reliable transferability to other schools of different demographics. The researcher also utilizes a grounded theory approach in this study intended to draw meaning based on the data "rather than try to emerge theory from data" (Khan, 2014, p. 224; Corbin & Strauss, 2015). New theory as it relates to preparing students for postsecondary success will emerge from the data collected within each case by using inductive methods.

Methods

In this qualitative instrumental case study, the researcher's interest is to understand the methodologies and implications for promoting postsecondary success with an in-depth, focused, thick-rich description of more than one particular case. Instrumental case study research is designed to develop a deep understanding of a phenomenon (Crowe et al., 2011). "An instrumental case study is the study of a case (e.g., person, specific group, occupation, department, organization) to provide insight into a particular issue, redraw generalizations, or build theory" (Mills, Durepos, & Wiebe, 2010, p. 2). "In instrumental case study research, the focus of the study is more likely to be known in advance and designed around established theory or methods" (Mills et. al, 2010, p. 2). Since the researcher determined the focus of study in advance, cases and participants were identified before conducting the research. The researcher's intent and focus in this instrumental case study is to infer a comprehensive perspective of all

cases studied as to how they promote postsecondary credential attainment after high school graduation.

Hays (2004) explains a case study seeks to answer purposeful questions by providing thorough descriptions and analysis within a relatively short amount of time. This study was conducted over the course of two semesters. The primary form of data collected was in the form of interviews, but observations and artifacts collected from the sample schools selected for this study supplemented the data collected with interviews. Triangulation and analysis of multiple sources of data increased the credibility and trustworthiness of the representation of each case with careful coding focusing on aggregate analysis of the cases as each related to the research questions as common themes emerged (Mills et al., 2010). Initial Coding methods utilized in this study consisted of attribute coding for the case descriptions. The findings from each case were a result of simultaneous use of In Vivo Coding and Process Coding.

Participant Selection

The purpose of this study is to gain a deeper understanding of and potential illumination of transferability in regard to innovative approaches to improving postsecondary credential attainment rates in rural secondary schools in Kansas. Each participant was purposely selected to best aid the researcher in constructing learning from participants with relative knowledge of the topic being studied (Creswell, 2013). This study includes data collected from eight participants, two from each site associated with of four cases (school districts). The selection of participants was purposeful in nature as "fewer participants interviewed in greater depth usually generates the kinds of understandings qualitative researchers seek" (deMarrais, 2003, p. 61). To gain a deeper understanding of meaningful methodologies employed, purposeful selection of participants included stakeholders who may have stake in the study including, but not limited to,

administrators in selected studies or other educational practitioners knowledgeable about school redesign as it contributes to increasing postsecondary credential rates among Kansas graduates in rural Kansas schools (Mertens & Wilson, 2012).

An intentional focus on postsecondary preparation prescribed a purposeful sampling method for intentional selection based upon the purpose of the study and the research questions. The selection of the cases/participants was nonrandom in nature. Nonrandom sampling "can be useful when the researcher has limited resources, time, and workforce" (Etikan, Musa, and Alkassim, 2016, p. 1). Etikan et al., (2016) explain nonrandom sampling in qualitative research does not intend to generate results to be generalized to the entire population; thus, maintaining a purposeful focus on subjects with commonalities, such as postsecondary preparation in rural secondary Kansas schools as dictated by the research topic and questions. Underlying the umbrella of purposeful sampling, the researcher employed a combination of stratified purposeful sampling and chain sampling. The researcher selected cases known to be rich in the data desired to be obtained. The stratified purposeful sampling method "combines the identification of strata of relevant subgroups" (Mertens & Wilson, 2012, p. 423). The researcher first employed stratified purposeful sampling by selecting only cases deemed as Mercury, Gemini I, or Gemini II schools. The researcher then employed chain sampling. Chain sampling begins with "key informants who are asked to recommend others" as candidates rich in information as it pertains to the key questions of the study (Mertens & Wilson, 2012, p. 423). Purposive sampling in this study reflects the researcher's deliberate choice of participants due to the criteria each participant possesses (Etikan et al., 2016), and due to the short time-frame for the study.

Since participants within the study may represent various educator roles within each case, each participant will be coded as participant "1" and Participant "2" identified in the table below.

Each participant was referred by the superintendent at each site as a participant with the most knowledge about initiatives to increase postsecondary success and the design of the learning environments at each site to improve postsecondary success. The school identifier was assigned as case A, B, C, or D, and the role each participant represents within each case was not divulged to ensure confidentiality. Intentional efforts were enforced by the researcher to maintain confidentiality; therefore, the researcher did not divulge school district case identities. Finally, each participant was identified as an educator in a Mercury school (one of seven school districts who launched redesign of schools in Kansas in 2016, "M"), a Gemini I school (one of twenty-one school districts who launched redesign of schools in Kansas in 2017, "GI"), or a Gemini II school (one of nineteen school districts who launched redesign of schools in Kansas in 2018, "GII"). A snapshot of participant positions and redesign category are found in table 3-1.

Table 3-1 Participants' Positions and Selection Criteria

Participant Identifier	School Identifier	Role	Redesign Category
P1	A	Principal	GI
P2	A	Teacher Leader	GI
P1	B	Assistant Principal	GI
P2	B	Teacher Leader	GI
P1	C	Teacher Leader	M
P2	C	Teacher Leader	M
P1	D	Superintendent	M
P2	D	Principal	M

Criteria

Intentionality of the researcher was intended to gain a rich understanding of educational perspectives regarding postsecondary preparation in sites with rural commonalities in Kansas

and active participation with regard to increasing postsecondary credential attainment rates. Each case was purposely selected to meet the following criteria (a) must be identified by the Kansas State Department of Education (KSDE) as a Mercury, Gemini I, or Gemini II school with a focus on increasing postsecondary credential attainment rates; (b) must be identified as a rural school; (c) must be classified as a 1A or 2A school as set forth by the Kansas State High School Activities Association (KSHSAA) with no more than 156 students enrolled in high school; (d) and a willingness to participate in the study. The researcher also affirmed the selected groups or individuals were knowledgeable with the research topic to increase validity of the study (Etikan et al., 2016). Thus, a criterion-based and purposive sampling method was employed by the researcher to gain thick-rich descriptions of methodologies employed by each case to increase postsecondary credential attainment rates. As participants were selected purposefully for the study, no Gemini II participants were selected. The non-selection of Gemini II participants was not intentional. Restrictions on time and determinations of rurality deterred selection of Gemini II school districts, however the validity of the study was not impacted due to the rich information provided by Mercury and Gemini I participants.

Rurality and School Classification

Participants were selected due to their rural definitions and school classifications. Rural secondary schools in Kansas were selected based on the definition of a rural school from the National Center for Education Statistics ([NCES], 2007) and the Census Bureau (Rural education in america - definitions.) "Urban areas with a population of 50,000 or more are designated as urbanized areas, and those with a population less than 50,000 but greater than 2,500 are designated as urban clusters" (NCES, 2007). Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster is also

considered rural remote (NCES, 2006). Three of the four cases selected for participation can be classified as rural remote. (See Table 3-2).

For the purposes of this study, each rural case was selected based upon distance from an urban area and urban cluster. Each case selected represented a distance of 40 miles or greater from an urban area, or greater than 10 miles from an urban cluster. The majority of Kansas school districts are rural with 207 out of 286 school districts identified as rural. To select the cases for participation in the study, the researcher studied the list of schools identified as a redesign school and their location. The researcher included two Mercury schools since they are deemed pioneers in redesign. Two Mercury design schools were selected with the closest proximity to the researcher. The remaining two redesign schools were selected due to closest proximity to the researcher and matching rural and school classification criteria.

School classification criteria consistent for each of the four schools selected for the study were identified by the KSHSAA. Schools classified as 1A or 2A, representing small student populations consistent with rural schools were eligible for the study. KSHSAA reports that 1A high schools (grades 9-12) have a total enrollment of 20 to 92 students. A 2A Kansas high school includes a total high school enrollment of 93 to 156 students.

To accommodate expense and length of time for the study, each case was located within 150 miles of the researcher. This enabled each visit to the school to be traveled within one day, increasing feasibility of the study to be completed in two semesters.

Table 3-2 School Site Selection Criteria

School District Identifier	Rural School Classification (Y=Yes)	Miles from Urban area in Kansas	Miles from Urban Cluster in Kansas	Mercury(M), Gemini I (GI), or Gemini II (GII)	Student Population	School Classification
Site A	**Y**	**49.9**	**26.4**	**G1**	**153**	**2A**
Site B	**Y**	**209.2**	**23.8**	**GI**	**71**	**1A**
Site C	**Y**	**163**	**40**	**M**	**90**	**1A**
Site D	**Y**	**79.4**	**10**	**M**	**132**	**2A**

Interviews

The data collection for this study spans the course of two semesters and is inclusive of multiple strategies designed to align with the research design of the instrumental case study. Purposeful efforts by the researcher's incorporation of multiple qualitative strategies increased credibility, transferability, dependability, and conformability of the study (deMarrais, 2003; Shenton, 2004).

The data includes a primary emphasis on interview data with rural school educators. The data was supplemented by observations, artifacts for interpretation, and construction of meaning as themes emerged from the analysis of the data. The interview process was semi-structured and

one in which the researcher and participant "engaged in conversation focused on questions related to the research topic" (deMarrais, 2003, p. 54).

A critical component to the interview process is for the researcher to ensure trust and acceptance with the case study participants. Prior to interviews or visiting each case on-site, the researcher corresponded with participants by phone or email to establish the purpose of the study, and to obtain willingness toward participation (deMarrais, 2003). At the beginning of each interview, the researcher explained the process to secure confidentiality within the study and explained the right to refuse to answer specific questions. Prior to each interview the researcher spent time previewing the components of the interview guide with each participant, explained the process for recording the interview, secured written consent to participate, and previewed the research questions for each interview (See Appendix C, D, E). Since the researcher in this study also serves as a junior high and high school principal, collaboration with other educational practitioners may yield transferability of findings to their site which provided incentive to participate in the study.

The interview questions were semi-structured and arranged for open-ended responses lending to narrative data acquisition while encouraging participants to elaborate their responses in full detail. Transcriptions of the interviews and findings from such transcriptions were shared with each of the participants concluding the interview for clarification purposes. Each of the eight total interviews were approximately ninety minutes in length.

Additional Sources of Data

Though interviews served as the primary source of data for this study, the Basic StudentTracker (NSC) data from each site was incorporated as an artifact for inclusion in the analysis of data. In addition, data obtained from KSDE (https://www.ksde.org/), the Kansas

Department of Labor (KDOL, https://www.dol.ks.gov/), and the Kansas Career Navigator (https://kscareernav.gov) were used to supplement the data. When appropriate, artifacts in the form of NSC data, master schedules, advisory period frameworks, student-led conference frameworks, CTE pathway guides or frameworks with articulation from postsecondary institutions, enrollment information guides, school improvement plans, and needs assessments enhanced triangulation of the data within and between each case.

Data Collection

The researcher conducted interviews with each of the educational practitioners designated by the superintendent at each selected site. Each interview was digitally recorded and transcribed. Transcriptions of the interviews were shared with each interviewee to check for accuracy. Upon completion of the member checks, the researcher prepared transcriptions to produce codes, then categories, and subsequently, themes. The coded transcriptions aided in the analysis of the qualitative data to construct learning and findings with triangulation of primary interview data and supplemental artifacts from all participants or cases selected for this study. Themes were derived from intersected codes and categories across the cases for deeper analysis.

Data Analysis

The data analysis portion of this study includes the preparation and organization of the data. The analysis of data in this study incorporated inductive data analysis to construct meaning of participants' perspectives as they related to preparing students for postsecondary educational attainment by identifying patterns or themes (Creswell, 2012). Themes constructed in the research evolved from coding within the realm of data collected in the form of interview transcripts and artifacts. Saldana (2009) explains:

> A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data. The data can consist of interview transcripts, participant observation field notes, journals, documents, literature, artifacts, photographs, video, websites, email correspondence, and so on (p.3).

Triangulation of the data involved multiple cases "be verified against others and, ultimately, a rich picture of the attitudes, needs or behavior of those under scrutiny were constructed based on contributions of a range of people (participants)" (Shenton, 2004, p. 66). Participants in comparable positions relating to accountability with regard to postsecondary credential attainment were selected for the study for corroboration of the data findings.

Rigor and Quality of the Study

Increased trustworthiness of the study was achieved in this study by incorporating effective, well-established qualitative practices in the form of thick-rich description of the data, member checking, peer review, and incorporation of multiple data sources (triangulation) of data. In addition, familiarity was obtained by the researcher with each case preliminary to data collection by consultation with participants and documents prior to visits; thus, producing richer understandings of each case (Shenton, 2004). Purposive sampling served as the underlying strategy for participant selection to obtain participants indicative of a rural secondary schools in Kansas and to acquire data rich in information. The purposive-stratified selection of participants with chain sampling was applied once rural school criteria was established. Chain sampling of individuals eliminates bias by seeking participants from well informed individuals in the district (the superintendent). Chain sampling, much like random sampling, "negates charges of researcher bias" (Shenton, 2004, p. 65). Participants were also given the opportunity to decline

participation to ensure that the selected participants were "genuinely willing to take part and prepared to offer data freely" (Shenton, 2004, p. 66). Peer review debriefing sessions were also integrated within the study. The researcher maintained a reflective commentary and maintained a research journal as the study progressed to monitor and evaluate initial impressions of the findings. The reflexive approach of the researcher (Saldana, 2013) and reflective commentary in a narrative journal allowed for the emergence of new patterns and themes.

Table 3-3 Peer Reviewers Position and Levels of Experience

	Current Position	Current Highest Level of Education	# of Years served in Public Education	# of Years in Educational Leadership
Reviewer A	Superintendent	Doctoral Degree	34	8
Reviewer B	Retired Superintendent	Doctoral Degree	38	25

Researcher Positionality

The researcher "plays a role of "lens" through which data are gathered and interpreted" (Khan, 2014, p. 230). At the time this study was conducted, the researcher for this study was a doctoral student enrolled at Kansas State University. The researcher was a candidate for a Doctor of Philosophy degree in the Curriculum and Instruction department. The researcher's professional background included ten years of teaching experience in intermediate grades, eight years of K-12 instructional coaching, eight years of experience as a higher education instructor, one year of administrative experience in primary grades (preschool through second grade), and six years of secondary school administration experience. At the time of the study, the researcher served as a junior high and high school principal in a rural Kansas school.

The researcher's intentions were not to study every component of each case, but rather to "focus on specific issues, problems, or programs" (Hays, 2004, p. 225) for corroboration of findings and possible transferability of findings from postsecondary improvement efforts in rural Kansas secondary schools which may also be applied to non-rural schools. This study is qualitative in nature, and the researcher brought her perspectives as an administrator in a rural secondary school in Kansas. The researcher's experiences bring value to the research; however, it was the researcher's intention that findings emerge from triangulation of the data without

subjectivity from the researcher's educational administration experience and current role as findings are reported in chapter four. The researcher's subjectivity did, however, influence the conclusions made in chapter five.

Summary

This chapter describes the methodology employed with instrumental case study research. It is inclusive of the qualitative research design (epistemology, theoretical perspective, methodology, methods), criteria established for each case and participant of the instrumental case study, case descriptions, methods for data collection and analysis, rigor and quality of the study, and the researcher's positionality. This instrumental case study provides a research design that facilitates new learning to emerge, lending for construction of new findings for possible transferability across school sites with similar characteristics. It is possible that in some cases, transferability to other schools with differing characteristics may emerge. Chapter four will include a rich description of each case and analysis of findings from each case included in this study. Chapter five will include implications and recommendations for further research.

Chapter Four: Data Analysis

Introduction

The purpose and intent of this chapter is to "describe the study in such a comprehensive manner as to enable the reader to feel as if they had been an active participant in the research and can determine whether or not the study findings could be applied to their own situation" (Baxter & Jack, 2008, p. 555). This chapter will begin with contextual evidence that guided the study, identify the forms of data utilized in case descriptions and findings, and describe the procedures utilized for data analysis. A description will precede the findings of each case (school site). Common approaches utilized by all cases (school sites) will be synthesized to conclude the chapter.

Descriptions and findings for each case involved the analysis of interview transcripts, observation, and artifacts derived from visits and public information sources. The following over-arching research questions guided the analysis of data:

1) What innovations are rural high schools in Kansas implementing to increase postsecondary credential attainment as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

The following sub-questions will guide this study:

a) What innovations are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?

b) What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary credential attainment, and how do they overcome them?

In addition to the over-arching research questions, the research topic, review of the literature, and theoretical framework guided initial coding decisions to derive themes and patterns from the data (Saldana, 2016). An outline of the literature review is provided below:

A) Prosperous Nation

   a. Prescriptions for a 21st century workforce

C) Kansans Can Vision – "Kansas will lead the world in the success of each student."

   a. National Student Clearinghouse (NSC)

   b. Graduation Rates & NSC

   c. Social and Emotional Character Development

D) Innovative Education Design

   a. Student Empowerment

   b. Advisory in Secondary Schools

   c. Teacher as Advisor – A New Role

   d. Career Coach

   e. Individual Plans of Study

   f. Student-Led Conferences

   g. Parent Involvement

   h. Civic Engagement

E) Career & Technical Education (CTE)

   a. Career Pathways

   b. Principal Perceptions of CTE

   c. Relationships with Postsecondary Institutions

   d. Accessibility to Real-World Experience

e. Community Partnerships with Schools

F) 21st Century Rural Schools

The researcher condensed items from the literature review in chapter two to frame the interview questions. The researcher used categories derived from interview questions as constructs for initial coding. The over-arching research questions, literature review, and framework for the study guided the development of the following interview question constructs which assisted the researcher in initial data categorization procedures. Codes from each case were aligned with interview question constructs that depicted attributes regarding each of the following:

Table 4-1 Interview Question Constructs

Main Construct Categories
Purpose of Redesign - P
Redesign & Innovation - RI
Career & Technical Education - CTE
21st Century Rural Schools – RS
Postsecondary Credential Attainment - PCA

Identifying the Data

Interview transcripts provide the majority of data for this study; however, researcher observations, artifacts, and the researcher's analytic memos throughout data collection and analysis were used to clarify understanding to verify findings for this study. Supplemental data enhanced data analysis. Prior to data analysis, the researcher organized all data included in this study. A description of data used for analysis in this study is further described below.

Interviews

Interviews served as the primary source for data in this study. All interviews conducted with each of the eight participants were digitally recorded. The interviews were then stored in a

private file to ensure the researcher had sole access to the digital audio recordings. Each interview was transcribed by the researcher. Each participant was asked to review the transcript and check for clarity and accuracy prior to coding. The purpose of this study is to identify the factors that influence postsecondary credential attainment by high school graduates in rural Kansas schools; therefore, the researcher removed subjectivity while coding to allow the data to transcend from code, to category, to pattern, and to theme with a constructivist analytic lens grounded in theory. "Coding requires that you wear your analytic lens" (Saldana, 2016, p. 7).

Artifacts

The researcher did ask each school site to share their daily master schedule. All other artifacts used for this study are designated as public information. The researcher; therefore, did not request additional artifacts on site. Data was retrieved from multiple sources including the Kansas State Department of Education (KSDE) (https://www.ksde.org/), Kansas Department of Labor (KDOL) (https://www.dol.ks.gov), Kansas Career Navigator (https://kscareernav.gov/), and official unified school district websites.

Observation

The researcher was a visitor at three of the four school sites selected for this study. Time constraints and availability of the participants at one site called for a virtual interview of both participants at that school site. As a visitor at three of the case sites, the researcher absorbed and experienced first-hand the palpable school culture and attributes unique to each case. In all cases, the researcher utilized the rich characteristics observed in each interview, informal analysis conducted during the opportune visit to three locations (Case A, Case B, and Case D), artifacts, school information provided by the KSDE, and analysis derived from in-depth analysis of transcribed interviews to develop rich descriptions of each case. To ensure confidentiality of

each participant, real names are not used. Participants (P) will be referred to by coding of the case (A, B, C, or D) and participant number (1 or 2); therefore, participant 1 from case A would be labeled as PA1. Pseudonyms utilized in the descriptions will be notated with an asterisk.

Analytic Memos

The researcher kept an informal narrative journal to record analytic memos as data collection ensued. The purpose of analytic memos is to provide the researcher with "reflexivity on the data corpus" (Saldana, 2016, p. 44). Dating of each memo entry also assisted the researcher with tracking the evolution of the study (Saldana, 2016). Memos are often a source for data in qualitative studies. "Yes, memos are data; and as such they, too, can be coded and categorized" (Saldana, 2016, p. 45). Inclusion of analytic memo serves as a source "not to summarize the data, but to reflect and expound on them" (Saldana, 2016, p. 45). Gordon-Finlayson (2010) articulates that "coding is simply a structure on which reflection (via memo-writing) happens" (p. 164). Analytic memos served as a narrative journal to conclude the study and assisted with development of conclusions in Chapter Five.

Criteria for Participation in the Study

The researcher's purposeful selection of participants in this case study research is indicative of attributes that are similar in nature. Cases were selected by a shared focus of impacting high school graduates' college and career endeavors through redesign of their educational framework. Since rural schools' attributes differ from urban counterparts, rural schools were selected intentionally for participation in the study. Each school site's distance from urban areas and urban clusters were considered to identify rural classification. Urban areas and urban clusters were defined as "Communities with a population of 50,000 or more are designated as urbanized areas, and those with a population less than 50,000 but greater than

2,500 are designated as urban clusters" (NCES, 2007). Schools in Kansas were also selected specifically due to the Kansans Can vision for 21st century learning. Included are initiatives set forth by the KSDE calling for redesign of the framework of education in the 21st century to meet the prescribed requirements of our nation's evolving workforce, and that the redesigned frameworks ensure students in Kansas graduate with the skills, knowledge, and experience necessary for successful matriculation into college and career environments.

Due to the researcher's purposeful selection, the cases selected closely resemble each other with regard to demographics, geographic proximity to urban areas, population of students, and designation as a redesign school in Kansas. Each case was purposely selected to meet the following criteria (a) must be identified by the KSDE as a Mercury, Gemini I, or Gemini II school with a focus on increasing postsecondary credential attainment rates; (b) must be identified as a rural school; (c) must be classified as a 1A or 2A school as set forth by the Kansas State High School Activities Association (KSHSAA) with no more than 156 students enrolled in high school; (d) and a willingness to participate in the study. The researcher's purposeful selection of cases for inclusion in the study produced similarities in demographics, geographic proximity to urban areas, and student population. (See Table 3-2.) However, the attributes of each case are unique including, but not limited to programs, priorities, culture, and goals associated with school improvement.

The Institutional Review Board (IRB) of Kansas State University approved this study in July 2018. This approval ensured the protection of human subjects. A copy of the consent form, interview protocol, and approval are included in appendices C-F.

Procedures for Analyzing the Data

Prior to analysis, the researcher transcribed each interview and read the transcripts to become familiar with the information provided from the interviews. Participants also reviewed each transcript to ensure accuracy and to improve trustworthiness of the study. Participants were invited to clarify any misrepresentations in the data, or to add additional information if desired. All participants agreed the transcripts were correct and nothing needed to be added.

Prior to coding the data, the researcher organized a journal to enhance reflexivity of the analysis process. The journal was divided into sections to maintain a narrative journal, organize codes, and record memos for each case analysis. The researcher then organized the data to begin initial coding procedures. Saldana (2016) explains that "initial coding provides the starting point for the researcher to gather analytic leads to set the stage for further exploration and guides the direction of the study" (p. 115). Charmaz (2014) further clarifies that coding is the critical link bridging the data collection and explanation of meaning in qualitative research.

Preliminary coding, or initial coding of data, illuminated rich context for each case. Attribute coding began the process of coding by highlighting segments of data that represented socio-demographic data (Kuckartz, 2014). Saldana (2016) explains "attribute coding is appropriate for virtually all qualitative studies, but particularly for those with multiple participants and sites" (p. 83). "Attribute coding is good qualitative data management and provides essential participant information and contexts for analysis and interpretation" (Saldana, 2016, p. 83). Descriptions are provided to give a rich description of each case. As (Privitera & Ahlgrim-Delzell (2018) explain, descriptions which provide context for findings "increase the trustworthiness of the research" (p. 321). Thick-rich descriptions of each case (school site) precede the findings to provide a vivid depiction of the context for each case.

Analysis of the data and findings as they relate to increasing postsecondary success rates immediately follows each case description. Description of each case provided the context, but the findings came from additional coding techniques differing from descriptive attribute coding. As the analysis of each interview transcript ensued, each transcript was analyzed in depth before moving on to the next transcript. "Initial coding is appropriate for virtually all qualitative studies (Saldana, 2016, p. 115). To approach initial coding, the researcher read each interview transcript multiple times before coding while making memos and notes of details in the side margins of important key concepts to be mindful of prior to coding (Creswell, 2012). The researcher then began initial coding by rereading each transcript while highlighting pertinent units of pertinent data.

Initial Coding methods utilized in this study consisted of simultaneous use of In Vivo Coding and Process Coding. In Vivo codes were chosen to keep coding true to participants' verbiage and broke down the qualitative data into manageable smaller parts. "In Vivo coding is appropriate for virtually all qualitative studies, but particularly to prioritize and honor the participant's voice" (Saldana, 2016, p. 106). Process coding simultaneously accompanied the initial In Vivo coding. Process coding "is appropriate for virtually all qualitative studies, but particularly for those that search for the routines and rituals" associated with the study (Saldana, 2016, p. 111). Process Coding placed "ing" (action or gerund words) to codes to emulate actions taken by each case (Saldana, 2016). To "dig deeper" into the data, the researcher chose to use "line-by-line" coding techniques to extract as much meaning as possible from the interview transcripts (Kriukow, 2017).

The researcher then began first-cycle coding to reduce the data into "meaningful segments, assigning names for the segments, combining the data into broader categories or

themes, and displaying and making comparisons into broader categories and themes" (Creswell & Poth, 2017, p. 148). The interview question constructs (See Table 4-1) served as a guide to begin coding, however, the researcher remained open to the direction of the data. Coding methods illuminated rich descriptions and meaning of the information sought by the researcher. The researcher highlighted codes of data, such as words, phrases, sentences, or paragraphs to assign codes under the interview question categories (See Table 4-1). The codes were then coded into categories and transferred to a Microsoft Excel sheet and also placed on sticky notes onto an organizational chart. "Touching the data and physically moving categories in multiple arrangements helps better discover and understand such organizational concepts" (Saldana, 2016, p. 231). A Microsoft Excel sheet was created for each of the four cases (labeled A, B, C, D) and inclusive of all initial codes. The initial codes sheet contained both participants' In Vivo and Process codes. A second Microsoft Excel sheet was created next to each case's initial coding sheet. The second sheet included both participants' In Vivo and Process codes but were categorized according to the interview question constructs (See Table 4-1) as well as other assigned to other categories as they potentially emerged.

When initial coding was complete during the first-cycle round of coding for each case, the researcher took time to reflect on the codes and analytic memos. Conducting sound qualitative research is more about good thinking and how researchers reflect on the data corpus, more-so than the methods for data analysis (Stake, 1995). "The initial codes were compared for similarities and differences while the researcher remained objective and open to all possible theoretical directions suggested by interpretations of the data (Charmaz, 2016). Due to the large number of initial codes produced by line-by-line coding, the researcher coded the codes to condense the codes for further analysis (Saldana, 2016). A third Microsoft Excel sheet was then

placed next to the categorical codes sheet for each case for further analysis. Sticky notes were rewritten or rearranged to provide a constant visual of the data.

When initial coding was completed for each case, the researcher moved into second-cycle coding analysis. During second-cycle coding analysis, the researcher continued to reflect on assigned coding categories. Some codes were eliminated, some codes were coded further to condense codes, and some codes were reassigned to other categories. Synthesis of the data continued until patterns and themes began emerging. As patterns and themes emerged, they were transferred into an additional Microsoft Excel sheet and simultaneously placed on a diagram with sticky notes to manipulate the data.

To increase the trustworthiness of the findings, the researcher shared concluding data analysis with two peer reviewers. Each peer reviewer are qualitative experts with both holding doctoral degrees earned from Kansas State University. Each peer reviewer had no vested interest in the study to provide non-biased feedback.

Findings from the analytic process previously described will be subsequent to the description for each case (school) below.

Descriptions and Findings of Each Case

Description of School A

School A is a junior senior high school inclusive of grades 6-12 with 287 students and is designated as a Gemini I school by the KSDE. School A represents the largest of the four schools participating in this study with a high school enrollment of 153 high school students in grades 9-12 and is classified as a 2A school district (KSHSAA, 2018). It is considered a rural school employing 27 certified teachers and is represented by three communities in close

proximity with one another. It is located 49.9 miles from the nearest urban area and 26.4 miles from the nearest urban cluster, so it is considered a rural school district.

Commitment to Excellence and Building Relationships

The first thing a visitor may notice about this school is the dedication of the school principal and staff. The interview with the principal was scheduled at 6:30am to ensure he was present for students during the school day. The subsequent interview with a teacher leader from this school was scheduled at 8:00am, so the researcher, was able to accompany the principal in the hallway at the beginning of the school day. Informal dialogue with students was observed between the principal and the students clearly indicating that the principal not only knew the students on a professional, but also on a personal level. The atmosphere felt warm, and it is evident through interviews and observation that building relationships is important to this leader and school staff. It was also observed that other teachers were greeting students in the hallway in the morning. The custodian was also present in the hallway greeting students.

Attributes of the Community

The district spans 231.8 square miles. Attendance is represented by students who reside in one of three communities in close proximity with one another and from surrounding rural areas. A large majority of the student population is Caucasian. KSDE (2018) reports that 87.02% of the student body are Caucasian, 5.88% Hispanic, 2.60% African American, and 4.50% reported as "Other." According to the KSDE (2018) there are no students at this school identified as migrant, 1.05% of students at this school are identified as English Language Learner, and 16.75% of students are deemed a student with special needs or disability. A large portion of this school's student population is identified as economically disadvantaged with the KSDE (2018) reporting at 42.73% of students considered low-socioeconomic status. The annual

median wage of this county is reported as $29,303 (The Kansas Department of Labor ([KDOL], 2017). A small private Christian college is located within the community with enrollment of 594 in postsecondary learning. This local private college serves as a potential resource for continued postsecondary learning with rigorous standards set forth for admission with a 55% admission rate. However, this private college does not offer programs to enhance CTE pathways designated at this school.

Opportunities for Career & Technical Education

This school is progressive in nature when it pertains to providing exploration for career and technical education with twenty pathways available to pursue through this school. Much of the coursework is in place on campus to integrate diverse possibilities for career exploration within the curriculum as it is defined and approved by the KSDE. Some courses not available on campus are provided through virtual learning experiences. This school benefits from its contribution to a comprehensive virtual network of curricular options through a virtual interlocal partnership established between four school districts in geographical contiguity. This network of virtual coursework offers curricular choice to students and adults in the region when a specific class is not offered on campus. This network is free of charge and offers free laptops for use when students have applied and are admitted to the program. This school also offers ITV courses that are transmitted from a postsecondary institution in the nearest urban area. Students are able to earn high school credit and college credit simultaneously (dual credit) with this arrangement. Though this school is located in a rural area, the leadership creatively ensures the benefits of postsecondary training with on campus and virtual resources through the application of technology. Though there are 27 certified teachers on staff at this school, the average caseload averages five preparations, or courses for each teacher to teach. The caseload of the

staff at this school exposes the commitment to doing all that is possible to provide rich and diverse learning opportunities. Table 4-2 below indicates the pathways associated at this school:

Table 4-2 KSDE Approved Career & Technical Education Pathways at School A

Consumer Services	Early Childhood Development	Family & Community Services	Teaching / Training	Government & Public Administration
Health Science	Production	Cartography	Biomedical	Engineering
Agricultural Science	Agricultural Plant Systems	Agricultural Structural Power	Audio-Visual Communications	Audio-Visual Arts
Business Entrepreneurship & Management	Business Finance	Restaurant Management	Program & Software	Web & Digital

Rising Above

School A is mindful of the postsecondary indicators reflected by the National Student Clearinghouse (NSC) StudentTracker data to the KSDE. (Refer to Appendix F for a comprehensive look at postsecondary success indicators for School A). Since the KSDE released this new set of data to districts in 2016, the call to ensure at least 70% of graduates receive some form of postsecondary credential by 2020 to meet the prescribed needs of the workforce is taken seriously at this school. School A proves to be faring well when considering performance indicators as they pertain to student success after high school. This school is closing in on the mark prescribed to be the required number of students graduating with some form of postsecondary credential to fuel the workforce by 2020. According to NSC calculations, consideration is given to all students who graduate with a diploma from this school and an average of 69% are attaining some form of postsecondary credential. In comparison, all students who entered as freshmen and had potential to graduate from this school combined with those who did graduate from this school, the combined percentage is 64% of all possible graduates

attaining some form of postsecondary credential. Additionally, this school boasts a 93% graduation rate. The goal set forth by the KSDE calls for a 95% graduation rate. Rural schools, such as this school, are especially cognizant of the 95% graduation rate target as one student not graduating impacts graduation rates more noticeably than in larger class sizes. In a class size (cohort) of 20 students, one student not graduating will drop a graduation rate by 5%. Students who move to private schools or home schools also count as a non-graduate in the state of Kansas, regardless of whether they graduate or not, as do students who obtain a GED. A non-graduate, however, does not always constitute a dropout. To be included in the data as a graduate, the KSDE (2019) clarifies graduate versus dropout as:

> Any student who does not graduate with a regular high school diploma within four years will appear in the cohort as a non-graduate and will negatively impact the rate. A regular high school diploma means the standard high school diploma awarded to students that is fully aligned with the state's academic content standards. It does not include GED diplomas, certificates of attendance, or any diplomas issued by non-state accredited private schools and homeschools. For this reason, it is important to remember that a non-graduate is not the same as a dropout.

School A Findings

The findings identified are indicative of two participants at this site. The findings from School A will be presented in narrative text and tables as a result of coding processes described previously in this chapter. Throughout the analysis process, the researcher remained faithful to the participants' verbiage. The building principal and a lead teacher participated in interviews at School A. The patterns from the findings are represented in the tables below. A summary of patterns across all cases will be presented at the conclusion of this chapter.

An example of data classification for each interview question construct is provided below (See Table 4-3). This data table provides the code, construct, description, and data excerpt for each of the interview question constructs to provide an example of how data was aligned to each interview question construct. Each data excerpt demonstrates how each statement made by one of two participants at this school concisely aligned with each interview question construct.

Table 4-3 Interview Question Constructs with Definitions and Examples from Text

Code	Construct	Description	Data Excerpt
P	Purpose of Redesign	Refers to the cohesive beliefs, attitudes, perceptions, assumptions, and values exhibited by all members of the staff and stakeholders toward the rationale for redesign	We strive to create culture of learning that is relevant to students for now and the future. PA2
RI	Redesign & Innovation	Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Looking at English classes and looking at reading, we ask, why do we need to force students into reading Shakespeare when these kids will never read Shakespeare again? PA2
CTE	Career & Technical Education	Refers to learning experiences that integrate academic with technical and relevant learning experiences structured in a formal pathway toward student career interests	CTE can cut off at least a year or more of college. PA2
RS	Rural Schools	Refers to characteristics present in rural school settings	My district is made up of three communities. PA1
PCA	Postsecondary Credential Attainment	Refers to specific strategies associated with communication and monitoring of data toward a capstone goal of improving postsecondary credential attainment	We use (NSC) multiple times in multiple facets whether it's parent meetings, whether it's community things, whether it's

			staff meetings, it's used all the time. PA1

Patterns and Themes Emerging from the Data

Patterns emerging from the data were indicative of the interview question constructs selected by the researcher as they framed the literature review. Thus, the constructs identified include (a) purpose of redesign (P); (b) redesign and innovation (RI); (c) career and technical education (CTE); (d) 21st century rural schools (RS); and (e) postsecondary credential attainment.

Purpose of redesign (P). Both participants at this school identified many attributes associated with the need for redesign in the 21st century. Gaps in postsecondary credential attainment and engaging learners were cited by both participants with the most frequency. This school reflects an intentional focus to ensure all learners are successful. It is not acceptable to leave a portion of the student body unengaged or on the path to not live above the poverty line after high school graduation. Both participants cited the intentionality of seeking opportunities to civically engage students in the community. The participants at this school believe relevant learning that is personalized to student interest and capacity will reap the most benefit toward the outcome of postsecondary success. This school also recognizes the need for each local school district to design an educational system that is reflective of community values.

Table 4-4 Patterns for Purpose of Redesign (P) – School A

Construct Purpose of Redesign (P)	Patterns	Evidence (examples from transcripts)

Description - Refers to the cohesive beliefs, attitudes, perceptions, assumptions, and values exhibited by all members of the staff and stakeholders toward the rationale for redesign	Both participants at School A mentioned the following rationales for the need to redesign. PA1 mentioned each of these rationales eleven times and PA2 eluded to these rationales twelve times when discussing the purpose of redesign: *gaps in postsecondary completion (8) *recognize community values (5) *engage all learners (4) *opportunities for civic engagement (3) *relevant learning (3)	There's 31% of our kids that are likely going to go out and not live above the poverty line. That's not good enough. PA1 Our local college in town separates my district. Postsecondary education is valued in my community. PA1 We are starting to think about their future and that's why we really want to make sure that they are really engaged and providing opportunities to help them see how learning is relevant. Community involvement is a key aspect. PA2 Honestly, traditional education has been to give them information, study for a test, then they can leave it. PA2 If we are not preparing students to be successful after high school, then what are we doing? PA2

Redesign & Innovation (RI). Each local school district in Kansas is encouraged to implement practices reflective of a holistic, student-centered approach. These initiatives should align with the KESA framework (See table 2-1). Schools officially designated as a redesign school in Kansas should also align their initiatives with the 4 Principles of Redesign (see Table 2-2). All schools in Kansas should see a boost in results as outlined with the KSDE's measurable outcomes (See table 2-3).

Redesign of a traditional educational framework to match 21st century requirements are unique to each local school district due to community values. Each local school district should ensure their redesign initiatives align with community values, therefore, diversity in the approaches pursued will vary. Consequently, many patterns emerged for the redesign and innovation construct (RI). Patterns at this school site may vary from the patterns associated with redesign in the other participating school sites. Emerging patterns from School A with regard to redesign and innovation will be reported below (Table 4-5 through Table 4-11). A synthesis of the patterns (themes) will be reported at the conclusion of this chapter with themes that emerged concerning redesign and innovation across the cases.

Community Involvement. Community involvement is cited by both participants at School A as a crucial element of redesign of schools. Community involvement through communication appeared throughout coding with the most frequency. Participant one mentioned community involvement eight times throughout the interview and participant two mentioned community involvement nine times. Patterns from community involvement by both participants were continuous dialogue with parents, seizing opportunities to receive feedback from community, recognizing opportunities for communication with community, identifying and addressing misconceptions by community, and how support from the community can enhance school initiatives. The table below depicts the patterns from community involvement.

Table 4-5 Patterns for Redesign & Innovation (RI) – Community Involvement -School A

Construct Purpose of Redesign (P)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants at School A cited community involvement. PA1 cited community involvement eight times and PA2 cited community involvement nine times. *opportunities for communication (7) *obtaining feedback from community (6) *addressing misconceptions (2) *support from community (2)	We communicate with community every time there's a chance. PA1 We have some plans in place to talk about redesign because my district is made up of three communities. PA1 We are looking for ways to open up communication. We are either looking at a monthly coffee time that people can come to a coffee shop and ask questions with a 15-20-minute topic to open up for comments/questions. PA2 I remember there was a man at Kiwanis club. He was really mad. He said, "I think it's sick that you are making kids choose these careers at this point in time." I said, "Well that. That is not what we are doing, um, at all. We are doing exploration in terms of what's available. It's equally important to find out what they don't want to do as it is what they want to do." PA1

Managing Time. Redesign has sparked an air of excitement at School A with the freedom to dream and rethink possibilities. With that reignites a feeling of first-time teacher or administrator with new approaches to teaching and learning being established. "I feel like a first-

year principal" (PA1). Though many traditional learning environments have shown to be ineffective in our rapidly evolving world, one participant at School A stated, "it is important to remember to keep the good things that are in place" (PA1). Redesign does not mean changing everything. It does imply an intentional approach to fuel our workforce with graduates possessing the skills and knowledge required to maintain our nation's economy and global competitiveness. We must empower learners to build agency and take "ownership of their learning while teachers facilitate that process" (PA2). "It's been fun to have the freedom to dream and think" (PA2). Both participants at School A recognize that change takes time and with new approaches to be considered. Managing time is essential to balance initiatives with good practices already in place.

Table 4-6 Patterns for Redesign & Innovation (RI) – Managing Time (Staff) - School A

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants at School A referred to the time associated with redesign. A number of new initiatives takes time to learn and change takes time. PA1 mentioned managing time five times, and PA2 mentioned managing time four times. *time (4) *time crunch with multiple responsibilities (3) *a lot of work (2)	We're a redesign school so that is what's taking my time. PA1 It's going to take a lot of work to look at standards and alternative assignments to match up with the standards. PA2 As the needs arise the staff will put a calendar together for advisory period, the problem becomes time, just with everything else. Whether it's our honor choir that's meeting, college visits that are coming in, it's a constant. PA1

Personalized Learning. Both participants at School A referenced personalized learning throughout their interviews. Participant one referenced personalized learning four times and participant two referenced personalized learning seven times. It became apparent that personalized learning is a school-wide initiative that is being implemented. Both participants mentioned the benefits of personalized learning which are student choice to engage with learning and flexibility in educational design. Both participants recognized need for training of staff to improve this practice. The participants spoke about misconceptions about what personalized learning is and an apprehension by some staff to implement it with the role of the teacher shifting to a facilitator of learning versus the keeper of all knowledge. Both participants acknowledge that staff understands the rationale for implementation of personalized learning, but there are still questions surrounding how to efficiently implement it. Personalized learning is a new focus at school A with plans in place to provide professional development. The patterns as attributes were mentioned are indicated in the table below with the number of times the codes occurred.

Table 4-7 Patterns for Redesign & Innovation (RI) – Personalized Learning - School A

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants at School A referenced personalized learning. P1 referenced personalized learning four times throughout the interview and P2 referenced personalized learning seven times. *personalized learning (11) *improvement and training (6) *apprehension and misconceptions (3) *personalized assessment of mastery (3) *engaging for students (3)	Looking at what the four pillars of redesign were, what we really didn't have covered in that was the personalize learning piece. PA1 Most people agree with the concept of personalized learning, but struggle with how to do it. PA2 Many teachers ask, so let's just let the kids do whatever they want? PA2

	*flexibility for teacher and student (2)	I think some teachers are a little nervous about personalized learning. PA2 Let's say you have a kid who wants to be an auto mechanic. Okay, let's read some technical manuals on cars, these are things that would be very beneficial, but then when you get down to it, how do we check that? PA2

College/Career Planning. School A is using a counselor-centered model to deliver supports necessary for college and career planning. Career Cruising, a web-based career exploration tool, is the tool currently being utilized at this school to supplement career exploration and is the tool to document individual plans of study for each student. Though Career Cruising has been integrated into a personal finance course required for juniors, the counselor is the person who meets individually with each student to discuss their individual plans of study. Occasionally, an advisor (teacher) during advisory period may ask about progress with a student's individual plan of study or progress with identifying college and career goals, however at this point, it is not required, nor is there accountability for it. Teachers at School A may "ask questions like are you on pace, where are you at, are you taking the classes you need, what are you interested in" (PA2), but it is not structured at this time. This leads both participants at this school to believe that monitoring individual plans of study during advisory does not happen often. Plans are in development to strengthen college and career planning. A hybrid model of college and career planning is being considered where teachers in advisory period are accountable for meeting with each of their advisees, alleviating the load of the counselor while increasing efficiency. In addition, this school is planning to develop a digital

portfolio for students to have access to a flexible and comprehensive one-page document. This digital portfolio would create efficiency for both staff and student access while refining goals attributing to postsecondary plans. This school is intent on beginning college and career exploration in elementary and middle school. School A is also intent on ensuring the success of all students, therefore Project Search is in the second year of implementation. Project Search prepares students with significant disabilities in the last two years of high school for integrated, competitive employment. Last year three students from school A were placed in competitive employment after graduation. This year six students are enrolled. The expectation is that all six students will be placed in competitive employment positions. A shift in the focus of what constitutes college and career readiness is taking place at School A. This school is intentional about focusing on personal attributes that indicate college and career readiness versus a test score. "I know kids with good ACT scores and everything else right now, they're brilliant, but unable to work their way up to assistant manager at Wendy's. I also know kids with a 16 on the ACT and they are hugely successful. Something is amiss" (PA1).

Table 4-8 Patterns for Redesign & Innovation (RI) –College/Career Planning- School A

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants at School A referred to processes associated with college and career planning. PA1 mentioned each of the following patterns a total of eleven times. PA2 mentioned each of the following patterns a total of nine times. *Career Cruising – IPS (5) *refining college/career	Individualized plans of study are really important to help students figure out what they want to do. PA2 We've talked about each teacher have a group of students and keeping track of them (IPS). PA2 Our counselor is trying to manage our high school with

	Planning (4) *counselor-centered (4) *project Search (3) *shifting assessment focus (2)	160 students, that's tough for one person. PA2 Project Search provides specific training to our special education students to optimize getting a job right out of the gate. PA1 We stopped talking about test scores. Intentionally. We don't talk about them. We are not worried about them. So not putting that pressure on the kid who doesn't perform on a test, doesn't mean they can't go to college. That's not. That's not true. You can, so changing emphasis here. PA1

Project-Based Learning (PBL). Project-Based Learning emerged as a pattern at School A with a specific focus how to increase rigor within the domains of teaching and learning. Increasing rigor was mentioned by both participants, but not always succinctly. However, many attributes associated with increasing rigor were mentioned. Both participants acknowledged that students struggle with project-based learning because it requires them to utilize creativity, problem-solving skills, critical thinking, and to demonstrate mastery of learning across the curriculum. This is a definite paradigm-shift when compared to the traditional "sit and get" model of learning. Both participants discussed the importance to "have students see their part in figuring things out" (PA2). References to student engagement in project-based learning to build student agency solidified the theme for project-based learning at School A. Both participants also discussed student self-evaluation and reflection as a means to strengthen project-based

learning. Asking students, "Tell me how you are going to improve" enriches the project-based learning experience (PA2).

Table 4-9 Patterns for Redesign & Innovation (RI) – Project-Based Learning (PBL) - School A

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned project-based learning as a current initiative at School A. Each of the three patterns below were mentioned by both participants. PA1 mentioned these patterns a total of five times and PA2 mentioned these patterns a total of seven times. *increasing rigor (7) *self-evaluation/reflection (3) *building agency (2)	PBL has really thrown students off. PA2 Students were faced with the task of creating a presentation. PA1 (PBL) was at such a high level. One of them was comparing storylines, like a fairy tale vs. Greek Literature. PA1 We're here to support, we will provide information when it is needed"-PA2 Allow them to fail a little bit, not fail the course. PA2

***Real-World Experiences*.** School A reflects an intentionality toward providing real-world learning experiences for students. Both participants mentioned many attributes associated with providing these relevant learning experiences for students. Both participants mentioned many aspects of providing real-world experience for students that reflect a combination of the patterns derived. According to both participants at School A, students have the opportunity to be engaged in the community with internships, though at times, a non-block schedule with forty-five-minute class periods forces them to be creative in the delivery of such internships or civic

engagement. "We provide internships in our preschool classrooms, our daycare centers, our banks, welding ships, and most are at the hospital" (PA1). School A is creative in seeking internship and real-world experience by "trying to help students learn through experiences" (PA2). In addition to internships, School A is beginning discussions about alternative credits. Alternative credits would provide students with learning experiences not traditional of the coursework in place, but they would be aligned to student interest in order for a student to see how the learning would be relevant in postsecondary endeavors. "My students are writing business plans. Now I'm trying to run all over the place, trying to be knowledgeable in thirteen different areas" (PA2). The sense of urgency and intentionality to provide real-world learning experiences were summed up by participant one, "Well, they need to be able to sit here and do this worksheet because they are not going to get this task done. - At no point in time does that task need to be done. But that, THAT (work experiences) does need to get done" (PA1). Both participants at School A believe more value should be placed on learning experiences than the traditional worksheet. "I took students to local businesses and asked who they hire. The students took that seriously to represent themselves well" (PA2). Both participants reflected beliefs that civic engagement and learning gained through experiences with regard to applicability to each students' future is far more valuable than a worksheet. Both participants feel these experiences will grow the leadership qualities and character qualities to support postsecondary success. The table below reflects the patterns that emerged from the codes regarding real-world experiences.

Table 4-10 Patterns for Redesign & Innovation (RI) – Real-World Experiences - School A

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to	Both participants mentioned providing real-world	Students come up with their own business ideas, come up

providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	experiences for students as a current initiative at school A. Each of the five patterns below were mentioned by both participants. PA1 mentioned these patterns a total of eleven times and PA2 mentioned these patterns a total of eleven times. *civic engagement (9) *relevance (4) *internships (4) *work experience vs. worksheet (3) *alternative learning opportunities (2)	with a real-world problem, and come up with a real-world solution. PA2 Our staff sees how important it is to provide those connections, hands-on experience, the relevancy within the real-world situations"-PA2. Everything from you know, down at the hospital, I bet we have kids down there every hour at some point or another, that's probably where we have the most kids go" - PA1 We are trying to put them in situations with the community"-PA2 Looking at English classes and looking at reading, we ask, why do we need to force students into reading Shakespeare when these kids will never read Shakespeare again? PA2

Social-Emotional Character Development (SECD). Both participants at School A described an intentionality that is embedded with the practice of supporting social, emotional and character development (SECD) at their school. "Support for SECD cannot be taught on an island" (PA1). It is the expectation at School A that all staff contribute in meaningful ways to with intentionality in every interaction with students to support non-academic skill development. "Okay, today is social development day, so get out your book and turn to page seventy-two and let's talk about pride. We're not doing that. It makes sense to use a social emotional curriculum

at the elementary level, not at this level" (PA1). All staff are encouraged to build positive relationships with all students and when there is a challenge, seek out somebody who has a positive relationship with that student. "When situations arise, it's okay to stop teaching your curriculum and have those meaningful conversations" (PA1). "We have a counselor. So much of her job is taken with career stuff" (PA1). Both participants also described that their school is in the beginning phases of becoming trauma-informed. I think when you start looking at the adverse childhood experiences (ACE) Scores and the Resilience scores, do they have those, that's where we come in as a school" (PA1).

Table 4-11 Patterns for Redesign & Innovation (RI) – Social Emotional Character Development (SECD) - School A

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with social-emotional character development at School A. Each of the three patterns below were mentioned by both participants. PA1 mentioned these patterns a total of twelve times and PA2 mentioned these patterns a total of twelve times. *intentionality (9) *trauma-informed (8) *building relationships (7)	When you're standing at the door greeting students, do not say, "Did you get your homework done?" Don't say that. Not there. There's a place for that, but it's not right there. "Did you get your stuff done?" No. It should be, "How are you?" Building relationships is not about the stuff in your room that's important. It's not. That's still hard for people because of the time crunch, and there is a time crunch. PA1 Teachers, in all seriousness, I'm losing them. I cannot reach them. I need your help. Who here has the best relationship, even if it's this much, who has it? PA1

		"It's really about helping kids to problem-solve, figure things out, and work through situations"-PA2 We cannot control the ACE score, but we can control the resilience scores and there is a direct correlation of those, the more you have of those, the more successful you will be. PA1 How do we grow some leadership qualities? PA2 How do we grow character qualities?"-PA2

Career and Technical Education (CTE). School A values their twenty CTE pathways and vows to do so through redesign with the support of the community. A former principal has been credited with establishing the pathways as much of the coursework was already in place. He was also a supporter of learning through experience and was passionate about career exploration. School A boasts a small private college in town so "there tends to be a higher value of education in our community so CTE is just kind of a natural fit"(PA1). Included in the twenty pathways, School A offers a teaching and training pathway as an initiative to grow their own teachers. "My son's teacher this year has come back. Education was a passion of hers and we were fortunate enough to get her back" (PA1). Job shadowing associated with CTE pathways is also facilitated at school A to provide real-world experiences for students. "We see some job-shadowing for the teaching pathway and others"(PA2). Students are also allowed to travel to a county community college to receive specific skill training in welding for the first couple hours of the day. Many

aspects of CTE can enhance initiatives already in place for redesign. "CTE enhances personalized learning, project-based learning, career exploration, and it can save kids a lot of money through career exploration" (PA2).

It was mentioned that even though there are three participating postsecondary institutions offering coursework in CTE at School A, there is not a lot of collaboration that occurs between postsecondary and secondary (PA1). There was also mention about schedule challenges to transport students to postsecondary programs (PA2). Neither participant shared information regarding a solution to these challenges. Both the lack of collaboration and schedule challenges were not presented as a pattern being that both participants did not reference both challenges.

Table 4-12 Patterns for Career and Technical Education (CTE) - School A

Construct **Career & Technical Education (CTE)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to learning experiences that integrate academic with technical and relevant learning experiences structured in a formal pathway toward student career interests	Both participants mentioned the patterns below that are associated with Career and Technical Education (CTE) at School A. Each of the four patterns below were mentioned by both participants. PA1 mentioned these patterns a total of nine times and PA2 mentioned these patterns a total of eight times. *natural fit (5) *benefits of CTE (5) *community values (4) *postsecondary options (3)	Our former principal was a big believer in CTE. He was creative in providing opportunities to explore possibilities. PA1 In the process of redesign, we need to make sure that we keep things that are important. In our case CTE. That's extremely important. PA1 CTE allows students to personalize further. PA2 CTE can cut off at least a year or more of college. PA2 We see some job-shadowing for the teaching pathway. PA2

		Our community can understand whether a student completed a degree or obtained a certificate. They get that, and that matters. PA1

Rural Schools (RS). School A participants shared many aspects about the dynamics of teaching and learning in a rural school. Most of the patterns are challenges, but strong support from the community is invaluable. Often rural schools are the heart of the rural community with a strong sense of pride. Both participants in School A shared about the supportive community in spite of a school district representing three different communities. School A has a supportive board of education, support from patrons, and from local industry. In addition, School A boasts a community foundation providing grants and support as needed.

There are, however, challenges that both participants mention. Due to a shortage of staff, School A participants note that the roles they fill are many. Both participant one and two state that they "wear several hats." "If a student isn't ready to learn on a specific day in first hour Monday morning because they just saw dad beat mom up all weekend, it might end up being me, it might be the assistant principal, or it might be the counselor, but it's not that consistent piece, so I would love to have more help"(PA1).

Both participants mention the impacts of rurality on CTE. There is no technical college in town offering CTE so many students would need to travel forcing many to enroll in online coursework facilitated on-campus. It is often difficult to attract highly qualified teachers, let alone CTE teachers, to rural areas unless they have roots in the area. Salaries in rural areas often do not compete with urban counter-parts. This shortage of staff has caused School A to think outside the box and partner with five surrounding rural communities to offer an online network

to provide CTE coursework online. Finding business and industry partners to send students for application level work experiences is often a challenge, but School A has a hospital in district. Hospitals often represent many different types of career exploration from health careers, to hospitality, to administration, to accounting, and culinary to name a few. School A utilizes the hospital quite a bit for internships.

Both participants also referenced the challenges with a small student body and how that may impact loss of instructional time and data reports to the state of Kansas. Last year, School A's postsecondary success rate as reported by NSC was 69%. (PA1) mentions that last year our rate was "69% or whatever it has been, like last year it was 65%, it went up a little bit, for us though, that's one kid so it could go one way or another, so next year it can be different." In a class of twenty students, one student not meeting the criteria for postsecondary success or graduating from high school can drop the percentage five points. Additionally, it is typical for rural schools to have large numbers of students involved in activities. "Especially during spring when schedules get busy, it is not uncommon to have your whole class absent" (PA2).

Table 4-13 Patterns for Rural Schools (RS) - School A

Construct Rural Schools (RS)	Patterns	Evidence (examples from transcripts)
Refers to characteristics present in rural school settings	Both participants mentioned the patterns below that are associated with Rural Schools at School A. Each of the five patterns below were mentioned by both participants. PA1 mentioned these patterns a total of thirteen times and PA2 mentioned these patterns a total of nine times. *rurality effects on CTE (7)	If we had a (CTE) college in town, that would make a huge difference. PA1 I can usually get 6 or 7 businesses willing to help with internships. PA2 Overall numbers of teacher education majors are down. I'm afraid we are going to be facing a whole different crisis here in a few years. PA1

	*limited resources (5) *multiple roles (4) *supportive community (3) *effects of small enrollment (3)	To address the teacher shortage, we have to find the students. We want our best. PA1 I teach and coach, KESA team, Redesign team, entrepreneurship. There are several different hats I wear. PA2 Due to large numbers of students missing 8th hour for activities, advisory period is not as effective 8th hour. (PA1)

Postsecondary Credential Attainment (PCA). School A is faring well when it comes to postsecondary success rates. The last NSC data from 2016 shows a 69% postsecondary success rate placing them 1% away from meeting KSDE's goal of 70%. "We are successful with getting our kids to college, but not only that, completing college or postsecondary" (PA1). Both participants referenced a heavy emphasis on communicating the school's goal to ensure at least 70% of graduates attain some form of postsecondary credential. Both participants verify that National Student Clearinghouse (NSC) data is shared at every opportune moment with stakeholders, local business and industry, and staff. Plans are in place to communicate about NSC data more thoroughly with parents, especially lower socio-economic status parents who (PA1) feels are not getting as much communication. Both participants also stated that staff is very aware of the data. The NSC data is shared with staff frequently by administration. "Some discrepancies are present with the NSC data and we are aware of it" (PA2). "We see the point of

(NSC), if we are not preparing students to be successful after high school, then what are we doing? I think having some accountability is good" (PA2). Both participants also mention the support from community and business partners. Graduating students who will be skilled to be gainfully employed are wanted. "They can understand whether a student completed a degree or obtained a certificate. They get that, and that matters" (PA1).

Table 4-14 Patterns for Postsecondary Credential Attainment (PCA) - School A

Construct **Postsecondary Credential Attainment (PCA)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to specific strategies associated with communication and monitoring of data toward a capstone goal of improving postsecondary credential attainment	Both participants mentioned the patterns below that are associated with Postsecondary Credential Attainment at School A. Each of the five patterns below were mentioned by both participants. PA1 mentioned these patterns a total of twenty-one times and PA2 mentioned these patterns a total of sixteen times. *NSC communication (14) *NSC monitoring (8) *established PCA goals (7) *accountability (5) *stakeholder values (3)	Latest data shows we are 69% postsecondary success rate. PA1 We are successful with getting our kids to college, but not only that, completing college or postsecondary. PA1 If it's just for high school (graduation) then we are missing the point. PA2 Every time there is a chance it will come out (NSC). PA1 Some are reluctant to use NSC data. Is that really what's best? Some schools are around 40-50%. PA2 I shared NSC data with our chamber of commerce, so a lot of the business individuals at the beginning of the year. PA2 We use NSC multiple times in multiple facets whether it's

		parent meetings, whether it's community things, whether it's staff meetings, it's used all the time. **PA1**

Summary of School A. School A is relentless in the pursuit to build strong relationships with students and community. The community support for redesign is strong as a result of opportunistic communication efforts. School A is committed to maintaining a high postsecondary credential attainment rate by providing several career pathways (including teaching and training) and numerous internship and civic engagement experiences to increase real-world experiences. School A recognizes that student experiences promote deeper learning and acquisition of necessary skills required for success in school and in life. In addition, School A is transitioning from a counselor-centered model to a hybrid advisory model where all teaching staff will be helping with college and career counseling to increase efficiency with postsecondary planning.

Description of School B

School B is a junior senior high school designated as a Gemini I school by the KSDE and inclusive of grades 6-12. The entire school district's enrollment is 110 students with 15 certified teachers on staff. School B represents the smallest enrollment of the four cases selected for the study with 71 students enrolled in grades (9-12) and is classified as a 1A school district (KSHSAA, 2018). This school is a small rural school located in western Kansas and serves as the only secondary public school in the entire county. School B is located 209.2 miles from the nearest urban area and 23.8 miles from the nearest urban cluster, so it is considered a rural school district.

What's Best for Kids?

The first thing a visitor may notice during a visit to School B is that it seems there is a great sense of school pride and warm atmosphere. The campus boasts a football field behind the school with displays including mascots and school logos. Upon moving into the entrance of the building a large sign displays, "What's Best for Kids?" Upon entering the building, the sign is also posted in the hallways in multiple locations. This focus is reiterated when visiting with school officials that the success of each and every student is important in this school in whatever form that success may look like during secondary educational experiences and the quality of life after graduation for each and every student. A main focus of this school is to ensure that graduates are happy, responsible, and have acquired the skills necessary for whatever pursuits they engage in after high school. This school has built time into their schedule to ensure each teacher meets with a homeroom of students in mixed grades in an advisor role to ensure each individual student's needs are met (academically, socially, psychologically, and physically). This support for staff at this school to give the best education in all domains of well-being begins with support of the superintendent and board of education and encompasses all staff members.

Attributes of the Community

This school is located within a region of Kansas where the main industry is farming and agriculture. The isolation of this school lends to its rurality as being the only school located in its county and is one of the least populated counties in the state. Despite a sparsely populated area in Kansas, the district spans across 619.5 square miles; which, represents the largest area of the four cases studied. The closest school is 23.8 miles away in the nearest urban cluster which is also considered a rural school. Shared staff with this neighboring school is a common practice to ensure teaching staff is available for the curriculum in place. Three staff members are shared

with the neighboring district, and one of the shared staff members is currently working toward a teaching license through an alternative licensure pathway offered at a university 88.4 miles away. KSDE (2018) reports that the students at this school are predominantly Caucasian (79.09%). Hispanic students represent 15.45% of the student population and 5.45% of the student population are designated as "other." No student at this school is identified as migrant, and English Language Learners account for 2.73% of the student population (KSDE, 2018). Students with disabilities account for 14.55% of the student population (KSDE, 2018). Poverty in this school is common. According to KSDE (2018) the percentage of students attending this school designated as economically disadvantaged is 43.64%. In addition, KDOL (2017) reports the annual median wage of this county as $33,219.

Opportunities for Career & Technical Education

Despite challenges presented with rurality, this school is rising to the challenge to ensure students have opportunities for career exploration and curricular choices associated with career and technical education. Coursework is offered on campus to facilitate career and technical education (CTE) pathways. CTE offerings are enhanced through partnerships established with a neighboring school district and sharing of staff. When coursework is not available on campus, a partnership with an education service center located in the region provides online career coursework associated with Senate Bill 155 (SB 155). This school chooses to use online coursework to supplement the curriculum. According to one participant in the study, "We don't transport anybody for dual-credit. It's just too far" (PB1). Notwithstanding of challenges presented by rurality, this school still offers nine CTE pathways for career exploration. Table 4-15 below indicates the pathways associated at this school:

Table 4-15 KSDE approved Career & Technical Education Pathways at School B

Audio-Visual Communications	BioChemistry	Business Finance	Construction	Family, Community, & Consumer Services
Manufacturing	Mobile Equipment Maintenance	Teaching/Training	Web & Digital Communications	

Growth Mindset

Innovation at school B tends to be the norm with a multitude of prototypes in place to design a learning environment reflective of the 21st Century workforce requirements for graduates. Since being designated by the KSDE a Gemini I school in August 2017, many innovative research-based practices have been put in place to pilot. Reflecting upon the process to design a learning environment conducive to providing acquisition of skills and knowledge necessary for the 21st Century, one participant communicated, "there's a lot more buy-in from staff. People are more engaged, whether they want to be or not. They have realized that the train is moving" (PB2). Staff at this school do not support the thinking that redesign of schools is just a phase. "Well, they're just going to go back to the old way, or this is stupid. We squashed that like a bug" (PB2).

Postsecondary Success Indicators

With the target of 70% of high school graduates receiving some form of postsecondary credential by 2020, the five-year success average (years 2012-2016) for this school is 58% meaning that 58% of students who graduated with a high school diploma from this school went on to earn some form of postsecondary credential or are working toward one. (Refer to Appendix F for a comprehensive look at postsecondary success indicators for School B).

The five-year effective average (2012-2016) is 55%. This means that of all students who entered as freshmen and had the potential to graduate from this school began work to acquire a credential after graduation. What is fascinating about School B is that when the KSDE takes into consideration all risk factors; 1) cumulative poverty; 2) student mobility; and 3) chronic absenteeism to predict a rate of effectiveness, this school should be performing between 38.8% and 44.8%. With the actual rate being 55%, this school is outperforming expected outcomes given their risk factors.

In addition, the five-year graduation average between 2012 and 2016 is only one percentage point below the target of 95% set forth by the KSDE with 94% of students who enter as freshmen graduating with a high school diploma. In 2017 the graduation rate at this school was 100% exceeding the 95% target set forth by the state of Kansas. In 2018 the graduation rate at this school was 95.2% also exceeding the target set forth by the state of Kansas. This school is intentional about accountability to each student's acquisition of a high school diploma.

School B Findings

The findings identified are indicative of two participants at this site. The findings from School B will be presented in narrative text and tables as a result of coding processes described previously in this chapter. Throughout the analysis process, the researcher remained faithful to the participants' verbiage. The assistant principal and a lead teacher participated in interviews at School B. The patterns from the findings are represented in the tables below. A summary of patterns across all cases will be presented at the conclusion of this chapter.

An example of data classification for each interview question construct is provided in Table 4-3. Table 4-3 depicts the code, construct, description, and data excerpt for each of the interview question constructs to provide an example of how data was aligned to each interview

question construct. Each data excerpt demonstrates how each statement made by one of two participants at this school concisely aligned with each interview question construct.

Patterns and Themes Emerging from the Data

Patterns emerging from the data were indicative of the interview question constructs selected by the researcher as they framed the literature review. Thus, the constructs identified include (a) purpose of redesign (P); (b) redesign and innovation (RI); (c) career and technical education (CTE); (d) 21st century rural schools (RS); and (e) postsecondary credential attainment.

Purpose of redesign (P). A strong emphasis is placed on "What's Best for Kids" at School B. To further clarify School B's position with regard to "What's Best for Kids" they elaborate to say, "What's Best for Each Kid?" A strong focus to personalize learning for each kid is present at School B. Personalizing learning can look like differentiation in the classroom by teaching to all modalities of learning, such as, visual, auditory, and tactile, but personalized learning at School B also means to ensure each student has a tailored program of study which may guide them toward career interests. Accordingly, School B has also become focused on providing additional career exploration opportunities.

Special attention is given to a discrepancy between GPA's and ACT scores at School B. Both participants mention a disconnect between students maintaining a 4.0 GPA but scoring low on the ACT. It is evident to both participants at school B that academic tenacity may be lacking at their school calling for a culture shift from the traditional framework of education to a redesigned framework that embeds a holistic learning approach. "We have 4.0 students who get 18's and 19's on ACT and begin in college taking remedial courses, that's a huge disconnect" (PB1).

Both participants at School B explained that their main purpose is to ensure each student is successful after high school. It may not mean college, but if students choose a non-college trajectory after high school, it is their hope that each student can be productive with the skills and knowledge to be successful in a job. "Our vision is to provide personalized learning that gets our students to a place that they need to be successful" (PB2).

Table 4-16 Patterns for Purpose of Redesign (P) – School B

Construct Purpose of Redesign (P)	Patterns	Evidence (examples from transcripts)
Description - Refers to the cohesive beliefs, attitudes, perceptions, assumptions, and values exhibited by all members of the staff and stakeholders toward the rationale for redesign	Both participants at School B mentioned the following rationales for the need to redesign. PB1 mentioned each of these rationales seventeen times and PB2 mentioned these rationales twenty-six times when discussing the purpose of redesign: *What's Best for Kids? (5) (8) *academic tenacity (5) (8) *personalized learning (5) (4) *success skills (2) (6)	We need to reach every single student. PB1 Last year in redesign or leadership meetings, a lot of tough decisions had to be made. We always had to say, "Well, what's best for the kids?" PB2 People say, "Why are we doing this change? I don't understand." It's because your student has a 4.0 and she's going to score a 16 on the ACT. That's where we are. Do you want that to happen? She wants to go to K-State and thinks her 4.0 will get her a good scholarship. It's not, you know what's going to get her a good scholarship? Good ACT scores. There's a disconnect because the way things have been, we are not pushing her hard enough or teaching her what she needs to know. PB2 The beauty of my tiny little school district is that we can

		truly look at each individual kid and go, "Well, what do they need?" PB2 "Students have not been loyal to their academic tenacity. PB1 Our students need to be equipped for whatever portion of life they choose to tackle. PB1

Redesign and Innovation (RI). Each local school district in Kansas is encouraged to implement practices reflective of a holistic, student-centered approach. These initiatives should align with the KESA framework (See table 2-1). Schools officially designated as a redesign school in Kansas should also align their initiatives with the KSDE's 4 Principles of Redesign (see Table 2-2). All schools in Kansas should see a boost in results as outlines with the KSDE's measurable outcomes (See table 2-3).

Redesign of a traditional educational framework to match 21st century requirements are unique to each local school district due to community values. Each local school district should ensure their redesign initiatives align with community values, therefore, diversity in the approaches pursued will vary. Consequently, many patterns emerged for the redesign and innovation construct (RI). Patterns at this school site may vary from the patterns associated with redesign in the other participating school sites. Emerging patterns from School B with regard to redesign and innovation will be reported below (Table 4-17 through Table 4-21). A synthesis of the patterns (themes) will be reported at the conclusion of this chapter with themes that emerged concerning redesign and innovation across the cases.

Flex-Mod Scheduling with a Focus on Success Skills. School B's overarching theme of doing what is best for kids reverberates through the redesign and innovation (RI) strategies and approaches they are implementing. This school is intentional about every decision made being in the best interest of their students. "The driving force has always been "What is best for our kids?" (PB2). There is a strong pursuit to tailor an educational environment that is conducive to each individual student at School B. The patterns that emerged are reflective of their purpose to do "What's Best for Kids," to personalize learning, to increase academic tenacity, and to develop success skills necessary for postsecondary success. "My biggest dream is walking in here and I don't have to redirect anybody because they're all engaged in learning. They are all doing what they want to do because they are so passionate about it" (PB2).

School B has embedded an approach with flex-mod scheduling that seamlessly integrates success skill development into the school day absent of adding, yet, another task to be responsible for. Students in grades ten through twelve structure their learning around this flexible scheduling approach. "High school kids love the flex-mod schedule" (PB1). Teaching staff collaborated several times in what School B refers to as, "The War Room."

> We have what's called a module (mod) in our flex-mod schedule. The flex-mod schedule was difficult to piece together. It took hours of conversation, and we used a lot of sticky notes and poster paper. First, we asked teachers what their expectation of time was for teaching their class. Teachers could choose "half-mods" (twenty minutes), forty-minute mods, or more than one. For example, the instructor chose four days a week, twenty-minute mods. She presents information to them traditionally for twenty minutes, they sit and get, they go over it, and they have assignments to work on. The students then have to use their flexible time to complete what they need to complete for the next class. We used

to have fifty-minute class schedules. Managing time is one of the biggest push backs from the kids because they used to have longer class periods with free time" (PB1).

The flex-mod schedule not only provides flexibility and choice for the teacher, it also provides an opportunity for flexibility and choice for students. School B has a focus room for students who need structure and silence to work on tasks as their flex time allows. There is also a flex room for students to use as they see the need to when they have additional time. Students have choice as to how they structure and use their time. "My favorite thing is when you say, "Show me your schedule," every kid has taken that flex-mod schedule and made their own version. It's amazing because they "own" it" (PB2). Students need to be intentional about organization because five different schedules are in place, one for each day of the week.

Both participants at School B mentioned several success skills embedded in this approach that enhance non-cognitive (non-academic) skill development; such as, building agency, time management, responsibility, creativity, critical thinking, and independence to pursue college or career interests. Building student agency was mentioned with the most frequency by both participants. (Manning, Kinzie, & Schuh, 2014) describe student agency as a "capacity to exercise control over the nature and quality of one's life" (p. 146). A student demonstrates agency by taking initiative, self-regulating, being assertive, and persisting through tasks. (See Figure 2-1).

There are other benefits with implementation of the flex-mod at School B. Both participants stated, "We can prepare them for ACT with flex-mod"(PB1 & PB2). Both participants also mentioned that students can be creative with their flexible time in pursuing learning interests such as work-study, college coursework, or career exploration. The participants at this school do not claim the schedule works perfectly, yet. There are always

iterations to be made. In spite of a few little kinks, "The students advocate for themselves way more than they ever did in the past" (PB2).

Table 4-17 Patterns for Redesign & Innovation (RI) – Flex-Mod Scheduling with a Focus on Success Skills - School B

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with flex-mod scheduling with a focus on success skills at School B. Each of the six patterns below were mentioned by both participants. PB1 mentioned these patterns a total of thirty-one times and PB2 mentioned these patterns a total of fourteen times. *building student agency (17) *time management (9) *choice (6) *responsibility (4) *engaged (3) *creativity (3) *ACT Preparation (3)	We do what's best for kids by facilitating and managing time. PB1 Students have to be intentional. Students have had to learn to go out and ask. PB1 We have more flexibility to prepare them for ACT with flex-mod. PB1 We are starting to see more kids taking initiative for their future. PB2 With flex-mod, students can take additional college work and work study with regular coursework if they like. PB1 Flex-mod provides students with the opportunity to explore, figure out a plan, and get it. PB1 Flex-mod is beautiful for some classes because they have longer periods of time. PB1 There are kids fluxing in and out, possibly every 20 minutes. So, this kid comes in, you know for 120 minutes

		and he leaves. A teacher has 2 more come in. Do I expect that teacher to stop and every 20 minutes take attendance? PB1

Summit Learning. Summit Learning is a new curricular platform that was recently adopted at School B. Summit Learning is a free online platform that School B selected as a vehicle to impact many of their redesign goals. Summit learning focuses on key elements for college and career readiness that was appealing to School B including, but not limited to, enrichment of learning through personalized learning, enrichment of cognitive skills with project-based learning components, mentoring with social-emotional character development (SECD), and real-world connections. Both participants at School B believe that when all of these components are addressed as a holistic approach, the rigor is boosted, and students are more engaged. A team representing School B, comprised of parents, teachers, and students, visited schools with Summit Learning. School B listened to high school students' feedback and chose not to implement Summit Learning in grades ten through twelve. Summit learning is implemented at School B in grades seven through nine. "We felt giving 7-9 graders a little bit more independence, taking charge and thinking at a higher level would benefit 7-9 in grades 10-12" (PB1).

Table 4-18 Patterns for Redesign & Innovation (RI) – Summit Learning - School B

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors	Both participants mentioned the patterns below that are associated with Summit Learning at School B. Each of the six patterns below were mentioned by both participants. PB1 mentioned	We went to grades 7-9 Summit Learning platform. PB1 Summit Learning incorporates self-directed learning. PB1

and the support to enhance completion that may vary from traditional educational approaches	these patterns a total of eleven times and PB2 mentioned these patterns a total of thirteen times. *mentoring (6) *rigor (6) *engaged (4) *self-directed (3) *personalized (3) *project-based learning (2)	With Summit, you see 3 or 4 over here working together, some working independently, but all are engaged. PB1 I can tell you kids are 50% more engaged with Summit than they ever would be if I was standing at the front of the room doing what I would've done to teach them the topic. PB2 Students are engaged talking with each other about their learning. They are learning a lot. PB2 We are doing one-on-one mentoring in homerooms with Summit. PB2

Homeroom. Daily time established for, what has been referred to in other schools as advisory period, is allotted for homeroom time at School B. The main focus of homeroom at School B is building relationships and mentoring students. Many components associated with the social-emotional and character development (SECD) standards set forth by KSDE are addressed during homeroom time. Homeroom also encompasses guidance for students as they work through Career Cruising (a web-based college and career exploration tool) to refine their individual plans of study (educational programs/plans) that address their postsecondary goals. A part-time counselor helps send out a pacing calendar of tasks that should be done during each month as a guide, but teachers have flexibility in how they support students in each homeroom.

Students at School B begin their day meeting with their homeroom teacher as a "check-in" for seventeen minutes, then again at the end of the day for fifteen minutes. Weekly goals identified by students with support of the homeroom teacher are established and monitored by the homeroom teacher during this time. Embedded within this homeroom time is an established one-on-one mentoring piece as guided by a newly adopted curriculum known as the Summit Learning platform (a web-based personalized learning platform). "I sit down with 6 or 7 freshmen for ten minutes each once a week. They will talk to you one-on-one. I have noticed a positive change in attitude from kids since mentoring" (PB2).

Teachers at School B are accountable for mentoring in homeroom by collecting data. However, both participants acknowledge that even adults sometimes too, struggle with building relationships and mentoring. Both participants feel that they still don't have all the answers to ensure consistency and more support in mentoring would be beneficial. "Some people are doing mentoring and documenting with more fidelity than others" (PB2). Both participants expressed that it is a work in progress and more professional development in this area would be beneficial.

Table 4-19 Patterns for Redesign & Innovation (RI) – Homeroom - School B

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with homeroom at School B. Each of the nine patterns below were mentioned by both participants. PB1 mentioned these patterns a total of sixteen times and PB2 mentioned these patterns a total of twenty-five times. *mentoring (6)	We did mentor training with Summit. We place a heavy emphasis on social-emotional. You can't skip it. You can't "not" do it. It has to be important. You have to do it. PB2 You learn things about your students in these one-on-one mentoring sessions. PB2 SECD is supported through

	*relationships (6) *individual plans of study (IPS) (5) *Career Cruising (5) *pseudo-counselor (4) *social-emotional character development (SECD) (4) *goal-setting (4) *fidelity (4) *career interests (3)	our culture, but also our conversations we have with kids. PB1 I feel like that IPS is really integrated into our homeroom which is at the beginning of the day and again at the end of the day. PB2 We are always working to make homeroom a little bit better for the kids. PB1 Our pseudo-counselor sends us updates like, "October is anti-bullying month," but nothing is super regulated. PB2 We have to collect data on SECD for accountability. PB2 Have we looked at the SECD standards? No. It's not something I've done personally. It's something that probably as a staff we need to do. PB2

Innovation and Iteration. Both participants at School B recognize that to grow with innovation, you must be willing to take risks and iterate as you work to address and improve various components within your school, especially within redesign. A shift in the culture of the school is in progress with regard to 21st century learning.

Both participants recognize that while they are making great gains in transforming their approach to teaching, learning, and skill development, they still don't have all the answers. Both

participants expressed an intentionality with regard to innovation and iteration of the strategies they have implemented. "Long-term we know we have to make adjustments" (PB1).

It is evident that School B focuses on what is best for each kid in their schools, even when they are implementing or iterating and implementation. Sometimes you learn best by watching others in education, and this school has traveled frequently to visit other schools with Summit Learning and flex-mod scheduling.

The staff at School B is engaged through continuous dialogue empowering teachers to attempt innovation in their classrooms and promote buy-in. "We have had conversation, after conversation, after conversation" (PB1). "We have spent a great deal of time in the "War Room" (PB1). Both participants recognize with any change, it takes time.

School B does focus on social-emotional character development, but both participants agree that more professional development is needed in this area. There were other components mentioned, such as, collaboration with community and research for best-practice, but these two items were not mentioned by both participants, and therefore, not recorded in the table below.

Table 4-20 Patterns for Redesign & Innovation (RI) – Innovation and Iteration - School B

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with innovation and iteration at School B. Each of the eight patterns below were mentioned by both participants. PB1 mentioned these patterns a total of twenty-two times and PB2 mentioned these patterns a total of twelve times. *collaboration (8)	We could use more professional development because we know social-emotional is important. PB2 We started to go to other places to see what other schools were doing. PB2 We have been in several conference calls learning from other schools. PB1

	*social-emotional character development (SECD) (6) *kid focus (4) *time (4) *school visits (3) *research (2) *iterations (2) *piloting initiatives (2)	There's always room for improvement. PB2 We did more research on flex-mod scheduling and have learned a few things we want to change next year. PB1 We piloted flex-mod with our existing schedule last spring for last 4 weeks. PB1

Student-Led Conferences. School B implements student-led conferences. This form of parent/teacher conference is led by the student with the homeroom teacher present for support and guidance. At school B, the Summit Learning platform is shared with parents and dialogue is encouraged. Students also share about their career focus, plans, and projects. Both participants shared that they feel student-led conferences encourage students to take ownership for their learning and encourage students to take initiative for their learning. "Student-led conferences force those kids to really have that conversation with their parent about where they are going because that may not happen at home or be on their priority list" (PB2).

Table 4-21 Patterns for Redesign & Innovation (RI) – Student-Led Conferences - School B

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with student-led conferences at School B. Each of the four patterns below were mentioned by both participants. PB1 mentioned these patterns a total of four times and PB2 mentioned these patterns a total of four times.	The students will go through projects they have done, habits of success, review what they are working on, and share what they're good at. PB1 During student-led conferences I may have to say, "So okay, do we need to start looking at applications? We are going to print them out Monday." PB2

	*homeroom (2) *ownership (2) *career exploration focus (2) *initiative (2)	We are starting to see more kids taking initiative for their future. PB2 Students share their individual plans of study at student-led conferences. PB1 All parents have had access to the Summit parent portal but not many parents have taken advantage of it. PB1

Career and Technical Education (CTE). In total, School B has implemented five career and technical education (CTE) pathways. The main pattern emerging from CTE at school B is the opportunity for students to drive some of the opportunities for career exploration and skill acquisition. School B is located in an area where agriculture is the main industry, so kids advocated for an Agriculture pathway with the Future Farmers of America (FFA) program recently being established as a career and technical student organization (CTSO). Both participants at School B mentioned the relevance of learning that comes with pathway participation as many students enroll in pathway coursework when they have an interest in specific careers associated with the pathway. So, in a sense, career pathways are student-driven and should reflect student interests.

SB 155, a senate bill known as "the Governor's CTE Bill" was introduced in Kansas in 2012. SB 155 incentivizes students to pursue in demand and high wage occupations by offering free tuition or reimbursable tuition for coursework that leads to a certification. Both participants at this school mentioned that SB155 coursework is all taken through online programs. The

online SB155 courses are delivered online through a platform supported by a regional educational service center.

Both participants at this school recognized the need for career pathways to develop skills connected to student career interests, however, both participants noted they are still learning about CTE, with much to be learned. One participant mentioned with frequency the benefit of funding that comes with CTE, but also asserted that is not the purpose for CTE integrations. Another participant mentioned the difficulty that comes with finding qualified candidates to teach CTE coursework in a rural area, which will be discussed subsequently.

Table 4-22 Patterns for Career and Technical Education (CTE) - School B

Construct **Career & Technical** **Education (CTE)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to learning experiences that integrate academic with technical and relevant learning experiences structured in a formal pathway toward student career interests	Both participants mentioned the patterns below that are associated with career and technical education (CTE) at School B. Each of the four patterns below were mentioned by both participants. PB1 mentioned these patterns a total of five times and PB2 mentioned these patterns a total of ten times. *student-driven (6) *online SB155 (4) *skill acquisition (3) *support for implementation (2)	Kids advocated for their FFA program and we got it last year. PB1 Our online courses are Senate Bill 155 courses. PB2 I think the ultimate goal of those courses (CTE) are ultimately about relevance. PB2 Our students do learn the skills to be successful in a technical program. PB1 I'm still learning much about the whole CTE and how it works. PB1

		I was supported and encouraged to implement a pathway (Biochemistry) by the service center. PB2

Rural Schools (RS). School B participants shared many aspects about the dynamics of teaching and learning in a rural school. A heavy emphasis was placed upon the scarce resources that are available to rural schools. The participants in School B recognize that it is challenging for rural school districts to find qualified candidates to meet the needs of the curriculum. School B has formed a partnership with a neighboring school district located sixteen miles away and shares three teachers. This means that School B gets an Agriculture teacher, a Physics teacher, and a Family and Consumer Science teacher for two to three hours a day. “We have the teacher we share for about 2 and a half hours each day and squeeze every minute we can" (PB1). School B also partners with the same neighboring district to offer CTSO's associated with career pathways. Both participants also mentioned that often teachers are hired that are working through alternative licensure programs for teaching. Though this does not indicate those individuals are incapable of good teaching, it does indicate there is a teacher candidate shortage for rural areas. In fact, School B employs a part-time counselor and has formed a partnership with a behavioral and health service center in a town twenty-four miles away. This service center sends a specialist to work with specific students one time per week. Both participants also mention that due to a small teaching staff and limited funding in a small district, the students often take many career exploration courses online. “Dual credit students enroll for online dual credit online from a postsecondary institution forty-five miles away" (PB1). School B's teaching

staff consists of two teachers who have earned master's degrees. Both participants eluded to the fact that the teaching staff doesn't see the value in pursuing a master's degree. Many teachers at School B believe it is not lucrative to do so when comparing cost versus small rural school teaching salaries which tend to be smaller than urban teaching salaries. CTE is also impacted at School B with limited industry in the area. It is often difficult to find industry representatives in the area to serve on advisory committees for the career pathways. Though both participants did not share about the teaching/training career pathway, School B has established it. Rural schools often “grow their own” teachers, and this could benefit School B as teaching positions are needed to be filled in the future.

In addition to scarce resources, the participants at School B mention the challenges associated with having a small teaching staff. Often, one teacher represents a whole department. The participants cited many reasons a one-teacher department is a challenge. One challenge is that if a teacher is weak in a certain aspect of content, there is no other person to lean on for support. Though content support may be limited, technology has made collaboration more accessible. "We created Google Communities through our league where people can get on and share" (PB2). Another aspect cited as a challenge with a one-teacher department is that sometimes personalities don't match between a student and a teacher. "People jive a little bit easier than others, in a large school, if you don't get along with this teacher, you can ask someone else" (PB1). Personalized learning can also become affected as one teacher typically has developed a style of teaching that may not match a student's style of learning. When and if this happens, students typically want to take that specific class online instead of on-campus. “Some students wanted to take courses we offered on-campus online, but only allowed two. We only allow this with schedule conflicts" (PB1).

Both participants mentioned sporadic community support for postsecondary success goals. School B is located in a community with some economically disadvantaged students and is predominantly a farming community. Though there are community members who support postsecondary credential attainment, there are some that have a varying definition for success. "In this community some low socio-economic members exist, but also farming. "I'm going to take over the farm" why can't we count this as success" (PB1)?

School B is no exception when it comes to staff wearing many different hats. Both participants at this site mention that with a small staff, you still have to complete the same tasks. There is just less help. With many roles comes a heavier workload. Both participants mentioned the amount of time spent working outside of the school day. "A teacher has taken the lead with flex-mod scheduling. She spent the month of July working on that" (PB1).

Though there are challenges with the dynamics of rural schools, both participants mentioned the benefit of a smaller enrollment. "You know the students. In a small district you can take that data and have personal conversations. "What happened this year? What are your plans" (PB1)? Tracking postsecondary credential attainment is more manageable with a smaller number of kids who you know personally. "It's easier to track the data in a small district" (PB1). Both participants at School B site their location as a limitation specifically regarding career exploration and collaboration. "We don't transport anybody for dual-credit. It's just too far" (PB1). "If you don't have those supportive connections in your content, sometimes there's nobody that can help you. You are just isolated" (PB2).

Table 4-23 Patterns for Rural Schools (RS) - School B

Construct Rural Schools (RS)	Patterns	Evidence (examples from transcripts)
Refers to characteristics present in rural school settings	Both participants mentioned the patterns below that are associated with rural schools at School B. Each of the six patterns below were mentioned by both participants. PB1 mentioned these patterns a total of thirty-seven times and PB2 mentioned these patterns a total of twenty-two times. *scarce resources (22) *1 teacher per department (12) *limited community support for postsecondary (9) *overtime/many roles (8) *know the kids (6) *isolation (2)	Who is going to be on my advisory committee for biochemistry? PB2 4H kids who had exposure to the FFA crew in neighboring district, about ten of them begged, so the neighboring district was gracious enough to include those kids last year in several trips and learning sessions. They loved it so we worked it out for them in cooperation with neighboring district. PB1 Accommodating various learning styles in rural school with one teacher is challenging. PB1 We're in a community where education is valued by some, but not by all. PB1 I have 6 preps. I'm trying to write 30 fantastic plans a week. PB2 This year I picked up another hat, PBL director. PB2 The beauty of my tiny little school district is that we can truly look at each individual kid and go, “well, what do they need?” PB2

		We are small enough we can recognize barriers to learning and hone it down. PB1 We don't transport anybody for dual-credit. It's just too far. PB1

Postsecondary Credential Attainment(PCA). School B uses NSC data as one component to measure postsecondary credential attainment. However, NSC data is used more for personal conversations, building leadership team, and KESA team dialogue. Some other measures to monitor postsecondary credential attainment progress is through activities in homerooms. Both participants shared with a small school you have strong student/teacher relationships so college and career planning is better facilitated in small groups in homeroom. Since some teachers are “lifers” in the community, a stronger bond is formed with students for more efficient planning. NSC data is shared with the full staff on occasion, but "as far as teacher's familiarity, they would probably say, oh it's that graph, I remember that. It's fascinating data. What is success? The KSDE's definition makes sense, but there's discrepancies with the data, like I don't think the military shows up there" (PB2). Both participants mention that the definition of success at School B varies slightly from a credential mindset and fosters more of a support for students to be successful after high school in whatever path each student chooses. "I would not say our definition of postsecondary success perfectly aligns. Here's my goal. When you walk out of here, I want you to pay your bills, and pay for your insurance, I mean, I don't want to have to pay for you. I want you to be a productive citizen who can do what you want to do, but most importantly, I don't want to have to pay for you the rest of your life. I want you to have a job" (PB2).

Both participants mention there is varying opinions on what constitutes a successful high school graduate within their community. Some members of the community support postsecondary credential attainment and others do not. "Some parents dropped out or only finished high school, so the students will be fine, why do they need that" (PB1). Developing a cohesive approach within the community to support postsecondary credential attainment will take time and collaboration.

Since the Kansans Can Vision for education was launched, priorities have shifted at School B. It is no longer the traditional mindset of graduating students who have earned enough credits. School B has been creative in providing online college coursework, though both participants stated there is little dialogue that happens between them and the postsecondary institution forty-five miles away that supports the online coursework. School B has integrated college and career preparation initiatives, such as, work-study, college and career exploration off-campus, and supports career planning in homerooms. Again, the purpose for transforming the learning environment at School B rang out loud and clear with both participants revisiting the stance of "What's Best for Kids?"

Table 4-24 Patterns for Postsecondary Credential Attainment (PCA) - School B

Construct Postsecondary Credential Attainment (PCA)	Patterns	Evidence (examples from transcripts)
Refers to specific strategies associated with communication and monitoring of data toward a capstone goal of improving postsecondary credential attainment	Both participants mentioned the patterns below that are associated with postsecondary credential attainment at School B. Each of the five patterns below were mentioned by both participants. PB1 mentioned these patterns a total of twenty-four times and PB2 mentioned these patterns a	In a small district you can take that data and have personal conversations. "What happened this year? What are your plans? PB1 Our school employees may be "lifers" in the community, so tracking is easier. PB1

	total of sixteen times. *multiple measures to monitor PCA (16) *community cohesiveness (10) *shifting priorities (6) * "What's best for kids?" (4) *relationships with postsecondary (4)	We know the students. For us it's finding out is it a knowledge issue or motivational issue? PB1 Breaking down those barriers and exposing kids to some postsecondary options has been difficult. PB1 The last couple of years we've provided more opportunities for college exploration. PB2 Today we have four kids at a college for a KU Medical event. PB2 I don't think we have conversation with postsecondary institutions. PB2

Summary of School B. "What's Best for Kids" is School B's motto. The intentional design of the school's structure from Summit Learning in grades seven through nine and a flex-mod schedule for grades ten through twelve accomplishes many redesign goals. Student choice, personalized learning, and increased rigor is integrated with the Summit Learning platform. Student success skills necessary for success in postsecondary endeavors are developed through placing ownership of learning on the students by requiring students to manage time, self-regulate, and build agency. Homeroom (advisory) periods have been established in a hybrid model where all teachers are responsible for college and career planning with all students.

Career pathways are available, including teaching and training, even though it has been a challenge to establish them due to geographic isolation.

Description of School C

School C is designated as a Mercury redesign school by the KSDE. This school is a senior high school serving grades 9-12 and serves as the only high school in its district with a total enrollment of 91 students and employs 14 certified teachers. This school serves as one of two buildings in the school district with the other school serving as the grade school/junior high school. Total enrollment in both schools is 331 students. The district is located in rural Northwest Central Kansas and is classified as a 1A district (KSHSAA, 2018).

A Vision for All

This school embarked upon the redesign journey by identifying the purpose of the school's role in each student's life. "We want our vision to be applicable to every grade level, to every student, to any point in time" (PC1). Focusing on future goals is often isolated at the high school level, but not at this school. As one participant from this school shared, "we want that 8th grader to be ready for their short-term future for 8th grade year, and we also want that 2nd grader to be ready to move from 2nd to 3rd grade" (PC1). This school's vision to ensure all students are prepared for life focuses on goal setting and planning that is truly tailored to student desired outcomes.

Attributes of the Community

This school is located within a sparsely populated region of Kansas. The school district spans across a 444.8 square mile area and according to the U.S. Census (2010) this school is located within the 2nd largest community within its county with a population of 1,329. The largest community's population in the same county is 1,903 with the five other communities in

the county's populations representing less than 200 each (U.S. Census, 2010). The school is located 163 miles from the nearest urban area and the nearest urban cluster is a distance of 40 miles. This community averages 6 people inhabiting the area per square mile (U.S. Census, 2010).

The KSDE (2018) reports that students at this school are predominantly Caucasian representing 92.3% of the student body. Hispanic students represent 5.49% of the student population, 1.10% are African American, and 1.10% represent "other." No student at this school is identified as migrant, and English Language Learners account for 1.10% of the student population (KSDE, 2018). Students with disabilities account for 34.07% of the student population (KSDE, 2018). The United States Department of Education (2016) reports that average percentages for students identified with disabilities hovers between 12-14% nationally, so this percentage is high. Poverty in this school is common. According to the KSDE (2018) the percentage of students attending this school designated as economically disadvantaged is 43.96%. Correspondingly, KDOL (2017) reports the annual median wage of this county as $30,904.

Opportunities for Career and Technical Education

School C employs 12 certified teachers. Despite geographic distance from urban areas and a small number of certified teachers, this school seeks opportunities to provide career and technical education and learning experiences that match industry needs in their community. Currently, this school is in the process of researching the possibility of additional pathways while giving specific attention to integrating competencies defined within each pathway across core academics. A participant in this study from School C explained that experiences are sought for students to engage in real-world learning in addition to the pathways' content in which students

are exposed. Both participants at this school site offered a glimpse of experiences students have with regard to internships or job shadowing. One participant stated, "our internships have been organized through our counselor. All they [seniors] need is Government and another math class, so they have this block of time. These are the kids that typically get internships. I think eventually it will change" (PC2). School C is seeking further opportunities to expand real-world learning through the experiences that job-shadow, work-study, or internships can provide. (See Table 4-25 for pathways approved by the KSDE at School C.)

Table 4-25 KSDE approved Career & Technical Education Pathways at School C

Comprehensive Agriculture Science	Construction & Design	Family, Community, & Consumer Services	Power, Structural, & Technical Systems	Web & Digital Communications

Postsecondary Success Indicators

School C utilizes the postsecondary data from the NSC StudentTracker data. This school's five-year success average is reported as 57% meaning that 57% of students who graduated with a high school diploma from this school went on to earn some form of postsecondary credential or are working toward one. (Refer to Appendix F for a comprehensive look at postsecondary success indicators for School C).

The five-year effective average (2012-2016) is 52% meaning that 52% of all students who entered as freshmen and had the potential to graduate and begin work to acquire a credential after high school, or acquire a credential, did so. The KSDE takes into consideration all risk factors 1) cumulative poverty; 2) student mobility; and 3) chronic absenteeism, to predict a rate of effectiveness this school should be performing to arrive at a predicted effectiveness rate.

School C is predicted to perform between 44.7% and 48.5%. With the actual rate being 52%, this school is outperforming expected outcomes given their risk factors. This school is also closing in on the 95% graduation rate target set forth by the KSDE with a 5-year graduation rate average of 91%.

School C Findings

The findings identified are indicative of two participants at this site. The findings from School C will be presented in narrative text and tables as a result of coding processes described previously in this chapter. Throughout the analysis process, the researcher remained faithful to the participants' verbiage. Two lead teachers participated in interviews at School C. The patterns from the findings are represented in the tables below. A summary of patterns across all cases will be presented at the conclusion of this chapter.

An example of data classification for each interview question construct is provided in Table 4-3. Table 4-3 depicts the code, construct, description, and data excerpt for each of the interview question constructs to provide an example of how data was aligned to each interview question construct. Each data excerpt demonstrates how each statement made by one of two participants at this school concisely aligned with each interview question construct.

Patterns and Themes Emerging from the Data

Patterns emerging from the data were indicative of the interview question constructs selected by the researcher as they framed the literature review. Thus, the constructs identified include (a) purpose of redesign (P); (b) redesign and innovation (RI); (c) career and technical education (CTE); (d) 21st century rural schools (RS); and (e) postsecondary credential attainment.

Purpose of redesign (P). School C is a KSDE designated Mercury redesign school. The purpose for redesign at School C places a heavy emphasis on helping kids be successful in whatever path they may choose in life. "Our purpose for redesign is helping our students meet their potential in whatever it is they want to do after high school" (PC1). Both participants mentioned the inefficiencies of a traditional framework for education and cited that there is always room for improvement. School C's approach ensures their graduates are responsible citizens by assisting each student to visualize a future. School C helps students recognize short-term goals and how each goal attributes to long term goals. No matter the age of the student, there is always that next step to be prepared for. "Whether that's a senior that's walking out ready for the real world, whether they are going to college, or whether they are going to a career or whatever, we want them to be prepared. We also want that 8th grader to be ready for what they are looking at in their short-term future for 8th grade year. We want that 2nd grader to be ready to move from 2nd grade to 3rd grade. We want our students to be, "Mascot Ready" (PC2). (The researcher used mascot in place of the actual mascot label to ensure confidentiality.)

Table 4-26 Patterns for Purpose of Redesign (P) - School C

Construct **Purpose of Redesign (P)**	**Patterns**	**Evidence** **(examples from transcripts)**
Description - Refers to the cohesive beliefs, attitudes, perceptions, assumptions, and values exhibited by all members of the staff and stakeholders toward the rationale for redesign	Both participants mentioned the patterns below that are associated with the purpose of redesign at School C. Each of the three patterns below were mentioned by both participants. PC1 mentioned these patterns a total of four times and PC2 mentioned these patterns a total of ten times. *[mascot] “Ready” (7)	It puts accountability for preparation of students for all teachers all the way along the line. My kid has to be ready for that next step. PC2 We want our graduates to be responsible members of society to reach their goals. PC1 We want that student no matter what range to be ready

	*Support each student (5) *improving inefficiencies (2)	for what they have to look forward to in their short-term future. PC2 The past twenty years has been focused on the low range student, the medium to low range student. Efforts had been focused on that group with No Child Left Behind. If a student was already proficient, we would give them enough to keep them busy, but not necessarily challenge them or push them any further. Okay, they got an A, so they got an A. What more do you want from them? I want to extend their learning. PC2

Redesign and Innovation (RI). Each local school district in Kansas is encouraged to implement practices reflective of a holistic, student-centered approach. These initiatives should align with the KESA framework (See table 2-1). Schools officially designated as a redesign school in Kansas should also align their initiatives with the 4 Principles of Redesign (see Table 2-2). All schools in Kansas should see a boost in results as outlines with KSDE's measurable outcomes (See table 2-3).

Redesign of a traditional educational framework to match 21st century requirements are unique to each local school district due to community values. Each local school district should ensure their redesign initiatives align with community values, therefore, diversity in the approaches pursued will vary. Consequently, many patterns emerged for the redesign and innovation construct (RI). Patterns at this school site may vary from the patterns associated with

redesign in the other participating school sites. Emerging patterns from school C with regard to redesign and innovation will be reported below (Table 4-27 through Table 4-31). A synthesis of the patterns (themes) will be reported at the conclusion of this chapter with themes that emerged concerning redesign and innovation across the cases.

Non-academic skill development. Both participants reiterated prioritization on non-academic development at school C. Social-emotional character development is really our one big, huge initiative" (PC1). "I think social-emotional pieces will change the culture of a school drastically. That in itself aids the academic learning that goes on" (PC2). In support of facilitating non-academic skill development, school C recently integrated "Communities." Each of the fourteen teachers at School C are responsible for their assigned community. Each teacher's assigned students report to them for the first ten minutes of the day, and again for the last twenty minutes of each day. "When we check in with them at the beginning of the day to see how they are doing, if somebody is having a bad day, we can help them" (PC1). Structured activities are facilitated during the twenty-minute time period at the end of the day, such as, individual plans of study through Career Cruising (a web-based college and career exploration tool), lessons structured around Anderson's (2008) "Sixteen Habits of Mind," and developing a vision board for each student. Vision boards assist in conceptualization of future goals. Both participants mentioned the necessity of fostering positive relationships with students. Communities provides a context for developing a strong relationship with fewer students. "Relationships are the most important component you can have" (PC2).

Table 4-27 Patterns for Redesign and Innovation (RI) – Non-academic Skill Development - School C

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with non-academic skill development at School C. Each of the four patterns below were mentioned by both participants. PC1 mentioned these patterns a total of thirteen times and PC2 mentioned these patterns a total of eleven times. *communities (7) *individual plan of study (7) *relationships (5) *social-emotional (5)	Then from the research we conducted, we decided that having community groups would be the best way to go. PC1 We are doing some structured things with them at the end of the day for that twenty minutes. We are doing our individual plans of study with Career Cruising and right now they are creating a Vision Board. PC1 Our goal is by the end of this year each student has an individualized plan of study just like you would in the special education department. PC2 That's where I envision the individual plan of study going. You're not going to limit the top students. Each student can personalize. PC2 We have talked a lot about how trauma affects our students and our teachers. PC1 A relationship that a teacher has with a student makes all the difference in the world. PC2

		We have learned that having a strong relationship with an adult can help students learn more. PC1

Standards-Based Grading. School C began their 2018-2019 school year with the implementation of standards-based grading. Both participants at School C mentioned that authentic grading based on skill acquisition makes sense, but there have been some challenges along with the benefits of implementation. Both participants described how a big transition from the traditional letter grade system has promoted collaboration among a rural high school staff that tended to be isolated within each department. "I've witnessed in the high school a breakdown of those walls and we are working together" (PC2). The staff has participated in many workshops, trainings, and conduct research as a group. "Traditional grades are so arbitrary, like you could do extra credit and fail all tests, but still come out with the same grade, so standards-based grading makes sense, but it's hard though" (PC1).

Both participants refer to the amount of time needed to collaborate, calibrate, and learn together. Both participants mentioned aspects of implementing big culture shifts. “I caution anyone to be mindful about how much you try to implement at one time” (PC2). “I felt like the cart was put ahead of the horse on that one” (PC1). Planning is necessary and the time commitment is vital. “Our administrator came in and said, "Hey Monday morning I'm going to take all the students in the gym. All teachers go here and sit down, you work on this until you get it figured out. That time to collaborate is huge"(PC2). Through the process of implementation, the staff has worked together to refine components. "We were probably this close to throwing it in the trash can and say, no we are going to go back to the old way. That time piece is huge"(PC2).

It took some time for teachers to calibrate with standards-based grading and was still a work in progress at the time of this study. Both participants recognized standards-based grading is a huge shift from the traditional practices associated with arbitrary letter grades but is a better practice. At the time of the study, teachers and parents alike were still trying to become accustomed to the new way of grading. In addition, keeping track of standards with the student information system (PowerSchool) was developed and some minor technical issues had to be addressed. Both participants made reference to the question of how this may impact matriculation into postsecondary institutions still utilizing grade-point averages for admission. (School C has since developed a conversion system to calculate grade-point averages from standards-based reporting.)

Table 4-28 Patterns for Redesign and Innovation (RI) – Standards-Based Grading - School C

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with standards-based grading at School C. Each of the six patterns below were mentioned by both participants. PC1 mentioned these patterns a total of fourteen times and PC2 mentioned these patterns a total of ten times. *significant change (5) *developing (5) *communication (4) *capacity (4) *time (3) *authentic (3)	Our parents are up in arms because, "Oh my gosh! These are the grades! PC1 Every one of our assignments, how we are doing it is like every category on our PowerSchool pertains to one of those standards or competencies. PC1 We decided to go with standards-based grading, but we are struggling with the technology part of it as well. PC1 Time to collaborate is huge. PC2

		We had a trainer come from KSDE to help train us in what they call evidence-based grading. PC1

Parent EdCamp. School C implemented Parent EdCamps during the 2017-2018 school year. Both participants described the Parent EdCamp as being parent and community-driven by seeking input from parents and community members about topics they wanted to discuss regarding any component of redesign. Parent EdCamps are set up as community round-table discussions derived from feedback from the community on topics they would like to discuss. Surveys and fliers are sent out electronically, published locally, and posted around area businesses. Feedback from the parents and community are collected and utilized to drive the topics of the Parent EdCamp discussions. The selected topics and only the selected topics are discussed in small groups at the Parent EdCamp. "We would have four or five tables set up. Two to three teachers at each table and then the parents or community member could come in and say, "Okay, I want to hear about this topic." The round-table discussions split parents up into different places, listening and asking questions in smaller groups. Then in ten minutes we would switch" (PC2). Prior to Parent EdCamps, School C attempted to have community meetings that were open to discussion about any topic as a whole group. "We had a parent information night for redesign so parents could ask questions. "The first one was a witch hunt. We had angry parents; they were torqued! We honed that into a Parent EdCamp format" (PC2). Both participants stated that discussing relevant topics guided by stakeholder input in focused smaller groups is more productive.

Table 4-29 Patterns for Redesign and Innovation (RI) – Parent EdCamp - School C

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with Parent EdCamps at School C. Each of the three patterns below were mentioned by both participants. PC1 mentioned these patterns a total of ten times and PC2 mentioned these patterns a total of nine times. *communication (9) *seeking input (6) *relevance (4)	I would suggest EdCamp style with four main topics instead of community meetings for communication. PC2 We sent out a survey on things parents would like to talk about. Then the top four we set up little tables and they could go to each table and talk about it with teachers at each table. After ten minutes we switch. PC1 We would put a flier out and ask for topics that they wanted to discuss, and then we would set an agenda and say these are the topics we are going to discuss EdCamp style. PC2 Parent camps use the rule of two feet. If it was a topic they didn't want to talk about, they could move, and it wouldn't hurt anybody's feelings. PC1

Personalized Learning. School C is intentional about implementation of personalized learning. At the time of the study, School C was involved in conducting more research on the topic in teacher-led research teams. Staff at School C were also attending various workshops and

receiving training. There is still discussion regarding what personalized learning is and what it will look like at School C. Both participants mentioned there is some piloting of personalized learning happening, but in isolation in few classrooms at the time of the study. "In our high school it probably looks a little bit more like differentiated learning than personalized learning" (PC2). When asked about personalized learning, both participants stated that there is one component implemented so far. In the high school we are using Reading Plus. It can determine reading speed and they can choose subjects they are interested in to read. It's a requirement for the English class" (PC1). Both participants mentioned the individualized learning plans' potential to drive personalized learning. "That's where I envision the individual plan of study going. You're not going to limit the top students. Each student can personalize" (PC2).

Table 4-30 Patterns for Redesign and Innovation (RI) – Personalized Learning - School C

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with Personalized Learning at School C. Each of the four patterns below were mentioned by both participants. PC1 mentioned these patterns a total of five times and PC2 mentioned these patterns a total of six times. *developing (4) *piloting (3) *Reading Plus (2) *individual plans of study (2)	We are getting more professional development to broaden our knowledge on personalized learning. PC2 Personalized learning won't be so much teacher-led as much as the student will be working at their pace on the things they need to be working on and the teacher will simply be a facilitator. PC2 I feel like individual plans of study is "what's your goal and how's your classes set up. There are other people that believe it's the personalized learning part. PC1 We are working toward

		students doing a digital portfolio that starts in 7th or 8th grade. PC2 There's always more out there. Even your brightest student can climb the ladder another peg higher. PC2

Project-Based Learning. Project-Based Learning (PBL) is an approach to delivering instruction that is actively being pursued at School C. During the time of this study, it was still a work in progress; however, both participants mentioned aspects of implementation and the intentionality of integration. As School C moves through training on PBL, both participants sited that there are small pockets of teachers piloting the methods associated with PBL in isolation attempting to "get their feet wet" (PC2). "Ten of us went to a training from the Buck Institute. We came back and did a workshop for teachers that volunteered to come in the summer" (PC1).

Table 4-31 Patterns for Redesign and Innovation (RI) – Project-Based Learning (PBL) - School C

Construct **Redesign & Innovation (RI)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with Project-Based Learning (PBL) at School C. Each of the three patterns below were mentioned by both participants. PC1 mentioned these patterns a total of five times and PC2 mentioned these patterns a total of three times. *developing (3)	I don't know how effectively project-based learning is utilized. Project-based learning is something we are working on, but I think we are more looking at the class doing a project. PC1 We haven't gone yet to collaborating with other teachers as much for PBL. We'd like to get there. PC1

	*piloting (3) *Buck Institute of Education (2)	We are pushing toward some project-based learning. We went to the Buck Institute last summer. Ten people came back to present to the rest of the staff. PC2

Career and Technical Education (CTE). Both participants at School C recognized CTE pathways as a means for matriculation into career and postsecondary preparatory programs. Perceptions shared by both participants indicates their belief that CTE can enhance learning experiences through the opportunities presented with participation by students in a career pathway. Both participants at School C spoke about the value of CTE and how academia and CTE can complement each other to facilitate rich, meaningful learning experiences. "I don't think it's been academics versus CTE. I think we have been working hand-in-hand with CTE all along" (PC2). At School C, conversations surround the topic of alternative credits and how CTE and academics can complement each other with standards-based grading. "We are also looking at opening up math credits to areas because we are moving into standards-based grading" (PC2).

A benefit to having career pathways mentioned by both participants is the applicability of real-world experiential learning. This is in conjunction with the application courses embedded at the conclusion of the pathway in which students can demonstrate mastery of skills in real-world experiential learning, such as, the internship or work-study. Both participants expressed that scheduling for application classes with CTE are a challenge. "Adding a pathway isn't as hard as scheduling for it" (PC1). Scheduling challenges cited by both participants include limited options for internships due to a small number of businesses in a rural community, teacher turnover and hard-to-fill teaching positions, and a counselor-centered model for scheduling internships. School C is making plans to overcome those challenges by more

engagement in the community and business meetings as well as reaching out to surrounding areas. "We probably should have another business and industry meeting because we got a lot of input, but now we could start making specific plans and how we can connect the internships" (PC1). School C is also considering opening up more opportunities for students to drive themselves to internships. "Last year we had a student in a broadcast internship, but he had to drive thirty miles away. I think he went a couple times a week" (PC1).

Both participants voiced their belief that students learn through experiences. The experience that students gain with specific skill training in a pathway coupled with non-academic skill acquisition through those experiences are important to both participants at School C. "We'd like to see more juniors and seniors do have this opportunity, more of it. We haven't really done much of that in the past. It is a work in progress" (PC1).

Table 4-32 Patterns for Career and Technical Education (CTE) - School C

Construct **Career & Technical Education (CTE)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to learning experiences that integrate academic with technical and relevant learning experiences structured in a formal pathway toward student career interests	Both participants mentioned the patterns below that are associated with Career and Technical Education (CTE) at School C. Each of the three patterns below were mentioned by both participants. PC1 mentioned these patterns a total of eleven times and PC2 mentioned these patterns a total of eleven times. *positive perceptions of CTE (9) *small school challenges with (CTE) (8)	My perception of CTE has changed since my own children going to the workplace and that the education is continuing throughout life with recertifications. PC1 Trying to implement the standards-based grading, the individual plans of study, they are working on them in CTE classes as well. PC2 CTE is challenging when you have turnover with teachers that change. PC1

	*experiential learning (5) *No Teacher/Training Pathway	Can I hit that math standard in my Ag class or my shop class where they are talking about angles they are talking about fractions? PC2 We are trying to open up our internships so that there's more than just 2 or 3 out of the 20 students going somewhere in the afternoon. PC2 Doesn't mean they have to go out as an internship and spend the afternoon with a mechanic or somebody, but they are testing the waters out there exploring different opportunities through job shadows. Maybe once a month. PC2 Internships are handled through the counselor's office. PC1 Trying to implement the standards-based grading, the individual plans of study, they are working on them in CTE classes as well. PC2

Rural Schools (RS). The rurality of School C contributes to feelings of isolation exhibited by both participants. Both participants cited that there is often one teacher within each content area. School C recently piloted standards-based grading and has since implemented it, but there was only one teacher who piloted it leading to other complications when the whole staff implemented

the practice. "When only one person is piloting something, how can you make the determination that it's good enough to launch school-wide?"(PC1). Often growth occurs slowly when you are faced with one teacher departments. Collaboration is limited. "Even though we know we should be doing collaboration and cross-curricular activities, a lot of times that doesn't get done. High school isolation stifles creativity" (PC2).

Both participants at School C reiterate that a focus on civic engagement and real-world applications in learning are essential to equip students with skills necessary to ensure success after high school. However, both teachers who participated in this study mention there is little variance in the type of business available for students to seek career opportunities. "Opportunities that we have in our small community are miniscule compared to what's out there" (PC2). Both participants acknowledge that School C is planning for creativity in overcoming the challenges with limited resources within their community. It is a matter of being intentional about seeking potential partnerships. "Our principal had been invited to a Chamber meeting and asked, "How many of you are interested in signing up to host an intern?" (PC2).

With a small number of staff but the same number of tasks to be completed, often rural school educators feel like they are on "overload." Both participants urged others in small schools to be mindful of the amount of change they'd like to see if they are restructuring their educational framework. School C cautions other school of similar demographics to be mindful of your capacity. "I caution anyone to be mindful about how much you try to implement at one time. So, you're working on five or six components? You're only doing them mediocre" (PC2).

Table 4-33 Patterns for Rural Schools (RS) - School C

Construct Rural Schools (RS)	Patterns	Evidence (examples from transcripts)
Refers to characteristics	Both participants mentioned	I am the math department.

present in rural school settings	the patterns below that are associated with Rural Schools (RS) at School C. Each of the three patterns below were mentioned by both participants. PC1 mentioned these patterns a total of seven times and PC2 mentioned these patterns a total of twelve times. *1 teacher per department (7) *isolation (6) *scarce resources (5) *overtime/many roles (2)	PC2 I step out into the hallway and I wave at other instructors in the hallway and that's the only conversation I have with them. PC2 It's hard for one person to pilot and communicate to everybody else it's a go or a no-go, especially with standards-based grading. PC1 With one teacher per department, it turns into isolation. I'm in my classroom, I teach, I do what I need to do. PC2 One of the goals is to have a senior capstone project and an internship, but we kind of dropped the ball on that because we decided we have way too many things going on so that's not going to get started this year. PC1

Postsecondary Credential Attainment (PCA). No patterns could be determined between the two teacher participants at School C regarding strategies to boost postsecondary credential attainment. No specific knowledge about the NSC data was provided; however, one participant stated that data is used to help drive decisions with regard to redesign. When asked how data is shared with the community, one participant stated, "I think we are still in the process of analyzing the data within our own group before we get to the point of sharing it out so I don't think we have shared with community or parents" (PC2). One participant did mention the

concern about a seamless transition into a postsecondary program with standards-based grading and grade-point averages being a measurement for college admission in some cases. Our first red flag was, "If we go to standards-based grading, when a student needs a transcript to go to whatever college they want to go to, how do you change a standards-based grade to a 3 or 4.0 scale?"(PC2). School C has since developed a guide to convert standards-based grading into a grade-point average. One participant stated that dialogue between secondary and postsecondary institutions is beginning, but "developing relationships with postsecondary institutions are really slow" (PC2).

Summary of School C. Communication with stakeholders are an essential component of redesign initiatives at School C with implementation of Parent EdCamps where round-table discussions are held regarding transformations occurring in the systemic structure of the school. School C has been innovative in implementation of standards-based grading practices as pioneers in assessing learning based on mastery of standards or competencies. Personalized learning and project-based learning continues to be a topic for research among the staff as they are beginning to pilot more of this type of learning. Career pathways are offered, but no teaching and training is available. One participant at School C shared about how alternative credits could be issued to students by integrating across core academics and CTE coursework. School C is intentional about ensuring skills are developed with students in regard to preparation for the next step with short-term and long-term goal setting in communities (advisory), a hybrid model for college and career planning.

Description of School D

School D is located in a school district that spans 269 square miles and is inclusive of two communities 17.5 miles apart. This school is a junior/senior high school representing grades 7-

12 and is designated as a Mercury redesign school by the KSDE. It is situated in north central Kansas 79.4 miles from the nearest urban area and 10 miles to the nearest urban cluster. Enrollment at this school is 132 students in grades 9-12 with 19 certified teachers on staff classifying it as a 2A school (KSHSAA, 2018).

Building Agency

Upon entering this building, a visitor will notice a rigorous, yet relaxed learning environment with high student engagement on personal tasks as well as staff engagement. The researcher had an opportunity to be guided on a walk-through by the principal of this building during a flexible time known as "Power Hour" prior to the interview. Students were observed working on independent tasks selected by choice that were aligned to state curricular standards. Some students were reading content silently independent of others, some were watching content-related videos in small groups, and some were completing tangible projects related to their learning. One small group was building a 5'x5' model of a roller coaster. Walking through the building one teacher approached the principal to talk about an innovative idea she had to get permission for implementation to which the principal was open-minded and supportive. Two different students also approached the principal where the principal engaged in conversation regarding their goals they had set for learning and mastering content. A teacher was located in the main hallway playing an acoustic guitar adding to a flexible environment for learning and encouraging students to learn more about music composition.

This school is proactive when it comes to building leadership capacity. Tenets associated with school improvement are in place to confirm their dedication to this. The tenets not only address building leadership within staff, but also leadership and student agency to encourage

assertiveness within students to attain their learning goals. One participant in this study shared the following example as told by a student:

> So, we met with all the kids and said, we're going to survey, here's how we are surveying you, and we really want you to take this seriously and give us good information. When we started running pilots last semester, our first pilot we did included the Power Hour. Then I had some focus groups of kids, and I brought some kids in and asked, alright, what do you think? A very outspoken intelligent senior girl asked to go first. She said, "I just want to thank you because in my career in school this is the first time anyone ever asked me what I thought would be good and then listened to me, and then "did" it." Our students feel empowered to take charge in their learning (PD2).

Attributes of the Community

School D is located within a region of Kansas where agriculture is the predominant industry followed by machining and manufacturing (KDOL, 2017). Of the schools who participated in this study, this school is located nearest to an urban cluster providing easier access to nearby industry. The KSDE (2018) reports the student population at this school is predominantly Caucasian (90.29%). The KSDE (2018) also reports Hispanic and African American students represent 1.94% each, and students identified as "other" represent 5.83% of the student body. No student at this school is identified as migrant or as English Language Learner (KSDE, 2018). Students with disabilities account for 10.84% of the student body at School D (KSDE, 2018). Students attending School D who live in poverty are common with 37.38% of students identified as economically disadvantaged (KSDE, 2018). The annual median wage of this county according to the KDOL (2017) is $30,940.

Opportunities for Career and Technical Education

Many opportunities to explore potential careers with career and technical education are present at School D. One participant noted the proximity to the nearest urban cluster as an advantage when implementing CTE options for students.

> We haven't completely overcome challenges with CTE implementation. In this town, not necessarily the other town associated with the district, it's a little bit easier because it's only 10 miles from the nearest urban community. We have made connections with the Chamber of Commerce. We just need to enhance those connections to get kids down in those businesses (PD1).

The focus of this school is to enable students to take initiative in learning toward the desired outcomes they would like to achieve. This school continues to search for ways to help students learn from their experiences and providing opportunities for students to experience, first-hand, what is involved with various careers they may be interested in pursuing. At the time of this study, the following CTE pathways had been approved by the KSDE for this school. (See table 4-34.)

Table 4-34 KSDE approved Career & Technical Education Pathways at School D

BioChemistry	BioMedical	Business Finance	Comprehensive Agriculture
Health Science	Power Structural & Technical Systems	Visual Arts Pathway	Web & Digital Communications

Postsecondary Success Indicators

School D utilizes the NSC StudentTracker data as part of a system of multiple measures to assess success as a school including, but not limited to, state assessment data, ACT data, and growth data derived from formal assessments. (Refer to Appendix F for a comprehensive look at

postsecondary success indicators for School D). While the NSC data is used as a checkpoint to monitor progress, one participant shared, "that data will be two years out no matter what, so what we do right now is important. Doing the right things now will only improve our NSC data" (PD1, November 2018). According to the NSC StudentTracker data from 2012-2016, the following describes performance from that time frame. This school's five-year success average is reported as 54% meaning that 54% of students who graduated with a high school diploma from this school went on to earn some form of postsecondary credential or are working toward one. The five-year effective average is 49% meaning that 49% of all students who entered as freshmen and had the potential to graduate and begin work to acquire a credential after high school, or acquire a credential, did so. The KSDE takes into consideration all risk factors 1) cumulative poverty; 2) student mobility; and 3) chronic absenteeism, to predict a rate of effectiveness this school should be performing to arrive at a predicted effectiveness rate. School D is predicted to perform between 47.4% and 49.7%. With the actual rate being 49%, this school is performing as expected given their risk factors. This school is also closing in on the 95% graduation rate target set forth by KSDE with a 5-year graduation rate average of 90%.

School D Findings

The findings identified are indicative of two participants at this site. The findings from School D will be presented in narrative text and tables as a result of coding processes described previously in this chapter. Throughout the analysis process, the researcher remained faithful to the participants' verbiage. The superintendent and a building principal participated in interviews at school D. The patterns from the findings are represented in the tables below. A summary of patterns across all cases will be presented at the conclusion of this chapter.

An example of data classification for each interview question construct is provided in Table 4-3. Table 4-3 depicts the code, construct, description, and data excerpt for each of the interview question constructs to provide an example of how data was aligned to each interview question construct. Each data excerpt demonstrates how each statement made by one of two participants at this school concisely aligned with each interview question construct.

Patterns and Themes Emerging from the Data

Patterns emerging from the data were indicative of the interview question constructs selected by the researcher as they framed the literature review. Thus, the constructs identified include (a) purpose of redesign (P); (b) redesign and innovation (RI); (c) career and technical education (CTE); (d) 21st century rural schools (RS); and (e) postsecondary credential attainment.

Purpose of redesign (P). Both participants at School D cited many reasons for school redesign. Student learning is a priority at School D which calls for redesign in the manner in which students acquire knowledge. School D is shifting from a teacher-centered learning environment to a student-centered learning environment. This type of shift requires enhanced collaboration and mutual accountability of all stakeholders. Students are expected to master academic and non-academic skills that promote success in postsecondary credential attainment, provide motivation for continued learning, and develop skills necessary to be successful in the workplace. A desire to increase postsecondary credential attainment is recognized. When asked about School D's postsecondary rate as determined by NSC, one participant stated, "You can't argue with it. You can get all anecdotal all you want to, but you can't argue with it - 57% - is that good enough? Is that good enough for my grandkids? No, it's not good enough" (PD2).

Both participants at this school cited tenets officially adopted and designed to enhance the vision for success inclusive of specific responsibilities assigned to students, teachers, staff, and parents which promote mutual accountability for student learning. The vision for success at School D challenges all students to become responsible members of society and to be dedicated to lifelong learning in an everchanging world. Students are expected to not only master fundamental academic skills in a personalized manner independent of chronological age, but also acquire non-academic skills through training, interventions, and opportunities provided to enhance individual and social capacity, including teamwork, interpersonal, intrapersonal, and related skillsets to thrive in society and the workplace. Mutual accountability is a goal at School D with tenets in place that call for parents to be actively involved in and supportive of programs adopted to meet learners' needs. In exchange, School D vows to provide support and tools for parents as primary caregivers for students. The tenets at School D also ensure that teachers and staff have a responsibility to meet the needs of each student in their care, serve in a leadership role in their school community, and will be provided with the necessary tools, training, and support to effectively meet the needs of each learner. These tenets specifically address mind shift components associated with redesign efforts. The mutual accountability defined in these tenets cultivate partnerships within these groups of stakeholders specifying responsibilities designated for each group. School D's tenets emphasize a shift from teaching methods and teacher-centered pedagogy to a student-centered approach with special attention given to how students learn. According to one participant, any change in education has traditionally "focused on teachers and their teaching and not how students learn. That has got to change" (PD1).

Table 4-35 Patterns for Purpose of Redesign (P) – School D

Construct Purpose of Redesign (P)	Patterns	Evidence (examples from transcripts)
Description - Refers to the cohesive beliefs, attitudes, perceptions, assumptions, and values exhibited by all members of the staff and stakeholders toward the rationale for redesign	Both participants mentioned the patterns below that are associated with the Purpose of Redesign (P) at School D. Each of the six patterns below were mentioned by both participants. PD1 mentioned these patterns a total of fourteen times and PD2 mentioned these patterns a total of seven times. *enhanced collaboration (6) *learning focus (6) *student-centered (5) *postsecondary success (4) *skills (academic & non-academic) (3) *mutual accountability (2)	When that kid walks across the stage at graduation, whatever it is, they've "got" this. PD1 Redesign is not just about what we are doing different with kids, but also what we are doing different with each other too. You know, I think in terms of how I deal with my staff, how my staff deals with me, how we deal with parents, how parents interact with us, the feeling they have of openness being able to come into our building. PD2 Parents do not feel welcome because they haven't been. We've said we want parent involvement. We're the experts supposedly in the educational piece. They are the experts of being supposedly their parent, right? Then we cross over those paths all the time, and we don't ever communicate. PD1 You can't have silos, you know isolated islands, where things are taking place. You know, that's what education has been. PD1 We want students to be able to acquire skills at their pace, not

		the pace of the teacher which is also a mindset change. PD1 The conversations are just different. It's a welcome change, but those will never be without conflict. We are trying to create a mutual system of accountability here. It's okay to call someone on something even if it's me or if it's you. It's okay to do that. The goal is growth. The goal isn't to point fingers or point blame. PD1 The tenets address not holding kids back. I want kids to push our system. PD1 If students cannot read, write, or do basic mathematics, life will be difficult for them. They have to have that in any job that they do. I don't care if they are a welder, a plumber, a physicist, it makes no difference. PD1 You can't argue with NSC. You can get all anecdotal all you want to, but you can't argue with it -57% - is that good enough? Is that good enough for my grandkids? No, it's not good enough. PD2

Redesign and Innovation (RI). Each local school district in Kansas is encouraged to implement practices reflective of a holistic, student-centered approach. These initiatives should align with the KESA framework (See table 2-1). Schools officially designated as a redesign

school in Kansas should also align their initiatives with the 4 Principles of Redesign (see Table 2-2). All schools in Kansas should see a boost in results as outlines with KSDE's measurable outcomes (See table 2-3).

Redesign of a traditional educational framework to match 21st century requirements are unique to each local school district due to community values. Each local school district should ensure their redesign initiatives align with community values, therefore, diversity in the approaches pursued will vary. Consequently, many patterns emerged for the redesign and innovation construct (RI). Patterns at this school site may vary from the patterns associated with redesign in the other participating school sites. Emerging patterns from School D with regard to redesign and innovation will be reported below (Table 4-36 through Table 4-40). A synthesis of the patterns (themes) will be reported at the conclusion of this chapter with themes that emerged concerning redesign and innovation across the cases.

Tenets to Guide Redesign. School D is a KSDE designated Mercury Redesign School. Both participants (superintendent and building principal) spoke about the need to shift from a teacher-centered model to a student-centered model of learning that focuses on both academic and non-academic skills to increase the likelihood of their high school graduates experiencing success after high school. "Designation as a Mercury school came at the right time, so it literally gave us a license to go fast" (PD2). Since being deemed a Mercury school, both participants mentioned that the conversation surrounding learning and what success looks like is changing among all stakeholders in their community. "I think our kids are having different kinds of conversations, and our teachers are having different kinds of conversations" (PD1). More parent dialogue is also occurring. "We've got to continually culture that trust. We cannot discount any

individual parent's concern because it goes back to if we are individualizing for the kids, we are also individualizing for the parents" (PD1).

As School D embarked upon their journey into redesign, both participants spoke about the necessity to have over-arching tenets in place to ensure they were creating a "system of mutual accountability with a shared set of responsibilities among all stakeholders" (PD1). From a district level perspective, the tenets outline essential principles that should guide students, parents, and staff as the district moves through redesign. The tenets guide all the research-based strategies and approaches implemented at School D as well as two other schools in the district. Both participants at School D mentioned the district is trying to "bring along everyone as much as possible on at the same time, every group, as much as it's humanly possible" (PD1).

> "My role in this, I think has been facilitation. Letting them (teachers and students) realize that they have leadership capacity and they (teachers and students) have great ideas that they've never been able to voice before. I am building them up and giving them opportunity to have voice and have a real say in what we are doing. We've done the same thing with our parents and other patrons. We've done the same thing with our board of education. The tenets ensure a common approach among stakeholders "across the board in everything you are doing" (PD2).

Essentially, the tenets assist the school district in developing resolve toward redesign initiatives and sustainability as one participant explains:

> "Whatever we create needs to be independent of whatever leadership is in place because the leadership that is there is hired to fit into what the district needs to do. That is vitally important to me because we will have changes in staff, we will have changes in administration, and changes on the board of education, so everything we do we keep

these tenets in mind as it relates to every aspect of the strategies that we are trying to put in place going forward" (PD1).

Table 4-36 Redesign and Innovation (RI) – Principles/Tenets - School D

Student Tenets	Parent Tenets	Teacher/Staff Tenets
All students will progress with core skills in academics in a personalized manner independent of chronological age.	All parents will be actively involved and support programming of their child's educational needs from the day the student enters the educational system until the day they leave.	All teachers/staff will have the necessary training, skills, and resources to meet the needs of all their learners. The BOE, administration, and staff are committed to provide the tools necessary to thrive. We have your back.
All students will develop capacity to become expert learners.	All parents will be supported in their role as primary caregiver to enable students to reach their full potential.	All teachers will meet the needs of every student in their care. No student will ever be allowed to progress until they show competence in their academic studies and none will be held back from obtaining their potential in relation to their goals. Teachers will actively engage students in learning opportunities that align with the student tenets.
All students will be provided training, interventions, and opportunities to participate in independent and social real-world opportunities that require teamwork, interpersonal, intrapersonal, and other related skillsets.		All teachers and staff will have a leadership role in their school communities. This will be a commitment and obligation on the part of each staff member to ensure student success.
All students will have training and be developed socially and emotionally to thrive in a post-secondary world.		

Since all initiatives in redesign at School D are guided by the tenets, the patterns for redesign and innovation at School D will be reported in tables 4-37 through table 4-40.

Summit Learning. Summit Learning is a new curricular platform that was recently adopted at School D. Summit Learning is a free online platform that School D selected as a vehicle to complement many of their redesign goals. Both participants cited reasons for adopting Summit Learning that would enhance their redesign goals as depicted by the tenets established for students, teachers, and parents (See Table 4-36). "Summit can be a game changer for us if we do it with efficacy" (PD1).

Summit Learning delivers a learning platform that embeds mastery of content through choice of the preferred modality. This provides a personalized learning component with student choice being considered. Students must show mastery of content before being assigned a project-based learning assignment to apply the mastered content. The content is mastered at the pace of the student which also facilitates personalized student-centered learning.

Both participants referenced the gaps in the curriculum they are noticing after implementing Summit Learning. "In most schools our size, we don't have curriculum people, we don't have assessment people, you know, we are ALL that. The curriculum generally is the textbook" (PD1). Both participants at School D agree that Summit Learning has increased academic validity and boosted rigor. “Not only is it [Summit] valid, it is supporting real-world learning and also supports cognitive load theory in terms of kids who are struggling” (PD1).

In addition, Summit Learning provides School D with another component to build student agency as they accept ownership of their progress and performance through tasks. Summit Learning provides real-time data to monitor student progress for remediation purposes

when and if necessary. Students also use immediate feedback to drive goal-setting and strategize task completion.

> "We didn't have actionable data. Now we have actionable data. I can monitor student performance. I can go in and see how many times a kid has taken a content assessment. I can ask a student, "What have you done in between those times?" That goes back to the self-regulated learning in terms of getting kids to start making adaptive inferences based upon performance and in terms of what they are going to do from a planning perspective the next time" (PD1).

As stipulated by the over-arching tenets at School D, Summit holds students accountable for mastering content before progressing. Students are struggling with understanding what their role is, as are many of our teachers. As with all systems change, it takes time. "This is this really messy middle with redesign" (PD1). Both participants also referenced the higher level of rigor and adjustments with Summit Learning that present a struggle for some parents, students, and teachers to adjust to. Conversations and expectations are shifting. One participant explained:

> "Parents are pretty upset with the Summit platform because come semester break their students' grades are going to be incomplete and they are used to 4.0 GPAs. They will be incomplete because they are not where they need to be. I'll be more than happy to give kids the percentage grade that they've earned if that's what they want, but let's be clear. There's a pretty good chance that 4.0 isn't really a 4.0 if based on the school work this year, they are at a 19% completion. Clearly, they are not a 4.0 student, so somewhere along the line we got messed up. It's probably our fault, but they are not performing at a 4.0 level" (PD2).

Summit Learning also includes a social-emotional character development component. This component assists with developing college, career, and citizenship skills. "That's what's cool about the Summit platform. The sixteen habits of success and the college and career competencies essentially, are evaluated throughout the curriculum" (PD1).

Table 4-37 Patterns for Redesign and Innovation (RI) – Summit Learning - School D

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with Summit Learning at School D. Each of the four patterns below were mentioned by both participants. PD1 mentioned these patterns a total of twenty times and PD2 mentioned these patterns a total of twenty-six times. *personalized learning with student choice (22) *academic validity & rigor (11) *student agency (9) *closing curricular gaps (4)	It's got to be personalized to meet the needs of the teacher and student. Summit is adaptable. PD1 Know that the beginning of this year, we implemented Summit. You have to understand the amount of rigor increase. As a small district, you know, we have no guaranteed curriculum. If I hire an Algebra I teacher next year, they are going to teach Algebra in a different way than and in a different style, and a different order than what my Algebra teacher did this year. There's no guaranteed curriculum, whereas, you go to a large school, you're going to be handed a scope and sequence book. PD2 But that's the conversation that I have with my parents as it relates to that ACT score and the postsecondary success rate against. You know at some point we've got to stop giving the grade. We don't give a grade. They earn it, and we've got to quit giving it,

		and we've been giving it. PD2 With no guaranteed curriculum, we had gaping holes that we were finding rapidly right now, but gaping holes in learning because a teacher skipped that because they didn't like a certain topic. Let's do this instead. There's no curriculum in place, nothing established, so the rigor has been ramped up incredibly. PD2 With Summit, no more is grading subjective. PD2 And see that's a cool thing about the platform (Summit) is kids set goals (they're essentially tasks). Within the platform you can see the tasks that are being set. PD1 They're internalizing it. Well, you know because Summit was bad, Summit's evil, you don't know what you're doing, teachers aren't teaching, you know those were the criticisms. Now, kids are like, well, I've got to use my time better. PD2 If we could make Summit more of a state-wide accessible platform, we could have their content specialists validate the standards. That could be a game changer for us in rural communities. PD1

Developing Student Agency through Experience. Both participants spoke frequently about initiatives, strategies, and approaches to student learning that are in place at School D to promote and develop student agency. One small change impacting the culture at School D in a positive way is that the principal decided to turn off the bells. "One of the best things the principal did was shutting off the bells. Flexibility was created that would not be there had they not turned off the bells. I'm not sure they could be as adaptable as they are now" (PD1). With no bells, students now have to be responsible for time management and self-regulation. "There are really only two rules that I follow. One is be where you're supposed to be and two is to be doing what you're supposed to be doing" (PD2).

Power Hour was added to the daily schedule as a vehicle to promote student agency by allowing more flexibility for self-regulation. Power Hour is an hour-long lunch period where students can eat when they choose and also utilize the time in a capacity each student sees fit to meet their goals. Students can choose to manage their time in Power Hour to work on academic work. Students may also choose to use Power Hour as a time to develop social skills in the student lounge. Student agency is developed with the "free time we give them to manage themselves" (PD2).

Students also participate in leading student conferences. The individual plan of study serves as a guide for the student-led conferences which holds students accountable for ensuring they are updated, but also gives students choice in the process of planning for postsecondary goals as well as short-term goals. The individual plans are student-driven with a mentor in advisory period serving as support for the process.

Another approach to develop student agency is empowering students to be engaged in the redesign process. Students at School D are given voice and ownership in the redesign process

through multiple opportunities. Students are invited to conversations with administration in advisory committees to administration. Students provide their input on decisions that directly impact student experiences in school. Students are also asked to complete surveys which provide valuable feedback for staff. Conversations with mentors in advisory periods also enhance the ability for students to express their opinions about the redesign process.

School D has not established any additional curricular components to build student agency. Instead, School D is intentional about every interaction with a student as a means to develop non-academic (cognitive, interpersonal, or intrapersonal) skills. Meaningful interactions not only build relationships but embed and integrate development of non-academic skills in natural ways. "We are going to do it every day. We are going to teach it every day. The intentional processes we go through help them learn self-control and self-agency" (PD2).

Policies that are implemented in schools also impact a student's ability to develop agency. At School D, students are afforded the ability to develop agency through real-world learning opportunities as they may encounter after high school. For example, School D does not have a cell phone policy as many schools try to regulate the use of cell phones. During the interview, one participant stated, "You know what? My cell phone is on me right now. My cell phone has gone off on me three or four times while we're sitting here talking. I've not reached for that once. I had to learn to leave that alone. Kids have got to learn that too" (PD2).

Table 4-38 Patterns for Redesign and Innovation (RI) – Developing Student Agency through Experience - School D

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools,	Both participants mentioned the patterns below that are associated with Developing Student Agency at School D.	The level of freedom and accountability that we put on the kids positively impacts student ownership. PD2

and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Each of the seven patterns below were mentioned by both participants. PD1 mentioned these patterns a total of thirty-two times and PD2 mentioned these patterns a total of forty-three times. *student agency (36) *ownership/voice (12) *IPS (8) *no bells (7) *student-led conferences (5) *Power Hour (3) *policies (2)	A piece of that agency as learning self-denial because something else is priority right now. We've got a lot of adults that need to learn that. PD2 Students are going to be developed just through mature adult interactions through advisory and the other things we are doing, and then learning to manage themselves as it relates to their pacing with content, the free time we give them to manage themselves. PD2 The competencies are great and the strategies that they learn are great. PD1 There are really only two rules that I follow: One is be where you're supposed to be and two is to be doing what you're supposed to be doing. PD2 One of the best things he's done is shutting off the bells. It was a cornerstone type of thing. PD1 Students can work at their own pace, understanding that no pace is not a pace. PD2 I feel like we've got kids that are better equipped for that next step after three or four months of our new schedule. PD2

Building Leadership Capacity. The over-arching tenets establish roles and responsibilities that should be internalized by School D's stakeholders. Community members are

also encouraged to support the educational process at School D, but stakeholders addressed in this section deal with those that have a direct placement at the school level as student, staff member, or parent.

Students are expected to progress with the four tenets outlined for them, but both participants referred to specific examples of how students are empowered to meet those tenets. Both participants referred to questions that surround redesign regarding student management and discipline. "When I'm asked, "How do you discipline that?" I say, "You don't." You've got to teach the students, "This is yours" (PD2). Empowering students establishes buy-in that leads to empowerment. That empowerment creates a willingness to actively participate and to self-manage, which ultimately lead to student agency. Students also have a voice in the direction of redesign. Student Advisory/Focus Groups are established to meet with School D's administration to provide insight into student experiences. Students also have opportunities to give input through surveys distributed frequently.

Both participants empower teachers to lead in redesign efforts by giving them opportunities to build leadership capacity. “My role really has been opening the door and saying, “what do you guys think? We’ve done the same thing with our parents, other patrons, and we’ve done the same thing with our board of education." (PD2). Often in traditional school settings, decisions were not driven by the team, but handed down from the top. There is a newfound sense of excitement by “empowering teachers to know they’ve got the authority to reinvent. Let’s do it together. As long as we do it the right way and bring everybody along with us" (PD2).

School D not only encourages parent involvement, it is an expectation as stipulated by the parent tenets. "The parent tenets are that we expect our parents to be actively engaged in the

kids' education. The other side of that parent tenet is that we will honor that engagement. We will figure out ways to support them." (PD1). Both participants described an approach that welcomes dialogue with parents at any time. In fact, opportunities are seized intentionally. "We are really trying to increase the lines of communication with parents. That even goes to how can I support my kid academically" (PD1). Both participants have welcomed parents for discussion regarding redesign as well as academic support with increasing rigor associated with redesign initiatives. Most recent parent conversations have revolved around the Summit Learning platform.

> "When a parent asks me about Summit, I bring them in to my office. I have that conversation with them. I go through the platform with them. I talk to them. "If I were you as a parent, this is how I would instruct my kid to approach that teacher in relation to this deficiency." If parents don't have a frame of reference, they have no place to start a valid conversation to get help" (PD1).

In addition to continuous open dialogue with parents, Parent Camps have been established at School D. There have been two types of Parent Camps. Parent Camps have been held at the building level, but School D's district has implemented a district level Parent Camp. "Our social worker with our at-risk support person which we just hired with new funds this last year conducted sessions at the district Parent Camp. I conducted sessions on budget and redesign, board members conducted sessions on policy, and then we had just an open session for parents" (PD1). The goal of diversifying Parent Camps is to empower parents to work collaboratively as educational partners. "I had representatives from different mental health agencies come in. What we are trying to do is get parents encouraged to come to these things to learn more about how they can better support their kids" (PD1).

Table 4-39 Patterns for Redesign and Innovation (RI) – Building Leadership Capacity - School D

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with Building Leadership Capacity at School D. Each of the five patterns below were mentioned by both participants. PD1 mentioned these patterns a total of twenty-four times and PD2 mentioned these patterns a total of twenty times. *staff empowerment (14) *parent empowerment (12) *student empowerment (7) *parent camps (7) *student advisory/focus groups (4)	I am a change agent but figuring out a way to do that in such a way to make it their idea. PD2 I have to identify that tipping point where, "Okay I've got to step in here," but how do I do that without making it feel like I'm taking over because you are inapt? PD2 Our parents do the best they can. I know of no parent that wants to do a bad job with their kids. They sometimes don't have the tools. We've got to help provide the tools for them if we can. PD1 We also know that we can't support parents alone. That's why we're trying to partner with outside agencies and providing opportunities for parents to learn. PD1 We have surveyed students on redesign. PD2 We have asked kids to take the surveys seriously and asked them to give us good feedback. PD2 We have different levels of Parent Camps. We have building level Parent Camps

		and we just had our first district level Parent Camp. PD1

Social-Emotional Character Development. School D is intentional about developing the non-academic skills that while integrating it into natural interactions with students at the high school level. "We weren't going to go out and buy a canned program to teach skill development" (PD2). Both participants mentioned there are components integrated in the school setting that accommodate opportunities for student interaction through advisory period mentoring sessions, Power Hour, and relationship building that occurs every day. "So much is developed just through mature interactions through advisory and the other things we are doing. It's important that it's reinforced all the time." (PD2). Opportunities are present with every interaction with a student. If you pass a kid in the hallway, stop. "Shake my hand and talk to them about it. You know shaking hands, making eye contact when you're talking to somebody" (PD2). One participant recalled a dialogue with a contractor working at the school. Resounding the importance of non-academic skill development, the following dialogue transpired:

> "I said, cut straight and be honest, what are you looking for when you hire people? What could we turn out that would be something that you are looking for? He said, "I tell you what. I'll be honest with you. You get me a guy that can tell time, can leave his phone in his car, has a car and a driver's license with no court dates. I'll teach him everything else he needs to know. We've hired and fired three guys this week. One guy didn't show up, one guy has a suspended license and couldn't come to work because he couldn't find a ride, and the other guy could only come in at noon because he had a court date" (PD2).

School D also employs a counselor, a social worker, and an at-risk coordinator that can assist with critical needs which is rare for a rural school. School D is also beginning to support

staff with regard to training associated with trauma-informed practices. Staff at School D has experienced poverty simulations and have begun learning about adverse childhood experiences (ACES) with resiliency. "A lot of our rural kids, if they are agriculture, if that is their background, a lot of them live in poverty, and they don't even know it" (PD1). Poverty isn't always an indicator of high social-emotional needs. "The Kaiser Permanente study that was done on the Adverse Childhood Experiences (ACE's) was done on middle class, not people in poverty" (PD1). Both participants at School D recognize the importance of being trained to manage and support social-emotional growth.

Table 4-40 Patterns for Redesign and Innovation (RI) – Social-Emotional Character Development (SECD) - School D

Construct Redesign & Innovation (RI)	Patterns	Evidence (examples from transcripts)
Refers to 21st century practices that are conducive to providing learners with the experience, knowledge, tools, and skills to matriculate successfully and seamlessly into postsecondary endeavors and the support to enhance completion that may vary from traditional educational approaches	Both participants mentioned the patterns below that are associated with Social-Emotional Character Development at school D. Each of the four patterns below were mentioned by both participants. PD1 mentioned these patterns a total of twelve times and PD2 mentioned these patterns a total of thirty-one times. *intentionality (20) *advisory period (15) *trauma-informed (6) *mentoring (2)	I just stop talking until they look at me, and say, "I'm talking to you." Then I'll continue talking. I'll say eyes on me. Okay, now what I was saying was, just teaching that respect of making eye contact when you're talking to somebody, showing them that you are listening when they are talking to you and all those intangible little things. PD2 It comes down to what are we going to teach the kids? What is important? PD2 The sixteen habits of success and then the competencies essentially. PD1 If we want a kid to walk out of here with a skillset, then how did we intentionally see to it

		that that happened? PD2 Our parents don't have the tools, but they want them. They just don't know that they want them because they are living in the moment, those that are actually living in a trauma filled environment. PD1 The fourth tenet deals with that individual piece, which is that social-emotional component to where kids walk across that stage and they say, "I've "got" this, and they mean it, and they can do it. PD1 Our kids live in the same environments, and if we don't help the parents, we are not going to help those kids. PD1

Career and Technical Education (CTE). School D has established ten career pathways. Both participants understand the importance of career and technical education and are seeking improvement in terms of certifications and internships. Student acquisition of certifications while in high school increase the likelihood of being gainfully employed. "I'm working to get kids locked in to area colleges. I start working with the kids' schedules. I give them an elective and a college elective credit. They leave here at 11am, get in their vehicle, and they're in welding the rest of the day. Those kids when they walk across the stage in May, they are going to get a degree from me and a welding certificate in their back pocket" (PD2). A goal of both participants is to work through the area chamber of commerce to establish more connections with business and industry in the surrounding area. As far as overcoming challenges with how

rurality may impact CTE, School D hasn't yet. However, there is great support for CTE, and improvements are a current work in progress. 'We are going to continue to work on CTE and internships. It is a deficiency from where we are now and where we want to be" (PD1). A strategy used by School D to help with efficiency and management of the career pathways is to pay a teacher a supplemental stipend to help ensure coursework is mapped and approved by KSDE as well as updates and reports required to maintain the career pathways. Funding of the pathways is a great benefit, but also a concern with potential funding formulas changing within Perkins funding. Through that, School D is willing to work with the board of education to continue providing opportunities and experiences for students.

Table 4-41 Patterns for Career and Technical Education (CTE) - School D

Construct **Career & Technical Education (CTE)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to learning experiences that integrate academic with technical and relevant learning experiences structured in a formal pathway toward student career interests	Both participants mentioned the patterns below that are associated with Career and Technical Education (CTE) at School D. Each of the four patterns below were mentioned by both participants. PC1 mentioned these patterns a total of eleven times and PC2 mentioned these patterns a total of eleven times. *positive perceptions of CTE (6) *increasing internships (5) *increasing certifications (4) *funding (3)	I want to create those opportunities for internships. For example, if we could set up in a hospital, there's like 14 of the 16 pathways in a hospital. PD1 I've got a whole gaggle of kids taking the drone and wind energy intro classes getting ready to go to college. They will certify in a year and be done. PD2 The advantage is that I now have the Mercury tag to leverage. I reached out to the (area chamber of commerce) and they bit down pretty hard because they want to be working with one of the Mercury districts. They are

	**No Teacher/Training Pathway*	going to help us find work studies, job internships for our seniors. PD2 What I was able to do is that every English teacher has an online elective block. During that time students can either take college courses or take an online class. They can take classes that we don't offer that they don't need, and really more often than not, they are spending the time taking college classes. PD2 I'm going to get his son gainfully employed by the time he graduates, and his dad is all about it. PD2 English teacher also has a degree in Ag. We are doing a lot of college concurrent classes on soil, and ag business, and plant & animal science, so we are getting both edges of that sword. Those kids are getting college credit and we are also getting funded courses out of that. PD2 One of my teachers is the CTE director, so she gets a stipend. PD2.

Rural Schools (RS). A main theme emerged identified by participants at School D in regard to characteristics of rural schools is a lack of resources. There were several patterns cited under this theme which include a lack of staff, lack of fiscal capacity, lack of valid curriculum, and a lack of business and industry in close proximity. In many rural schools there is little fiscal

capacity to hire a large staff to handle many responsibilities. Instead, a small number of staff members assume multiple roles which burden staff with heavy workloads. Heavy workloads in turn, cause turnover and burnout. Small schools still have to complete the tasks that large school districts do, just with less staff. Necessary tasks are often carried out in a hodge podge fashion decreasing efficiency. "The challenges? Well we haven't overcome them, frankly. We've got one staff member up here that really works well on getting kids to where they're doing job-shadowing stuff, and that's not even her job" (PD1). "Yeah, we're going to lose good people because we're burdening them down" (PD2). One obstacle School D has overcome with limited staff is transitioning form a counselor-centered student advising model to a hybrid advisory model to increase efficiency with mentoring students and lightening the workload of the counselor. Each teacher is assigned an advisor role with assigned students to mentor.

> "A part-time counselor trying to counsel 200+ kids on their enrollment. That's what it is. Misinformation gets out there. She didn't have the time or the connectivity with the kids to fix that. Now we do. Now we've only got 12 kids per teacher instead of 200 for one person" (PD2).

In addition, uncommon to many small rural schools, School D was able to hire a counselor, social worker, and an at-risk coordinator to support the learning environment.

Due to limitations in staff capacity, a valid curriculum is not present in many small schools. "In schools our size, we don't have curriculum people, we don't have assessment people, you know, we are ALL that. The curriculum generally is the textbook in most small schools" (PD1). Often curriculum is supplemented with online coursework as well with small staff numbers. "We have no guaranteed curriculum. If I hire an Algebra I teacher next year,

they are going to teach Algebra in a different way, style, and order than what my Algebra teacher did this year. There's no guaranteed curriculum" (PD2).

Providing learning experiences and civic engagement for students in the form of work-study, job-shadow, or internships is a priority in Kansas. Proximity to abundant business and industry is an obstacle for many rural schools, but not one that cannot be overcome. Both participants at School D are working to improve connections with surrounding communities and the Chamber of commerce.

> "We have a lot of capacity, and our board is pretty flexible. I don't want transportation to ever be a barrier, but we don't transport kids now to vocational-tech. We have a lot of kids going. They transport themselves. I'd like to change that. I just want more funding to do it" (PD1).

Table 4-42 Patterns for Rural Schools (RS) – School D

Construct **Rural Schools (RS)**	**Patterns**	**Evidence** **(examples from transcripts)**
Refers to characteristics present in rural school settings	Both participants mentioned the patterns below that are associated with Rural Schools (RS) at School D. Each of the four patterns below were mentioned by both participants with an over-arching theme of lack of resources in each. PD1 mentioned these patterns a total of fourteen times and PD2 mentioned these patterns a total of eight times. *lack of resources [22] staff (11) curriculum (4) location (5)	It is an obstacle for us in rural communities. You know, larger school districts, they can write their own curriculum because they can hire a curriculum specialist and all the other support staff. PD1 We've got concurrent licenses of online coursework that I started getting a couple of years ago that gives us some alternatives. PD1 We have a lack of resources just based on proximity and where we are at. PD2

	fiscal (2)	We just don't have the fiscal capacity to do that (hire more staff). The scale isn't there like it would be in a larger district. PD1

Postsecondary Credential Attainment (PCA). Both participants at School D recognize the capstone purpose of school redesign is to ensure we are graduating enough students with the skills necessary to meet the demands of the prescribed 21st century workforce. The National Student Clearinghouse (NSC) data serves to provide School D with the motivation to make real change as the current percentage of graduates from School D needs to increase to meet the call for a more skilled workforce. "We've got to do a better job. It is my responsibility to see that we do everything we can to make that happen" (PD2). Both participants recognize the importance of meeting the 71% credential attainment goal. It is not an arbitrary number. One participant shared there is misconceptions present in dialogue with other administrators, "Well we just arbitrarily chose a new target and now we are all scrambling trying to meet that target" (PD2). As indicated in the literature review, it is backed by current research and not an arbitrary number. In addition to the initiatives in place at School D with regard to redesign and innovation, other strategies are being implemented. For example, one participant shared the intent of collecting senior exit surveys to be able to obtain contact information for tracking students after graduation. This participant also mentioned the intentional dialogue with students may help them establish a defined plan for postsecondary endeavors.

The NSC provides the motivation and a gauge for performance, but it is a lag measure with the latest data being reported from the 2015-2016 school year. Consequently, NSC data is not the only piece of data utilized to gauge performance with postsecondary credential

attainment. "I think NSC data and postsecondary success will take care of itself with the strategies we are putting in place. It will be more the lead goals" (PD1). As one participant explains:

> "There are so many confounding variables that are in there. We're never going to know which one of these things will impact it. It might just because the schedule change. I mean who knows because, or that adaptability. That could be the thing, but once again, we're dealing with a complex system so for this group of kids it's going to be this, for this group of kids, it's going to be this. But if we wouldn't have done these three things, if we were just going to do a specific scientific experiment with one independent variable, you know it would take us 100 years to change the system" (PD1).

Table 4-43 Patterns for Postsecondary Credential Attainment (PCA) – School D

Construct Postsecondary Credential Attainment (PCA)	Patterns	Evidence (examples from transcripts)
Refers to specific strategies associated with communication and monitoring of data toward a capstone goal of improving postsecondary credential attainment	Both participants mentioned the patterns below that are associated with postsecondary credential attainment at School D. Each of the three patterns below were mentioned by both participants. PD1 mentioned these patterns a total of eight times and PD2 mentioned these patterns a total of seven times. *NSC motivates to improve (8) *NSC lag measure (4) *current initiatives impact PCA (3)	It's probably not as good as it could be, and one of the things we could easily say is, well we are thrown in with another school so it affects our numbers or whatever, but bottom line is you know a kid graduated from our district, roughly 56% of them are going to be successful under that postsecondary success rating. PD2 If that's a true representation of what we're turning out, wouldn't you want that to be pretty good? When you consider the fact that, you know, as we look at those numbers that 71% of all jobs

		are going to require some type of certification. PD2 We are looking at more of these lead measures because we know that the end result will then influence that. We have looked at the postsecondary success rate, but we have not broken that down based upon individual students within there. PD1 The proof will be in the results. Honestly, that will be a couple years down the road. We are happy with what has taken place so far. We will just see. It's fun. We're having a good time. PD1

Summary of School D. School D promotes a learner-focused school environment reflective of shared responsibilities by all stakeholders as prescribed by tenets. The tenets ensure mutual accountability through the redesign process. Intentionality in regard to academic and non-academic skill development is a priority through meaningful interactions with students in all settings. Student agency is developed and enhanced by creating an environment with student flexibility with integrations of Power Hour, no bells, and Summit Learning. Career Pathways are offered at this school with intent to improve real-world experience through application courses, however no Teacher/Training pathway is available. It is anticipated that recent partnerships established with local business will enhance work experiences.

Categories Disaggregated by School Site

Focused Coding techniques illuminated categories which emerged through reanalysis of the initial findings. The researcher discovered when comparing findings across the cases that "the most frequent or significant codes developed the most salient categories in the data corpus" (Saldana, 2016, p. 240). A summary of the patterns identified across each case aligned with the interview question constructs (See Table 4-3) aided the identification of categories which are found below in Table 4-44 through Table 4-48. When patterns were disaggregated across each case, categories emerged that were indicative of all cases with regard to the interview question constructs. Categories are ordered from most cited to least cited.

Categories for Purpose of Redesign (P). Each school recognizes the need to develop student skillsets which will make them successful in postsecondary programs, careers, and the workforce. A traditional framework for education solely focused on academics as the indicator for school and student success. Though academics are still important, intentional approaches to develop skills, such as, interpersonal, intrapersonal, and cognitive competencies are taking precedence.

Each school's purpose also reflects the vision for our future. Personalizing learning will impact each student. Postsecondary credential attainment with strategic efforts to ensure students are prepared to matriculate into postsecondary credential programs are a capstone of redesign efforts. Though students are supported in any goal they wish to pursue if it does not include postsecondary training, it is most beneficial to ensure high school students possess the competence and skillsets to be successful in a career.

Table 4-44 Summary of Categories for Purpose of Redesign (P) across each School Site

Patterns	Number of Responses from each School Site			
	A	**B**	**C**	**D**
1 To develop academic and non-academic skills in a holistic approach	3	16	7	3
2 To personalize learning experiences that are relevant to each student's future goals	7	4	5	11
3 To redesign educational approaches which increase postsecondary credential attainment	4	1	1	4

Categories for Redesign and Innovation (RI). Upon identifying common patterns for Redesign and Innovation (Table 4-45) across each case, the categories that emerged aligned with the four principles of redesign as prescribed by KSDE. There are, however, some outliers which indicate additional varied innovative practices unique to individual cases.

School B is the only school in which a flex-mod schedule is implemented. Schools B and D have implemented Summit Learning. School C is the only school that has implemented standards-based (also known as competency-based or evidence-based) grading. Schools B and D have implemented student-led conferences driven by individual plans of study. School D is the only school that has established tenets in which all stakeholders share responsibility for student learning and skillset development.

Table 4-45 Summary of Categories for Redesign and Innovation (RI) across each School Site

Patterns	Number of Responses from each School Site			
	A	B	C	D
1 Each school is intentional about developing student success skills (academic and non-academic) through interactions, relationship building, mentoring/advising, and empowering students to take ownership of learning.	30	76	17	93
2 Each school is committed to providing real-world experiences to increase civic engagement, enhance success skill development, and to provide relevant experiential or project-based learning.	40	8	5	6
3 Each school provides focused college and career exploration and planning through designated times established to meet with a mentor, college visits, and guest speakers (ex. advisory periods, homerooms, communities)	13	16	7	23
4 Each school personalizes learning by empowering learners with ownership of how learning takes place. Personalized programs of study are tailored to personal interests in each school through individual plans of study (IPS).	15	8	11	10

Categories for Career and Technical Education (CTE). Each school's ability to offer real-world learning experiences in the form of application level coursework or internships was the most referenced. This aligns with providing real-world experiences, or the desire to improve these experiences among all schools.

All schools cited challenges with rurality, but are working to reach out into surrounding communities to tap in to additional resources. Technology offers virtual capabilities as well. Schools that cited challenges with the most frequency were schools farthest geographically from the nearest urban area or cluster.

All schools reported having very good relationships with postsecondary institutions through integration of dual and CTE college coursework. On the other hand, all participants in this study mentioned there was no collaboration with postsecondary institutions other than an occasional admissions representative visiting the school or through enrollment processes for dual credit or CTE. There was no evidence cited to indicate true collaborative partnerships between secondary and postsecondary institutions have been established.

School C is the only school who did not mention offering CTE certifications prior to or in conjunction with high school graduation. School B has implemented a formal plan for internships, work-study, or job shadows to validate learning and increase rigor through and application, documentation, and evaluation of and by students. School A and D are the only schools who cite offering student certifications prior to or along with high school graduation. A participant at School C is the only one who mentioned the benefit of blending academia with CTE to enrich cross-curricular, competency-based mastery. School C has implemented standards-based grading so alternative means to receive credits are branching out to include CTE.

No participants mentioned anything about the teaching/training career pathway. The researcher wanted to illuminate that as a means to address a teacher shortage, especially with regard to rural areas and hard to fill vacancies. A teacher/training pathway is a beneficial strategy to "grow your own" teachers, especially in rural areas where students may want to remain. This pathway also provides another option to civically engage students within the school district by helping younger students in their internship/application coursework.

Table 4-46 Summary of Categories for Career and Technical Education (CTE) across each School Site

Patterns	Number of Responses from each School Site			
	A	**B**	**C**	**D**
1 Each school has committed to improving experiential learning through application level coursework and/or internships, work-study, or job shadows.	4	17	5	5
2 Each school supports implementation of and recognizes the benefits of CTE.	10	2	9	6
3 Each school works to provide opportunities for CTE despite limited resources in rural areas.	1	12	8	3
4 Each school mentioned the benefit of additional funding for CTE.	2	3	3	3
5. Each school offers certifications prior to graduation or in conjunction with high school graduation.	2	1	0	4
6. School C recognizes collaboration between academia and CTE to increase potential for cross-curricular mastery of standards.	0	0	4	0
7. Teacher/Training pathway is offered in response to a teacher shortage and in attempts to "grow their own" teachers with hard to fill vacancies in rural areas.	Yes	Yes	No	No

Categories for Rural Schools (RS). Dynamics of rural schools were important in this study since there was a specific focus on rural schools. The categories that emerged are insightful regarding the challenges, but there are some benefits of rural schools as well. The challenges are explanatory in Table 4-47 below. There is one other challenge mentioned by one participant that did not make the category code but was an insightful comment that mentioned the effects of one student on data if there is a small class. If one student does not graduate, that means your graduation rate in a small school drops 5% (PA2). Though there may be challenges with rurality, each school was in the process of considering how to address them. Technology

helps with virtual meetings and online classes. There must be a willingness to be flexible with schedules and travel in a small district.

The benefits did not make the code category either as they were sporadic. Participants at school A cited were that rural communities are typically very supportive of the school. Participants at school B stated a smaller student body at rural schools enables strong relationships and tracking of student progress after high school.

Table 4-47 Summary of Categories for Rural Schools (RS) across each School Site

Patterns	Number of Responses from each School Site			
	A	B	C	D
1 Each school cited limited resources (staff, curriculum, fiscal) due to geographic location.	5	22	5	22
2 Each school cited limited access to business and industry to enhance real-world learning offered in the form of work-study, job-shadow, or internship. Limited representatives are available to serve on advisory committees associated with career pathways.	7	2	6	5
3 Each school cited that staff in rural schools must complete the same tasks associated with the job with less support staff. Multiple "hats" are worn by each staff member.	4	8	2	1
4 Two members at two schools frequently cited the impacts of one teacher per department on school culture and productivity in small rural schools.	0	12	7	0

Categories for Postsecondary Credential Attainment (PCA). Table 4-48 depicts categories derived from how familiar participants were with that data and the purpose for monitoring postsecondary credential attainment. It was unexpected to the researcher that neither participant from School C knew any specific information regarding NSC.

Table 4-48 Summary of Categories for Postsecondary Credential Attainment (PCA) across each School Site

Patterns	Number of Responses from each School Site			
	A	B	C	D
1 Each school (with the exception of school C) cited the use of multiple measures and current practice in redesign to drive improved results of postsecondary credential attainment.	8	16	0	3
2 Each school (with the exception of school C) cited the NSC data shifted priorities from academic to real-world application. Each school recognizes the need to graduate students with the skills and capacity to be successful in acquiring a postsecondary credential.	7	6	0	8
3 Each school (with the exception of school C) recognized the NSC data as a good tool, however it is a lag measure. It serves to motivate but should be one of many multiple measures to monitor postsecondary credential attainment.	8	6	0	8

Themes Identified from the Intersection of Patterns Across Cases

After multiple examinations of each interview transcript, analytic memos, notes, codes, and categories, themes began to emerge. The final task in the analysis was to re-examine the patterns and categories revealed in first-cycle and second-cycle coding methods. Six themes emerged as shown in Table 4-49.

Table 4-49 Themes Emerging from the Intersection of Patterns Across Cases

Themes Emerging from the Intersection of Patterns Across Cases
1 Intentional and deliberate enrichment and development of non-academic competencies that promote college and career readiness must be integrated in schools to promote postsecondary credential attainment.
2 Students must be empowered and granted ownership of their learning to develop student agency and academic tenacity necessary for postsecondary credential attainment.
3 Personalized and relevant real-world experiences are necessary and should reflect student interests to develop skills for seamless matriculation into postsecondary training.
4 Increasing the amount of relevant experiential learning associated with work-study, job-shadow, internship, and civic engagement will promote postsecondary credential attainment with continued improvement and support for CTE pathways.
5 Rural schools often face obstacles with limited resources, isolation of staff, and isolated location; however, the transformation to a holistic student-centered approach will positively impact postsecondary credential attainment.
6 NSC data informs postsecondary credential attainment and is a good tool to measure progress. A student-centered approach to learning will boost postsecondary credential attainment rates.

Theme One. Intentional and deliberate enrichment and development of non-academic competencies that promote college and career readiness must be integrated in schools to promote postsecondary credential attainment.

Table 4-50 Patterns Contributing to Theme One

Theme	Patterns Contributing to Theme
Intentional and deliberate enrichment and development of non-academic competencies that promote college and career readiness must be integrated in schools to promote postsecondary credential attainment.	SECD is supported through our culture, but also our conversations we have with kids. PB1
	I just stop talking until they look at me, and say, "I'm talking to you." Then I'll continue talking. I'll say eyes on me. Okay, now what I was saying was, just teaching that respect of making eye contact when you're talking to somebody, showing them that you are listening when they are talking to you and all those intangible little things. PD2
	As you walk into the flex room, that kid's over there eating a bag of popcorn, this kid is working on her math, these two kids are talking about their English assignment because the kids in the flex room kind of have it figured out. Then you go into the Focus room and everything is totally quiet. I don't think they see it as a bad thing, they just know if I need total quiet and I need to focus, that's where I need to go. PB2
	When that kid walks across the stage at graduation, whatever it is, they've "got" this. PD1
	Skills are not taught on a separate island. "Okay, today is social development day, so get out your book, turn to page 72, let's talk about Pride or whatever." We're not doing that. We are intentional about conversations we are having. PA1
	When we check in with students at the beginning of the day to see how they are doing, if somebody is having a bad day, we can help them. PC1

Theme Two. Students must be empowered and granted ownership of their learning to develop student agency and academic tenacity necessary for postsecondary credential attainment.

Table 4-51 Patterns Contributing to Theme Two

Theme	Patterns Contributing to Theme
Students must be empowered and granted ownership of their learning to develop student agency and academic tenacity necessary for postsecondary credential attainment.	When you try to get a kid to take a risk in a classroom, to be creative or be in control of their learning and they've never done that the entire time they've been in high school. They would prefer to just sit there and have me tell them what to do. PB2
	We are intentional about having students see their part in figuring things out. PA2
	Personalized learning won't be so much teacher-led as much as the student will be working at their pace on the things they need to be working on and the teacher will simply be a facilitator. PC2
	You've got to teach the kids, this is yours." PD2
	We have told them for years, take out your book, take out your pencil, do this, we tell them when to line up, we tell them when to go to lunch, and they never really had time to think for themselves. PB1

Theme Three. Personalized and relevant real-world experiences are necessary and should reflect student interests to develop skills for seamless matriculation into postsecondary training.

Table 4-52 Patterns Contributing to Theme Three

Theme	Patterns Contributing to Theme
Personalized and relevant real-world experiences are necessary and should reflect student interests to develop skills for seamless matriculation into postsecondary training.	We want to give students real-world experiences in those environments to where they are successful. PD1
	Well, they need to be able to sit here and do this worksheet because they are not going to get this task done. At no point in time does that task need to be done. But that, THAT (work experiences) does need to get done. PA1
	Through this redesign transition, the teachers are finding the culture has not been a healthy one with student mindsets fixed, "Education is stupid," "This is dumb," and "I don't want to be here. Work-study has been wildly successful with processes in place for accountability, applications, interview, weekly logs, grade, elective credit, and project. PB1
	We are trying to open up our internships so that there's more than just 2 or 3 out of the 20 students going somewhere in the afternoon. PC2

Theme Four. Increasing the amount of relevant experiential learning associated with work-study, job-shadow, internship, and civic engagement will promote postsecondary credential attainment with continued improvement and support for CTE pathways.

Table 4-53 Patterns Contributing to Theme Four

Theme	Patterns Contributing to Theme
Increasing the amount of relevant experiential learning associated with work-study, job-shadow, internship, and civic engagement will promote postsecondary credential attainment with continued improvement and support for CTE pathways.	In the process of redesign, we need to make sure that we keep things that are important, in our case the CTE, that's extremely important. PA1
	I'm still learning much about the whole CTE and how it works. PB1
	CTE is challenging when you have turnover with teachers that change, but I know we have added a pathway in business and industrial technology. PC1
	We are going to continue to work on CTE. It is a deficiency from where we are now and where we want to be. PD1

Theme Five. Rural schools often face obstacles with limited resources, isolation of staff, and isolated location; however, the transformation to a holistic student-centered approach will positively impact postsecondary credential attainment.

Table 4-54 Patterns Contributing to Theme Five

Theme	Patterns Contributing to Theme
Rural schools often face obstacles with limited resources, isolation of staff, and isolated location; however, the transformation to a holistic student-centered approach will positively impact postsecondary credential attainment.	Well we haven't overcome the challenges, frankly. We've got one staff member up here that really works well on getting kids to where they're doing job-shadowing stuff, and that's not even her job. PD1
	I think I have more conversations with my students about postsecondary. PC1
	The beauty of my tiny little school district is that we can truly look at each individual kid and go, "Well, what do they need? PB2
	We have to find our students to mold into teachers. We just got one of our students, this is her first year this year. We were fortunate enough to get her. PA1
	One teacher per content area is difficult at a rural school. PB1
	We get into our classrooms and it's so individualized, especially in a small rural school. PC2

Theme Six. NSC data informs postsecondary credential attainment and is a good tool to measure progress. A student-centered approach to learning will boost postsecondary credential attainment rates.

Table 4-55 Patterns Contributing to Theme Six

Theme	Patterns Contributing to Theme
NSC data informs postsecondary credential attainment and is a good tool to measure progress. A student-centered approach to learning will boost postsecondary credential attainment rates.	I think having some accountability is good. I know some people don't like that. Is that really what's best? 40-50%? PA2
	In a small district you can take that data and have personal conversations. "What happened this year? What are your plans? PB1
	We have started looking into data, one collecting it, but also looking at different aspects like that to help thrive. So yes, we are looking at NSC to see what we can change and how looking at data can help us make decisions in the direction we want to go. PC2
	We are looking at more of these lead measures because we know that the end result will then influence that. We have looked at the postsecondary success rate, but we have not broken that down based upon individual students within there. PD1

Summary

The intended purpose of the case descriptions in this chapter were provided to give the reader a deep understanding of each school site who participated in this study. Each vignette provides descriptions to aid in the development of perspicacity into each site selected for this study. Each school had a unique culture with similar attributes due to their rurality and as being selected by the KSDE as a redesign school in Kansas.

The findings reported in this chapter vary due to local characteristics of each district, but also may be impacted by varying roles of participants. Since the researcher relied upon the superintendent to recommend participants based upon the perception of knowledge by potential

participants in school redesign, some participant roles varied. Consequently, by using the chain sampling method, some participants were administrators and some participants were teacher leaders in school redesign. (See Table 3-1).

Chapter Five will include a discussion of the research questions, significance of the study, implications for practice, and recommend topics for further study.

Chapter Five: Conclusions

Introduction

This study examined educational redesign practices in rural Kansas secondary schools that promote postsecondary credential acquisition. Only rural secondary Kansas schools designated by the Kansas State Department of Education (KSDE) as official redesign schools participated in the study. Many strategies or approaches to redesign are being piloted and iterated in redesign schools in Kansas. The strategies being implemented are unique to each local district as redesign involves communication and collaboration with the local stakeholders to determine what approaches fit their community values. Strategies being implemented include, but are not limited to, facilitating student-centered-personalized learning, providing project-based learning with civic engagement, implementation of advisory periods to encourage hybrid models of college and career planning versus counselor-centered models, employing career coaches, enacting student-led conferences, additional career pathway offerings with real-world experiences embedded for internships, flexible scheduling, flexible classroom arrangements, programs, and varying approaches to supporting students with development of academic and non-academic competencies that are crucial in pursuit of postsecondary credential attainment. The themes derived from this study were not indicative of a one-size-fits-all strategy and the approaches to achieve the themes that were derived varied. A discussion of the themes below can be applicable to any specific strategy implemented for the sake of increasing postsecondary credential attainment.

Six themes emerged as a result of the perceptions of those interviewed which addressed the overarching research question and sub-questions of this study. This chapter will include a discussion of how the six themes relate to the overarching research question and sub-questions,

an analysis of the significance of the study, and implications for practice. Concluding this chapter, the researcher will share conclusions and recommendations for further study.

Discussion of the Overarching Research Question

What innovations are rural high schools in Kansas implementing to increase postsecondary credential attainment as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

This study found that intentional and deliberate enrichment and development of non-academic competencies that promote college and career readiness must be integrated in schools to promote postsecondary credential attainment. Many secondary schools are responding to research that supports development of non-academic competencies, "often referred to as soft skills, employability skills, social/emotional skills, college readiness, character development, affective, or life skills, necessary for employment success" (Noonan & Erickson, 2018, p.2). Non-academic competencies and their effect on skill formation for college and career success have not been included in academic discussions in research until the past decade (Heckman & Rubinstein, 2001; Kyllonen, 2013). "Across the country, education efforts are shifting from a narrow focus on academic ability and testing to a broader focus of better preparing students to be college and career ready" (Noonan & Erickson, 2018, p. 2). Academics may influence college and career success, but often social and emotional factors are left out of the equation in traditional school settings. In fact, recent research has found that as little as 20% of the employment success students experience can be attributed to cognitive abilities reflective of their academic proficiency (National Research Council, 2012; Kyllonen, 2013). As a result, it can be concluded that all schools who participated in this study believe that when non-academic competencies, such as interpersonal, intrapersonal, and cognitive skills are developed, it will

have a direct impact on academic performance, college matriculation and completion, and success in career and life. (See Figure 2-1).

This study also found that students must be empowered and granted ownership of their learning to develop student agency and academic tenacity necessary for postsecondary credential attainment. Student agency refers to a students' ability to set advantageous goals, initiate action toward those goals, reflect and revise, and internalize self-efficacy when the goals are met (Davis Poon, 2018). Academic tenacity can be defined as the mindsets or skills that demonstrate a students' ability to work toward long-term academic goals, conquering challenges in a pursuit to persevere toward long-term academic goals (Dweck, Walton, & Cohen, 2014). Essentially, student agency is the ability to recognize short-term goals and to tap into non-academic competencies, such as, interpersonal, intrapersonal, and cognitive skills required to recognize and achieve long-term goals in relation to a student's academic tenacity. Students must master the skills associated with Noonan and Erickson's (2018) college and career competency wheel (See Figure 2-1) in order to strengthen the college and career competencies associated with postsecondary credential attainment (Noonan & Erickson, 2018). Student agency and academic tenacity are strongly influenced by a student's development of self-efficacy. Students become empowered to take control of their learning when they are granted choice and flexibility. Students may choose a topic to explore, choose the modalities in which they prefer to learn, and are granted control of their learning with regard to time management, pace of learning, and place of learning. In essence, the teacher becomes the facilitator of learner and the student has more voice and choice in how that learning occurs. Giving students choice and voice develops autonomy to set goals, initiate action toward those goals, iterate, and establish self-efficacy when goals are met. When student-centered learning approaches are implemented, it lends to

developing student agency and academic tenacity. When ownership of the learning is handed to students, it creates more opportunities to develop these important skills. "Supporting students' development of self-efficacy promotes positive cycles of perseverance and achievement and encourages students to set meaningful goals and self-regulate to promote goal-directed behaviors" (Noonan & Erickson, 2018, p. 25). This will certainly have a positive impact on postsecondary credential attainment.

Additionally, this study found that personalized and relevant real-world experiences are necessary and should reflect student interests to develop skills for seamless matriculation into postsecondary training. Many schools in our nation are "Industrial Age" organizations existing in an "Information Age" world, and the delivery system is an assembly line where time for learning is the constant and the quality of learning is the variable (Schwahn & McGarvey, 2012, p. 5). Consequently, many students lack motivation to do well in school which positively correlates to a students' motivation to continue to seek learning in a postsecondary setting. "This lack of motivation to do well in school represents a serious loss of human potential, with implications for students' well-being later in life and for our country's future economic growth" (Dweck et al., 2014, p.3).

Perceptions of personalized learning may vary considerably. Some refer to personalized learning as the modalities in which student learn best, such as, visual, auditory, and tactile learning preferences. The analysis of data in this study identified personalized learning as a means to accelerate learning by tailoring programs and the instructional setting to accommodate student choice of what, where, where, when, and how learning takes place. The flexibility that personalized learning provides makes it possible for the teacher to become a facilitator of learning while creating more flexibility in time for student ownership of learning. Personalized

learning also grants teachers and students the capacity to build strong positive relationships through more meaningful, individual interactions. When personalized learning is implemented correctly, learning becomes relevant to the learner. When students are forced to learn topics that are not interesting to them or seem irrelevant toward future goals, students lack the intrinsic motivation to perform well. When this happens, educators may hear, "Why do we need to learn this? I'll never use it." Sound familiar? This is because in traditional school settings, a textbook is commonly used or a scope and sequence of curriculum with little flexibility for student choice. All students learn the same thing regardless of student interests. Personalizing learning to create relevant learning experiences dramatically ramps up student motivation and excitement for school which would likely contribute to higher percentages of students with postsecondary credentials.

Discussion of Sub-Questions

What innovations are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?

Findings from this study indicate that increasing the amount of relevant experiential learning associated with work-study, job-shadow, internship, and civic engagement is necessary with continued improvement and support for CTE pathways. The desire to improve career pathways was cited with the most frequency with regard to all cases in this study. As one participant states, "We are going to continue to work on CTE. It is a deficiency from where we are now and where we want to be" (PD2). School B cited improvement concerns with the highest frequency. It is no surprise that School B is located with the farthest distance from an urban area or urban cluster. Often in rural communities, there is a smaller pool of business and industry with which to tap into for learning in work experiences. School-community

partnerships can assist to merge career and technical education with academe and real-world experiences in a multitude of ways with mentoring, job-shadowing, service learning, school-to-work programs, internships, apprenticeships, and service in an advisory role to career and technical programs (Schafft & Harmon, 2011). It is important to remember that work-study, job-shadow, and internships are not only for seniors and these experiences do not always have to be connected to CTE pathways. School B has implemented a formal work-study program that has validated the rigor of the program. Schools A, C, and D cite reaching out to the Chamber of commerce as a good contact to initiate these experiences, however, no district mentioned using career pathway advisory committees to make connections with business and industry in surrounding areas.

There is also strong support for CTE among the participants in this study. It is recognized that career pathways are beneficial to merge academic, technical, and cognitive skills that, combined, contribute to successful matriculation into college and the workforce. One participant at School C spoke about the benefits of merging academia and CTE to provide comprehensive coverage of standards and competencies. This participant recognized that academic standards can also be addressed in CTE coursework allowing for alternative acquisition of credits tailored to student interest. A concise relevant path to a career provides a smooth transition into postsecondary programs for credential acquisition. CTE coursework lends an opportunity to merge classroom-based instruction with real-world, work-based learning, job-shadowing opportunities, internships, or apprenticeships. Visher and Stern (2016) explain the role of vocational education in our nation has evolved from a design in the 20th century to prepare some students for work and others for college, to preparation of all students for both college and careers (p. 2). "CTE is transforming vocational education consisting of low-level

coursework and job training, replacing it with academic rigor, integrated, and sequential learning that aligns with and leads into postsecondary credential attainment" (American Institutes for Research, 2013, p. 2).

There are challenges with rurality and implementation of career pathways due to limited resources, which will be discussed with regard to the following sub-question. Still, all cases in this study have implemented career pathways, however, all schools in this study supplement their CTE curriculum with online coursework as it is common for rural schools to have small teaching staffs. School A has even pooled with four other rural school districts in the area so that all five communities can enhance their CTE offerings online. Molefe et al. (2017) conclude in their study that, "the rise in online learning options has reduced logistical impediments to attaining a postsecondary degree, particularly for rural students" (p. 1).

It is also difficult to attract high quality CTE teaching candidates due to location and competing salary schedules with urban counterparts. An example of the benefit of CTE in rural settings is how rural schools in Kansas are addressing the challenge of recruiting highly qualified teaching staff. In some rural locations, CTE teachers are shared with neighboring school districts. Some rural schools in Kansas have also met this challenge by integrating Teaching and Training CTE pathways as a "grow your own" teacher approach where students feel strong ties to the community. Schools A and B have implemented a Teaching and Training pathway. Morehead (2015) explains that "CTE is believed to have the potential to play a vital role in reversing negative socioeconomic trends for rural communities" (p. ix). With a teacher shortage, especially in rural areas, it makes sense to establish a Teaching and Training career pathway.

School-community partnerships can assist to merge career and technical education with academe and real-world experiences in a multitude of ways with mentoring, job-shadowing,

service learning, school-to-work programs, internships, apprenticeships, and service in an advisory role to career and technical programs (Schafft & Harmon, 2011). Often, business and industry are limited in rural areas so it may be necessary to reach out to surrounding communities, utilize advisory committees associated with each career pathway, or utilize technology for virtual meetings with professionals in various careers. It is also important to remember that work-study, job-shadow, and internships are not only for seniors and these experiences do not always have to be connected to CTE pathways. Schools A, C, and D cite reaching out to the Chamber of commerce as a good contact to initiate these experiences, however, no district mentioned using career pathway advisory committees to make connections with business and industry in surrounding areas.

As cited previously, one participant at School C mentioned the benefit of collaborations between academe and CTE curriculum. It was mentioned that alternative credits are being considered where some standards may also be covered in CTE coursework. "Can I hit that math standard in my Ag class or my shop class where they are talking about angles they are talking about fractions" (PC2)? Collaboration between academe and CTE is an area that should be explored further.

What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary credential attainment, and how do they overcome them?

This study found there are challenges associated with attributes of a rural community that are still to be overcome. However, there are still things that can be impacted, and one of them is increasing postsecondary credential attainment rates with innovative redesign practices and the ability to form stronger positive relationships with a small student body. Rural schools often face obstacles with limited resources, isolation of staff, and isolated location; however, the

transformation to a holistic student-centered approach will positively impact postsecondary credential attainment.

The most cited challenge for rural school districts in this study was limited resources in the form of staff, curriculum, business and industry partnerships, and funding. Due to full-time equivalent funding (FTE) and lower tax bases, often small rural school district salary schedules do not compete with higher salaries of urban or suburban counterparts. Poverty rates are more prevalent in rural areas causing difficulty in offering a wage that compares with urban or suburban counterparts (Fowles et al., 2014). For these reasons, "there is little reason to believe that local governments in remote, economically depressed areas will be more successful in attracting highly credentialed, well-trained individuals from outside those regions" (Fowles et al., 2014, p. 517). Distant commutes also limit the appeal of employment within rural areas (Lowe, 2006; Fowles et al.,2014). Due to a small staff in rural schools, many staff members "wear multiple hats." This certainly benefits students for curricular choice and diversity of career exploration; however, high caseload is attributed as being a factor for attrition in rural secondary schools (Gonzalez, 1995; Lowe, 2006). Rural districts must also be creative in how they establish partnerships with business and industry. Local chambers of commerce have been utilized by all participants, but there was no mention of leveraging technological advances for virtual meetings with professionals, nor was the collaboration with advisory committees associated with the career pathways.

Significance of the Study

A country's productivity and economic competitiveness relies upon education, specifically, postsecondary training which is fundamental to students' upward mobility in a thriving and progressive economic culture. (Hanushek & Kimko, 2000; Haunshek &

Woessmann, 2012; Bureau of Labor Statistics, 2013; Bailey, Jaggars, & Jenkins, 2015). At least 71% of careers in the 21st century, and beyond, will require a minimum of a vocational certificate or licensure, associate's degree, or bachelor's degree by the year 2020 (Lindsay, J., Davis, E., Stephan, J., Bonsu, P., & Narlock, J. (2016). This study is significant because the time is "now." The numbers of students attaining postsecondary credentials are not enough to fill our workforce to sustain a competitive global economy (Carnevale, 2013; Bidwell, 2015). This study supported the current restructuring of schools in Kansas as a result of the need to shift from a traditional framework for education to a framework that includes a holistic, student-centered approach encouraging development of academic and non-academic skills required to be successful in college and careers in the 21st century.

Equally important, this study also provided insight into approaches utilized by rural secondary schools in Kansas who are committed to implementing evidence-based practices in school redesign. These practices are designed to support and develop the skills necessary for students to internalize which contribute to higher rates of postsecondary credential attainment. The practices described in this study may be transferable to other schools with national attention drawn to postsecondary credential attainment.

This study was also significant because it provided compelling evidence that acquisition of non-academic competencies is imperative when preparing students to be college and career ready. Non-academic competencies, such as the skills identified in the College and Career Competency Framework (Noonan & Erickson, 2018) are essential in preparing students to be college and career ready. (See Figure 2-1). This study supported the need to implement practices such as personalized learning, project-based learning, and experiential learning to foster

student agency, academic tenacity, and other essential skills related to social and emotional well-being.

CTE implementation was given consideration in this study. The academic, technical, and cognitive skills that can be developed within career pathways was of special interest to the researcher. This study provided evidence that experiences provided for students in real-world settings within careers of interest set the stage for seamless matriculation into postsecondary programs that provide the credentials necessary for employment within those specific careers. This study confirmed that Perkins legislation is inclusive of an expansive and ever-changing amount of information and guidelines for integration in which school districts need to have trained professionals competent in this domain. A lack of support staff in rural school districts creates a challenge to overcome where this responsibility falls on one individual who may have limited knowledge, most often, the principal or counselor.

Dynamics of rural schools were recognized within this study. Often, models and practices intended as a uniform system for public education in our nation is geared toward the dynamics of urban schools; where rural schools are expected to conform, or urbanize rural schools (Tieken & San Antonio, 2016; Schafft, 2016). This study also confirmed challenges with rural communities, such as a lack of resources (staff, curriculum, and fiscal), but there are also benefits of a rural community, such as strong community support and more efficiency to build positive relationships with students due to a small student body.

Implications for Professional Practice

The findings and descriptions of this study may have significant potential to positively impact postsecondary credential attainment in the 21st century, not only in Kansas, but across the nation. The research in the literature review section of this study and the findings may be

applicable in all states as the research confirms a national gap in the prescribed percentage of credentials needed to fill a 21st century workforce and actual credentials acquired across the nation. The research provided in this study also confirms that the Kansans Can Vision for education is aligned with current research.

All professionals within the realm of law and policy, education, psychology, and social work may find benefit in the contents of this study. This study includes pertinent information for the sustainability of a nation and the ability to live happy, healthy, productive lives. Education is the key to the productivity of our great nation and the social factors that influence quality of life.

This study also lends to potential transferability of approaches or practices that may be implemented at local levels across the nation to enhance postsecondary credential attainment. Though this study specifically focused on rural school settings, it seems that the findings indicate a perspicacity to include non-academic competency development among all students. This is a necessity that can be transferred to all settings to enhance student agency and academic tenacity that is crucial for postsecondary success.

Personalizing learning in conjunction with real-world learning experiences can be beneficial in all school settings as to develop intrinsic motivation and relevance is associated with these types of learning experiences. Implementation of career pathways indicative of student interests are necessary to facilitate the seamless matriculation into postsecondary learning and programs that may lend to established careers matching student interest. This is important in all school settings, not just rural school settings. With that said, if it were fiscally possible, it would be beneficial for each rural district to employ one person who is knowledgeable of career and technical education. Perkins CTE funding covers an everchanging and expansive amount of information. Rural school districts are managing CTE the best they can

with limited knowledge and many responsibilities, but it is not thorough. It is not as good as it could be. Many school districts, especially small rural schools, are not taking advantage of all they could be, nor is there capacity with regard to time and staff to be thorough and knowledgeable.

Implications for the Researcher's Personal Practice

The researcher was interested in this topic due to the applicability of the topic as a rural secondary principal in a redesign school in Kansas. A passion for the topic of increasing postsecondary credential attainment and helping students recognize their highest potential has been a focus as an administrator. The researcher was interested in growing professionally on this topic in order to be an effective leader in school redesign and initiatives to increase the postsecondary credential rate. Recognizing the importance of CTE in this mission was essential as there is always so much to learn about implementation and innovation with career pathways and matriculation into postsecondary programs. Being an administrator in a small, rural, 1A school district, there was specific interest in innovations in other rural secondary redesign schools.

The researcher was profoundly influenced by the research in this study. The thorough review of the literature provided insight that was easily transferred to professional development with staff. It also provided important information that has enhanced dialogue with stakeholders within the community and has influenced decision making with regard to practices implemented at the researcher's school. The interviews with other professionals in the same setting has increased capacity for networking and provided more insight into the great work we do. This research has spawned ideas for additional study, and the researcher is excited to continue her life-long pursuit of learning.

Recommendations for Further Study

Recommendation one. In order to impact the postsecondary credential rate, we must ensure we are focused on the skillsets that facilitate success in that domain. Noonan & Erickson (2018) describe the key skillsets that are essential for postsecondary credential attainment and career success in, "The Skills that Matter." It would be beneficial to conduct further study with regard to what schools are implementing to specifically address these intrapersonal, interpersonal, and cognitive skills. (See Figure 2-1). As of the last decade, there is significant research in the domain of developing non-academic skillsets that can be enriched by further research.

Recommendation two. The researcher concluded in this study there is still much for rural schools (and potentially all schools) to learn about CTE programs and how they impact matriculation into credentialed careers. Further study is recommended as to how secondary educators/administrators are prepared to implement and understand processes with CTE. CTE programs and purpose in schools will be in a better position with principal support to be established as an integral component of a school's educational mission (Kitchel, 2015).

Recommendation three. This study confirmed limited resources in regard to fiscal, personnel, curriculum, and industry in rural schools. It would be beneficial to conduct further study as to how rural school educators are capitalizing on the access to technology to remedy a lack of such resources. Consideration may be given to virtual access to classrooms where a qualified teacher is not available in rural settings. Virtual meetings may increase advisory committee participation and assist with connections for real-world learning opportunities. The use of technology may provide cost savings for rural district with shared staff through technology. Technology also has the potential to enhance a teacher's ability to leverage dialogue with industry partners located

away from the rural school. For example, there may not be a biochemist in the rural community, but perhaps a biochemist in a larger city could virtually participate in advisory meetings.

Recommendation four. Further study may be beneficial to provide insight into what types of collaboration between secondary to postsecondary to community entities would impact postsecondary credential attainment. Postsecondary and Secondary often work in silos. It may be beneficial for educational leaders in both settings to reach out and schedule times for professional dialogue to enhance common approaches for matriculation into postsecondary programs. It would also be beneficial to collaborate with education departments of postsecondary institutions on a consistent basis, not only for recruiting purposes, but to also share what qualities and skills are being sought for future teacher candidates. Collaboration between higher education and secondary education in rural communities are especially important, where institutions of higher education may unintendedly overlook rural youth because they are not representative of a large market for college-aspiring youth (McDonough, Gildersleeve, & Jarsky, 2010).

In addition, "Collaboration between agencies in the service of college completion should not be limited to public schools and colleges" (Boylan et al., 2017, p. 19). Boylan et al. (2017) report that student retention rates are higher when postsecondary institutions collaborate with secondary institutions and community stakeholders. Community stakeholders are also important in that students sometimes face adversity creating challenging circumstances for college completion. In any given community, there are numerous social services and organizations that can assist with college success, including, but not limited to, healthcare, mental health, financial and legal services, and shelters (Boylan et al., 2017).

Recommendation five. The researcher is passionate about learning more about alternative credits. Further study is recommended on how rural schools blend academe and CTE.

For example, how can rural schools expand upon offering Mathematics or English credentials for work completed in CTE courses that match the same standard with their competencies? Collaborations between academe and CTE teachers may leverage the ability to personalize learning further while still mastering required standards in core subjects. It would potentially eliminate time spent in a classroom that would seem redundant while increasing time for experiential learning in real-world settings through internships or work-study. This collaboration could efficiently make use of time spent on academics and increase time in tailored programs of study where certification could be sought and acquired prior to or in conjunction with high school graduation. Often CTE coursework is overlooked in academic discussions, but "CTE programs are stepping up to offer students a rigorous and relevant education, rich in literacy content and strategies" (ACTE, 2009, p. 1). A school culture that fosters collaboration between academics and CTE and integrations of both better prepare students for both college and careers, and better preparation for the workforce (Kitchel, 2015). "High-quality CTE programs of study, aligned with academic and technical workplace standards, not only have the potential to reduce high school dropout rates, but help students to see the relevance of what is learned as it relates to a potential career" (Balfanz, et al., 2013, p. 9).

Recommendation six. As the researcher moved through the findings of the study, the researcher began to think about how society has evolved; yet, schools have not changed much over the past 100 years. A case study on change theory in redesign schools would be interesting since the call for redesign of our educational framework is urgent, and change is slow.

Researcher Conclusions and Recommendations

The researcher was especially interested in what schools are doing to increase the postsecondary credential acquisition rate in her school, in her state and in her nation. As a rural secondary school principal in Kanas, the researcher believes in the KSDE's vision for redesign as the research is overwhelmingly strong to support it. It also echoes what is best for kids and our future prosperity on a global scale.

Upon beginning this study, the researcher wanted to make one marked distinction. That is, the KSDE defines postsecondary credential attainment as postsecondary success. The researcher agrees, but as indicated in this study, each case held a varied stance on what success is. The researcher chose to use postsecondary credential attainment throughout the study as there was a desire to not confuse the two. Yes, a student is successful if they are prosperous in a career. However, astounding research points to the likelihood of increased chances of living a healthy, prosperous life by having the credentials to work in a high wage, high demand career. That comes with postsecondary credential attainment in the 21st century. Sometimes we are asked questions about the 70% goal set forth by the state of Kansas. It's because that's what the workforce requirements are calling for, not necessarily that a student is not going to be successful if they don't obtain a credential.

College, Career, or Both?

ESSA provides the framework for schools today to focus not only on college preparation or career preparation, but to prepare students for both college and career. There seems to be differing opinions on the question of college, career, or both? Since most jobs in the 21st century require postsecondary credentials, it is difficult to deny with current research in mind, the majority of jobs "require advanced skills and credentials, typically acquired through higher

education, and that all young people therefore deserve the opportunity to explore college as an option, even if it is the one they choose not to pursue" (Savitz-Romer & Bouffard, 2012, p. 15). It is the researcher's firm belief there should be an intentional focus on postsecondary credential attainment due to increased possibilities for prosperity. Postsecondary credential attainment can come in the form of stackable credentials, licensures, certificates, associate's degrees, bachelor's degrees, and graduate degrees. In line with the findings from this study, Savitz-Romer & Bouffard (2012) confirm that "all youth should have the chance to consider college as an option, but believe the lack of attention to the developmental processes, such as identity and self-regulation, is one of the reasons many young people never get that chance" (p. 16). It is the researcher's belief there is a possibility for every student and skillsets must intentionally be developed to achieve the skilled workforce that our 21st century calls for.

Summary

The trend for jobs in the 21st century to require more postsecondary credentials and the fact that schools are still predominantly focused on academics, it makes sense that, on average, as a nation we are not successful at ensuring students matriculate into or finish programs after high school. The only way to fulfill the workforce requirements is by shifting our focus from a sole intent of high school graduation and focusing on the whole child and their experiences to instill all of the following in an integrated approach: academic, cognitive, technical, employability, and civic engagement (KSDE, 2019). Postsecondary credential attainment leads to success in careers which contribute to overall quality of life as an adult. It is our collective duty to ensure our youth are equipped with the academic and non-academic skills to be productive in a 21st century society that is competitive on a global scale. Our economic stability and quality of life depend on it.

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Appendix A - Definitions

Academic Achievement Gap – disparity in academic performance, such as grades, test scores, college completion, among certain groups of students

Articulation Agreement – a formal agreement between two or more educational entities with regard to specific programs of study

Career Readiness – acquisition of academic skills, employability skills, and technical skills required for success in a career

Career and Technical Education – programs of study specifically aligned with applied sciences, skilled trades, or modern technologies with career preparation

Career Pathway – a program of study that aligns with a specific path into a technical career

Critical Thinking – objective evaluation and analysis of specific situations to form judgement or solutions

Equitable Learning – learning in which each individual students' needs are met and may not be similar to other students

Individual Plan of Study – a plan developed to facilitate individual students' future educational and career goals

Postsecondary Success - a student's postsecondary educational attainment that leads to acquisition of a license, certificate, or degree

Real-World Experience – experiences students are given to expose them practice applicable to a possible future career

School Redesign – educational reform to transform the structure or framework of the learning environment

Social Emotional Character Development (SECD) – learning of skills that include intrapersonal and interpersonal abilities

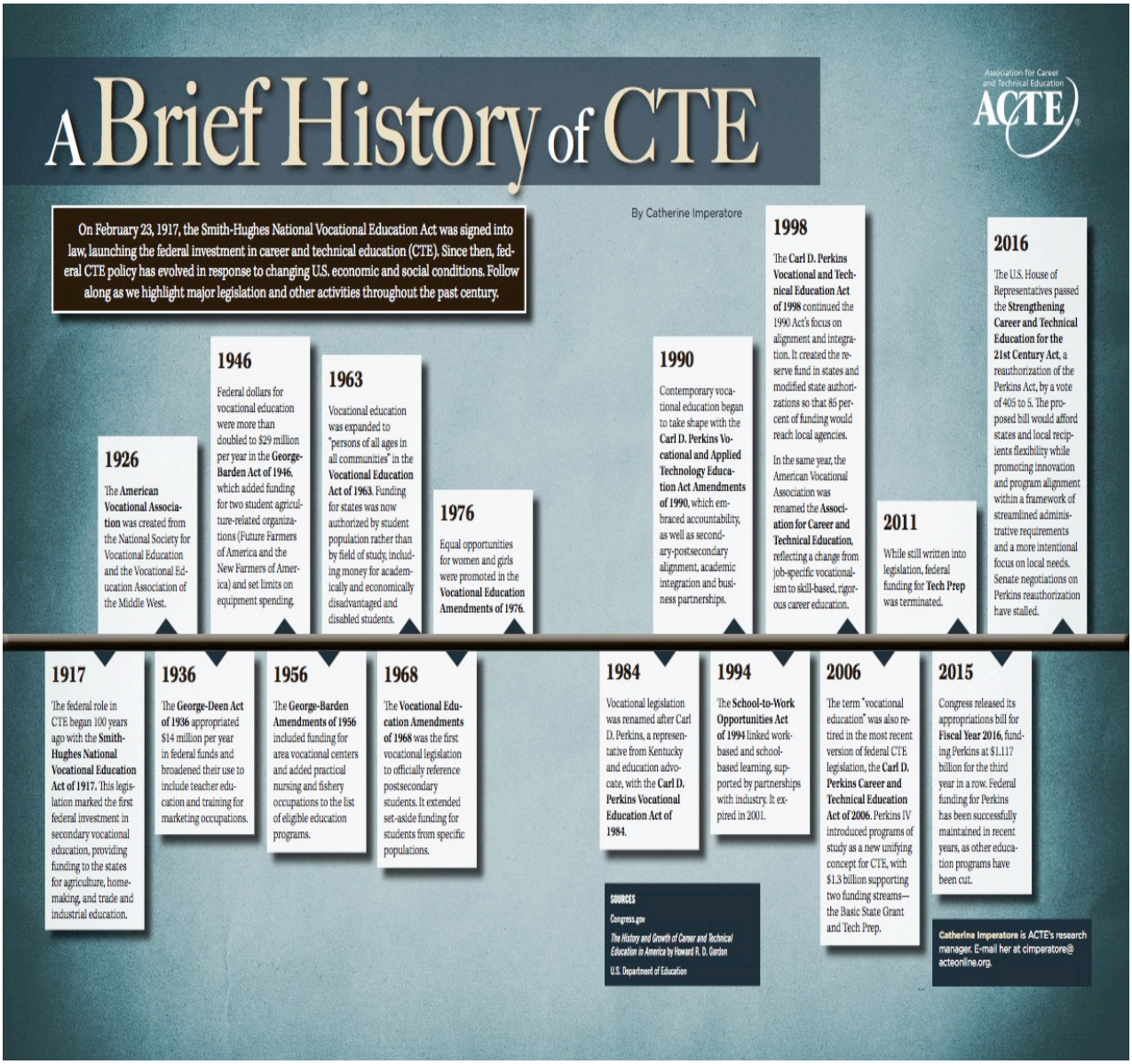
Social Proficiency – fluency in intrapersonal or interpersonal situations in social settings

Socio-Economic Status (SES) – combined total measure of a person's social and economic position in society when compared to the population

STEM – science, technology, engineering, and mathematics education – sometimes referred to as "STEAM" meaning science, technology, engineering, arts, and mathematics

Student-Led Conference – a non-traditional conference that resembles a parent-teacher conference; only the student leads the conference

Appendix B - Career & Technical Education Timeline



Appendix C - Interview Guide for Educational Practitioners

Purpose of Study

The purpose of this study is to understand the methods or approaches rural schools in Kansas utilize to prepare students for postsecondary credential attainment; thus, increasing postsecondary success rates as measured by the National Student Clearinghouse StudentTracker data. This instrumental case study of rural school educator perceptions and approaches toward increasing postsecondary credential attainment to fuel the prescribed workforce requirements in the 21st century will result in potential identification of effective methods utilized to increase postsecondary credential attainment in rural school settings. These methods may be transferred to schools of similar rural demographics, and in some cases, may suggest transferability to suburban and urban secondary schools.

Research Question

This study emphasizes the overarching research questions:

1.) What practices are rural high schools in Kansas implementing to increase postsecondary success as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

The following sub-questions will guide this study:

a. What innovative strategies are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?

b. What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary success, and how do they overcome them?

Protocol for Interview

Interviewer: Audrey A. Herbst

Nature of the interviewer's relationship with interviewees: The interviewer is a rural Kansas secondary school principal. The interviewees are educators in rural Kansas secondary schools. The interviewees work in different school districts than the interviewer. No social or professional relationship with any of the interviewees exist prior to the face-to-face interview; however, interaction between the interviewer and interviewees will be made prior to the formal face-to-face interview to establish confidence and trust.

Process: Contact will be made with the superintendent of each selected rural school district by phone or in person to describe the purpose of the study ask permission to interview two educators in their district to conduct a face-to-face interview. The superintendent will recommend two educators within their district to interview. Informal contact by phone or in person will be made with two individuals in four different districts as recommended by the superintendent to describe the purpose for the study and to receive voluntary participation for a face-to-face interview. The interviewer will share the process for maintaining confidentiality, and the process for collecting data through interviews and artifacts. Once voluntary verbal consent by the interviewee is secured, a date and time convenient for the interviewee will also be established. A location for the interview to take place at each district site will also be established at the interviewees discretion where they feel comfortable absent of distractions. The names of the interviewees will be coded and remain anonymous for purposes of this study.

At the beginning of each face-to-face interview, an "Informed Consent Form" will be shared with each interviewee to review procedures as discussed during initial phone contact. Consent will be secured in writing by asking for a signature on the "Informed Consent Form" after previewing the parameters established for voluntary participation by interviewees. After receiving permission from the interviewee, each interview will be recorded utilizing a digital audio recorder. Digital recordings of each interview will be transcribed. The transcriptions will be used for the purpose of data analysis using data disaggregation to identify over-arching themes. The interview questions identified below will serve as a guide for the interview; however, the interviewer may ask the interviewee to elaborate or clarify responses.

Interview Questions

The interview questions are influenced by the guiding questions of this instrumental case study.

1.) What practices are rural high schools in Kansas implementing to increase postsecondary success as set forth by the Kansans Can vision to "Lead the World in the Success of each Student"?

The following sub-questions will guide this study:

a. What innovative strategies are rural high schools in Kansas utilizing to facilitate Career and Technical Education (CTE)?

b. What challenges do rural secondary schools in Kansas experience as students are preparing for postsecondary success, and how do they overcome them?

Interview questions have been designed intentionally to learn from each case that may provide purposeful insight toward increasing the postsecondary credential attainment of rural Kansas students by utilizing a qualitative study grounded in theory (Khan, 2014, p. 224). The research

questions, literature review, and framework for the study guided the development of the following interview question constructs and codes:

- Purpose of Redesign (P)
- Redesign and Innovation (RI)
- Career and Technical Education (CTE)
- Rural Schools (RS)
- Postsecondary Credential Attainment (PCA)

Appendix D - Interview Questions for Rural Kansas School Educators

1. Please introduce yourself and tell me about your role in your district.
2. Has your school/district established your “why” or purpose for school redesign? What is your "why"? (P)
3. Has your school/district formally identified your "vision" with redesign? If so, what is your school district's "vision" relating to the Kansans Can vision for “Leading the World in the Success of each Student” and school redesign? (P)
4. What are some of the significant transformations in educational design your school district is experiencing or has experienced since officially being deemed a redesign school by the Kansas State Department of Education (KSDE)? (RI)
5. Does your district/school utilize the National Student Clearinghouse (NSC) StudentTracker data to monitor progress toward postsecondary credential attainment and how is it utilized in your district? (PCA)
6. How familiar do you feel all staff are with regard to Kansas’ postsecondary credential attainment goal of 70-75% and why?

Parents? Community? (PCA)

7. How does your school/district tailor personalized learning environments and do you feel this impacts the postsecondary success rate? If so, how? (RI) (PCA)
8. If personalized/student-centered learning is a priority in your district or considered by some staff, how is it being integrated in your classrooms? (RI) (PCA)
9. Are Individual Plans of Study utilized in your district as a tool to increase postsecondary success rates? How are they utilized? (RI) (PCA)

10. Does your district utilize student-led conferences? If so, how do you feel this impacts postsecondary success rates? (RI) (PCA)

11. Does your school/district integrate career and technical education courses within your curriculum, and if so, what has been the process to do so? (CTE)

12. Considering rurality of your school/district, has your school/district encountered challenges with CTE integrations in the curriculum and if so, how have you overcome them? (CTE)

14. Have you observed specific ways that relationships with postsecondary institutions have changed by offering CTE/dual credit curriculum or through the redesign process? (CTE) (PCA)

15. Does your school/district offer real-world experiences to students in the form of work study, internships, or job shadowing? Please share about your work in this area. (RI) (CTE) (PCA)

16. How do you involve patrons, parents, or community industry partners in preparing students for college and career? (RI) (PCA)

17. How does your school/district ensure character development, social, and emotional development to enhance postsecondary success? (RI) (PCA)

18. What do you feel you do well in regard to social, emotional, and character development (SECD)? What have some challenges been with regard to SECD integrations? (RI) (PCA)

19. Is there anything with regard to preparing students for postsecondary credential attainment that I didn't ask you that you would like to share, or what do you feel your district does well?

Again, I would like to thank you for your voluntary participation in this study. I would like to conclude by reviewing the benefits of the study, confidentiality of the study, and how I will share results with you.

Appendix E - Informed Consent Form

This Informed Consent Form has two parts:

- PART I - Information Sheet (to share information about the study with you)
- PART II - Certificate of Consent (for signatures if you choose to participate)

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

PROJECT TITLE: An instrumental case study of approaches rural secondary schools in Kansas utilize to prepare students for postsecondary success

This informed consent form is for educational leaders in rural secondary Kansas schools who have been invited to participate in the instrumental case study of practices rural secondary schools in Kansas utilize to prepare students for postsecondary success.

APPROVAL DATE OF THE PROJECT: July 25, 2018

EXPIRATION DATE OF THE PROJECT: May 31, 2019

PRINCIPAL INVESTIGATOR: Dr. Debbie Mercer, Dean of Curriculum & Instruction, Kansas State University

CO-INVESTIGATOR: Audrey A. Herbst, Principal, Little River Junior Senior High School

CONTACT INFORMATION FOR ANY PROBLEMS/QUESTIONS: Audrey A. Herbst aherbst@usd444.com

IRB CHAIR CONTACT/PHONE INFORMATION: Dr. Debbie Mercer dmercer@ksu.edu

SPONSOR OF THE PROJECT: There is no sponsor. This study is conducted to fulfill the requirements of a dissertation learning activity.

INTRODUCTION: My name is Audrey A. Herbst, doctoral student at Kansas State University. Currently I serve as building principal at Little River Junior Senior High School, USD #444. I am conducting research on practices rural secondary schools in Kansas utilize to increase postsecondary credential attainment rates. I plan to study four rural Kansas districts to construct learning toward increasing postsecondary success rates. I invite you to be a part of this research. A decision on voluntary participation is not necessary today. Please feel free to stop and ask me any questions before deciding if you'd like to participate or not. In addition, should you decide to participate, I invite you to ask me questions at any time before, during, or after the interview. My contact information has been provided.

PURPOSE OF THE RESEARCH: The purpose of this study is to understand the practices rural schools in Kansas utilize to prepare students for postsecondary credential attainment; thus, increasing postsecondary success rates as measured by the National Student Clearinghouse StudentTracker data. This instrumental case study of rural school educator's perceptions and approaches toward increasing postsecondary credential attainment to fuel the prescribed workforce requirements in the 21st century will result in identifying potential effective practices, or strategies, utilized to increase postsecondary credential attainment. These methods may be transferred to schools of similar demographics, and in some cases, may be transferred to suburban and urban secondary schools.

PARTICIPANT SELECTION: You are cordially invited to participate in this research. Your direct experience in leading a district in alignment with the Kansas vision for student learning is the richest and most applicable contribution to this research.

PARTICIPATION: Participation in this research is confidential, and names will be coded to ensure anonymity in the final conclusive analysis. Additionally, participation in this research is voluntary. You may choose to accept the invitation to participate, and you may also choose to resign from the research at any time.

PROCEDURES: I am asking for your participation to understand more about increasing postsecondary credential attainment rates among graduates from rural secondary schools in Kansas. I will first ask for and secure your voluntary permission to proceed with researching your educational perspectives. After securing your permission to be included, you will be asked to participate in an open-ended interview to share your educational perspectives with regard to preparing students for postsecondary success. The questions in this interview process are open-ended, and if you give your voluntary permission to participate, you are invited during the interview to ask questions or ask for clarification. You will choose a location at your district site that you feel comfortable with minimal distractions. Only you and the interviewer will be present at the interview unless you choose to ask someone else to attend. The interview will be recorded with a digital audio device for transcription purposes, and confidentiality will be maintained throughout the interview/recording with names being omitted during questioning and coded for anonymity in the findings. The interview is confidential, and at no time will anyone with the exception of the researcher have access to the audio recordings. The audio recording will be secured in a locked file cabinet and destroyed upon conclusion of the study findings. You may opt out of answering a particular question at any time. All transcripts will be provided to you to ensure accuracy, reliability, and validity before the researcher will conduct analysis of the transcribed interview. Additional artifacts may be requested

to elaborate on information provided in the interview, such as copies of schedules, forms utilized to track student progress, and data utilized to inform analyses of postsecondary credential attainment.

DURATION: You are asked to voluntarily participate in an interview lasting 60 minutes.

RISKS: Do not feel that you have to answer all questions, or take part, if you feel any of the questions or part of the research makes you feel uncomfortable.

BENEFITS: All districts may benefit from this study with emerging themes that may illuminate methodologies to prepare students for postsecondary success.

CONFIDENTIALITY: Your information will be kept confidential. All information from districts will be labeled with a code instead of a district name, and any personally identifiable information will not be revealed in any form within this study.

SHARING OF RESULTS: No information gained from you as a voluntary participant will be identifiable, and nothing will be labeled with your name. Transcripts from this interview will be shared with you for accuracy before being analyzed and used in the publication of this study. Following the study, I will publish results that will be obtainable by the public in a dissertation format. Anonymity will be provided throughout the process and no names of participants or their school/district will be published. Publication of results may facilitate learning for other school districts seeking to improve postsecondary credential attainment and success.

RIGHT TO REFUSE OR WITHDRAW: You are not obligated to participate in this research.

Part II: Certificate of Consent

I have been invited to voluntarily participate in research about practices utilized to increase students' postsecondary success in my district.

I have read the information consent form, or it has been read to me. I have had the opportunity to ask questions about my role in the study. Any questions I asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant_____

Signature of Participant _____

Date _____
Day/month/year

Appendix F - IRB Approval

KANSAS STATE University Research Compliance Office
UNIVERSITY

TO: Proposal Number: 9370, Dr. Debbie Mercer Curriculum and Instruction 06 Bluemont Hall

FROM: Rick Scheidt, Chair - Committee on Reseach involving Human Subjects

DATE: 08/07/2018

RE: Approval of Proposal Entitled, “An instrumental case study of approaches rural secondary schools in Kansas utilize to prepare students for postsecondary success."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. This proposal is **approved for one year from the date of this correspondence, pending "continuing review."**

APPROVAL DATE: 08/07/2018 EXPIRATION DATE: 08/07/2019

Several months prior to the expiration date listed, the IRB will solicit information from you for federally mandated "**continuing review” of the research. B**ased on the review, the IRB may approve the activity for another year. **If continuing IRB approval is not granted, or the IRB fails to perform the continuing review before the expiration date noted above, the project will expire and the activity involving human subjects must be terminated on that date.**

Consequently, it is critical that you are responsive to the IRB request for information for continuing review if you want your project to continue.

In giving its approval, the Committee has determined that:

There is no more than minimal risk to the subjects. There is greater than minimal risk to the subjects. This approval applies only to the proposal currently on file as written. Any change or modification affecting human subjects must be approved by the IRB prior to implementation. All approved proposals are subject to continuing review at east annually, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by URCO staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB and / or the URCO.

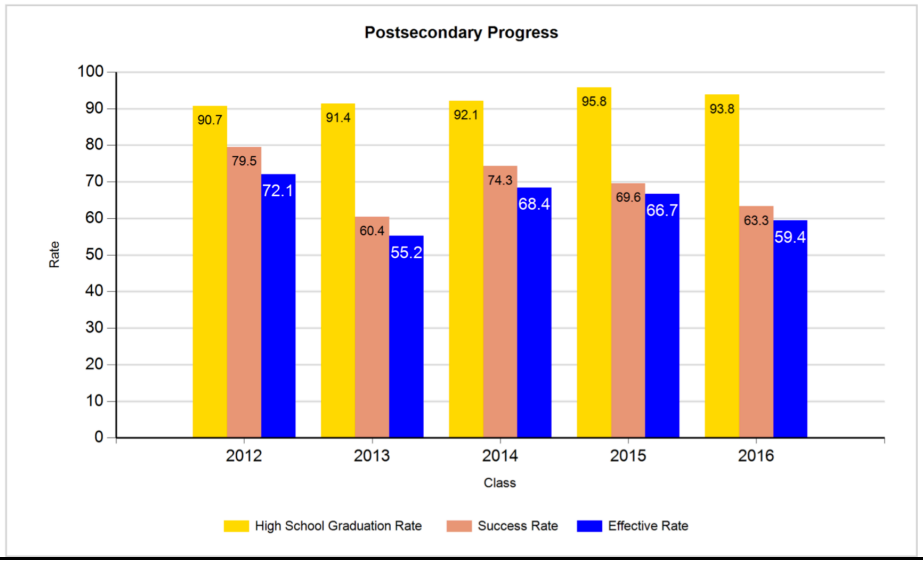
203 Fairchild Hall, Lower Mezzanine, 1601 Vattier St., Manhattan, KS 66506-1103 | 785-532-3224 | fax: 785-532-3278
comply@k-state.edu | k-state.edu/research/comply

Appendix G - National Student Clearinghouse Success Data for Case Selections

The Kansas State Department of Education (2017), Postsecondary User's Guide defines the following as:

> **Graduation Rate:** The 4-year adjusted cohort graduation rate is the number of students who graduate in four years with a regular high school diploma divided by the number of students who entered high school as 9th graders four years earlier (adjusting for transfers in and out).
>
> **Success Rate:** A student must meet one of the four following outcomes within two years of High School graduation.
>
> 1. Student earned an Industry Recognized Certification while in High School
> 2. Student earned a Postsecondary Certificate
> 3. Student earned a Postsecondary Degree
> 4. Student enrolled in Postsecondary in both the first and second year following High School graduation
>
> **Effective Rate:** The calculated Graduation Rate multiplied by the calculated Success Rate.
>
> **95% Confidence Interval for the Predicted Effectiveness Rate:** This range is a benchmark to help districts judge their comparative performance on postsecondary effectiveness. There is a 95 percent probability that, after accounting for influential risk factors, the true mean district effectiveness rate falls within this range. If your district's five-year effectiveness average is within or above the predicted range, then your district's effectiveness rates can be considered average, or maybe better than average, when compared to similar districts. On the other hand, if your district's five-year effectiveness average is below this predicted range, then its performance, when compared to similar districts, is either average or below average. (Postsecondary User's Guide, KSDE, 2017)

School A (Case A)



Kansans Can Lead the World!
Graduation: 95%
Effective Rate: 70-75%

Five Year Graduation Average

93%

Five Year Success Average

69%

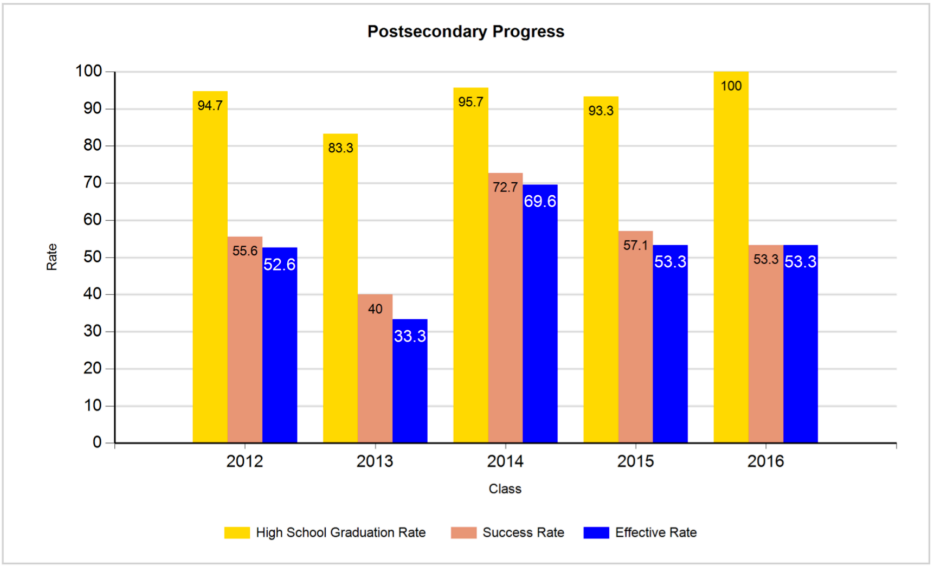
Five Year Effective Average

64%

95% Confidence Interval for the Predicted Effectiveness Rate

51.8 - 56.3%

School B (Case B)



Kansans Can Lead the World!
Graduation: 95%
Effective Rate: 70-75%

Five Year Graduation Average

94%

Five Year Success Average

58%

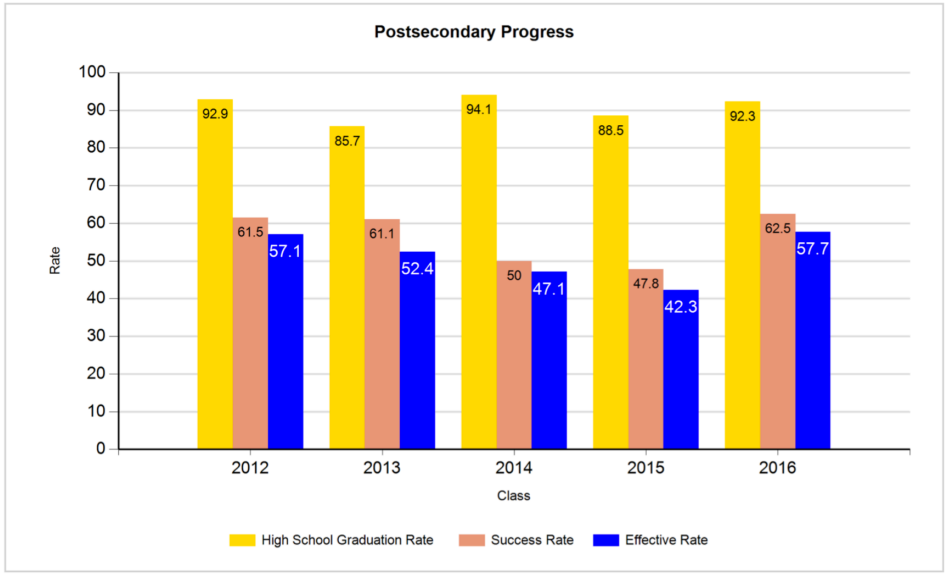
Five Year Effective Average

55%

95% Confidence Interval for the Predicted Effectiveness Rate

38.8 - 44.8%

School C (Case C)



Kansans Can Lead the World!
Graduation: 95%
Effective Rate: 70-75%

Five Year Graduation Average

91%

Five Year Success Average

57%

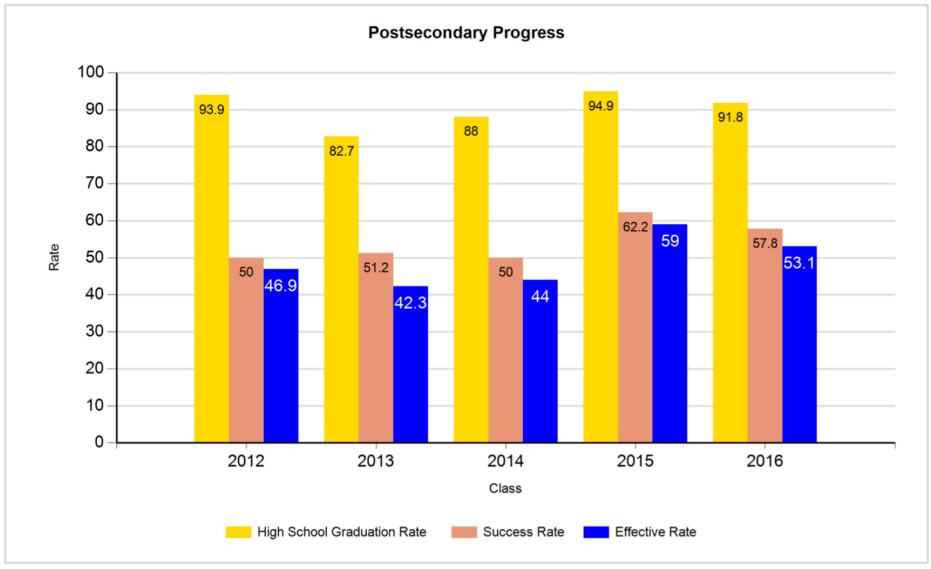
Five Year Effective Average

52%

95% Confidence Interval for the Predicted Effectiveness Rate

44.7 - 48.5%

School D (Case D)



Kansans Can Lead the World!
Graduation: 95%
Effective Rate: 70-75%

Five Year Graduation Average

90%

Five Year Success Average

54%

Five Year Effective Average

49%

95% Confidence Interval for the Predicted Effectiveness Rate

47.4 - 49.7%