The Impact of College Preparation Curriculum Choices on Student Post-High School Persistence and Degree Completion

Robyn M. Kelso
B.S., Kansas State University, 1989
M.A.Ed., Baker University, 2008

Submitted to the Graduate Department and Faculty of the School of Education of Baker University in partial fulfillment of the requirements for the degree of Doctor of Education in Educational Leadership

_____
Sharon Zoellner, Ph.D., Major Advisor

_____
Verneda Edwards, Ed.D.

_____
Patti Bishop, Ed.D.

Date Defended: November 17, 2016

Abstract

This study centered on three variables—high school academic preparation program pathway choice, college structure choice, and college funding level—that might affect persistence and post-secondary success in the years following high school. The study group consisted of 270 students who graduated from Eudora High School between the years 2006 and 2008. The study utilized two tests: a one-way analysis of variance (ANOVA) and a chi-square test of independence.

Statistically significant relationships were found between the high school academic preparation program and variables tested, including the number of years enrolled in a post-secondary setting, graduation rates from any post-secondary setting, and two-year and four-year public institutions chosen by students. Additionally, a statistically significant relationship between high school academic preparation program choice and graduation from any post-secondary institution within five years was found. A statistically significant relationship was not found between high school academic preparation program and graduation rates from private post-secondary institutions.

Statistically significant relationships were found between high school academic preparation program choice and persistence and graduation in a post-secondary setting. Educational leaders at any level who are interested in ensuring post-secondary success and graduation could benefit from reviewing this study, which indicates that a more rigorous curriculum is a strong predictor of post-secondary success. Results show that the best choices for post-secondary success if enrolled at Eudora High School were standards set by the Kansas Board of Regents (KBOR): Kansas Qualified Admissions and Kansas Scholars Curriculum.

Dedication

This dissertation is dedicated to the following people:

First, I would like to thank my family and dedicate this work to them. My mom and late dad, Cherry and Bob McCabria, believed in me from the time they brought me home. To my husband, Mike Kelso, and my sons, Matthew and Mason, who have been patient and kind, holding my hand through statistics and giving me time and space to dedicate to this endeavor, I am eternally grateful.

Next, I would like to thank the school board, faculty, and staff (both current and former) of USD 491 and Eudora High School, who encouraged me in this study, provided data, allowed for interviews, and answered questions about everything from APA style to statistics—I cannot thank you enough.

Last, I would like to thank the members of Cohort 12 who encouraged me through this process, especially to Kevin, my seatmate, partner and classroom companion during the first two years of classes, and to Michelle, who helped me immensely through the principalship courses. Keith, Diamond, and Tiffany—together with your families and children—you inspired me by your work ethic and never giving up. I thank you sincerely from the bottom of my heart.

Acknowledgements

I would like to acknowledge the faculty and staff of Baker University for their dedication and patience as I worked through this program. I would especially like to acknowledge my major advisor, Dr. Sharon Zoellner—thank you for your constant encouragement as I negotiated this dissertation writing. I also want to acknowledge Dr. Phillip Messner for his help with the statistical analysis—I am sure I must have tried your patience time and time again. I also thank Dr. Verneda Edwards for serving on my dissertation committee. Special thanks go to Dr. Patti Bishop, who not only served on my dissertation committee but also shepherded me through my first directed field experience—I feel that I have grown tremendously as a future educational leader under your tutelage.

Table of Contents

List of Tables

Chapter One

Introduction

American high schools were challenged to equip students with the skills to be college-ready and successful in post-secondary education. This was important because students were facing a future in which post-secondary training was essential. Not only did post-secondary training provide important skills, it was also viewed as a mechanism for economic security (Barrow, Brock, & Rouse, 2013). Despite the need for post-secondary training, Kena et al. (2015) reported for the National Center for Educational Statistics (NCES) that the percentage of students who acquired bachelors' degrees increased from 23% in 1990 to 34% in 2014. These rates of persistence and graduation in a post-secondary setting were problematic as the workforce changed and required more training of future employees. Carnevale, Smith, and Strohl (2013) reported that total employment was expected to increase by 24 million jobs by the year 2020. At the current rate of production, the number of workers with the required post-secondary credentials would be short by about five million people (Carnevale et al., 2013).

The demand for a more educated workforce resulted in an increased number of students enrolled in college. According to the NCES, enrollment in post-secondary, degree-seeking institutions rose 15% between 1992 and 2002 (Basu, 2011). Between 2002 and 2012 enrollment increased 24% for full-time post-secondary enrolled students (National Center for Educational Statistics, n.d.). The Inside Higher Education online news source projected a 14% increase in college enrollment through the year 2022 (Lederman, 2014).

With college enrollment numbers escalating in response to demand for post-secondary training, further research on what factors best predict post-secondary success was needed. This chapter contains background information, statement of the problem, purpose, significance of the study, delimitations, assumptions, research questions, and definitions of terms.

Background

With the democratization of public education in America's history, the role of high school curriculum has gone through several transitions between a specific, core curriculum and a broader, choice-driven curriculum. Adjustments to the curriculum were a reflection of times in which the curriculum was modified. For example, in the 1950s, the Russian satellite Sputnik was launched, catching Americans off guard (U.S. Department of Education, n.d.). This event sparked the need for more emphasis on mathematics and science in high schools as Americans sought to launch a similar satellite. This was just one example of how American educational leaders and policymakers struggled to create the best high school curriculum options for all students, regardless of their post-secondary plans. A variety of curriculum options were offered included vocational training, basic curriculum, and college preparatory options were offered in order to find the best path forward for all high school students (Lee & Ready, 2009; Mirel, 2006). Research by The American College of Testing (ACT) found that students who consistently took a core curriculum were more likely to be ready for post-secondary planning, whether those plans involved college or joining the workforce (2016). A core curriculum generally consisted of four years of English, three years each of mathematics, science and social studies.

The current study was limited to Eudora Unified School District, a small 4A school district located in eastern Kansas with an enrollment of 1743 students in 2015 (S. Splichal, personal communication, October 5, 2016). The district includes pre-K to grade 12 students and had an average pupil-to-teacher ratio of 12:1 district wide (Niche, 2015a). In 2015, Eudora Unified School District employed 134 teachers (Niche, 2015b), 65 of whom had master's-level degrees or higher (A. Brown, personal communication, June 2015). The district was homogenous with 87% of its school population identifying as White or Caucasian (Kansas State Department of Education (KSDE, 2014). The district was considered economically disadvantaged, with 45% of its students qualifying for free or reduced lunches rates (S. Flakus, personal communication, October 17, 2016).

In 2015, Eudora High School, a grade 9 through 12 enrollment center, had a student population of 523 students (S. Splichal, personal communication, October 5, 2016), a pupil-to-teacher ratio of 15:1 (Niche, 2015c), 10% minority enrollment, and 35% economically disadvantaged enrollment (S. Flakus, personal communication, October 17, 2016). Eudora High School counselor Brett Misse stated graduates' self-reported data suggested that well over half of the graduating classes from the years 2006 to 2013 planned some post-high school training, either at a two- or four-year institution, or vocational school. However, he noted that formal tracking of post-secondary information was not collected during the years 2006 to 2008 (B. Misse, personal communication, 2014).

Data from the National Student Clearinghouse (NSC) were retrieved during the 2013–14 school year and sorted to include the Eudora High School graduation years of 2006 to 2008. Eudora Unified School District offered a variety of academic preparation

program pathway choices for students. Students could select a basic curriculum approved by the Board of Education (BOE). This Eudora BOE-approved (BA) curriculum fulfills graduation requirements set by the school board. With appropriate grade point average (GPA) and standardized testing scores students could gain admission to post-secondary institutions. Increasingly rigorous curricular options were offered by Eudora Unified School District, as defined by the Kansas Board of Regents (KBOR): Kansas Qualified Admissions (QA) curriculum and Kansas (Regents) Scholars (RS) curriculum. An overview of graduate credit requirements for all three academic preparation program pathway choices offered by the Eudora Unified School District can be found in Appendix A. Additional archived data were obtained from the Eudora High School registrar's office during the 2015–16 school year to determine academic preparation program choice, which was identified on a scale of 1 to 3 as BA, QA, or RS, respectively.

Statement of the Problem

In the early years of the twenty-first century, schools were under pressure to ensure that all students were ready for post-secondary training after high school. Districts searched for ways to improve college and career readiness after high school (Chait & Venezia, 2009). The focus of the current study was to determine whether there was a relationship between persistence and a student's academic program pathway choice, along with college structure choice, and college funding level—were evaluated to see if post-secondary success was influenced.

Persistence in a post-secondary setting was defined by the number of years students were enrolled and graduated from a post-secondary setting, as reported by

National Student Clearinghouse (NSC) data. Data was gathered from the NSC during the 2013-14 school year. Persistence and post-secondary success of students who graduated from Eudora High School between the years 2006 to 2008 and who attended and graduated from a post-secondary institution, based on the variables listed, regardless of the post-secondary institution chosen, were included.

Purpose of the Study

The current study addressed academic preparation program pathway choice, college structure choice, and college funding level that might affect post-secondary persistence in the years following high school. One purpose of the current study was to evaluate to what extent student persistence was dependent on the type of academic preparation program pathway choice—BA, QA, or RS—offered at Eudora High School. The second purpose of the current study was to evaluate the relationship between academic preparation program pathway choice and persistence, regardless of college structure chosen. This was defined as any post-secondary institution that offered a two-year pathway to a degree, traditionally known as a community or junior college, or a post-secondary institution that offered a four-year pathway to a bachelor's degree. The third purpose of the current study was to evaluate the relationship between academic preparation program pathway choice and persistence within a specific college funding level, defined as the differentiation between public, taxpayer-funded post-secondary institutions; and private, non-taxpayer-funded post-secondary institutions. In order to address the problem of student persistence in a post-secondary setting, the focus of the current study was to determine whether there was a relationship between academic preparation program pathway choice, college structure, and college funding level.

Significance of the Study

Studies on academic achievement as a predictor of post-secondary persistence have been numerous (Conley, 2005; Conley, 2006; Kirby & Sharpe, 2001; McGrath & Braunstein, 1997; Ryland, Riordan, & Brack, 1994; Wyatt, Patterson, & Di Giacomo, in press). However, studies evaluating the relationship between academic achievement and post-secondary persistence were fewer; the current study added to this research gap. The current study addressed other factors such as college structure—a post-secondary institution offering a two-year pathway to a degree, traditionally known as a community or junior college, or a post-secondary institution offering a four-year pathway to a bachelor's degree. The current study also addressed college funding level—public, taxpayer-funded post-secondary institutions and private, non-taxpayer-funded post-secondary institutions—as possible indicators of why students succeeded in a post-secondary setting. The results of the current study provided the school district with data for evaluating the academic preparation program pathway choices for their students.

Delimitations

Delimitations were boundaries set by the researcher as it related to the study (Lunenburg & Irby, 2008). The delimitations for this study specified time and location, as well as population. Delimitations included the following:

1. This study included Eudora High School graduating classes for the years 2006 to 2008. Data were collected during the 2013–14 school year.
2. This study involved former students who graduated from high school and attended a two-year, or four-year school following graduation from Eudora Unified School District.

3. This study involved students who had data reported from archived sources, either NSC or archived Eudora High School data.
4. Persistence measurement was a researcher-generated measurement.

Assumptions

"Assumptions are postulates, premises, and propositions that are accepted as operational for purposes of the research" (Lunenburg & Irby, 2008, p. 135). In this study, the following assumptions were made:

1. NSC data were reported accurately.
2. Data from Eudora High School were reported accurately.
3. Any coding that occurred was done correctly and reported accurately.
4. Persistence, a researcher-generated term, was measured by a student's enrollment and graduation from a post-secondary setting.
5. Data provided by the NSC was coded correctly and was the most current information.

Research Questions

The current study investigated whether there was a relationship between a student's academic preparation program choice and a student's persistence in a post-secondary setting, including graduation. Summary percentages were reported for each category of study, which included the academic program pathway choice and persistence. For purposes of the current study, the following abbreviations were used to define each academic preparation program pathway choice: BA, QA, or RS. Data were collected to answer the following research questions:

RQ1. To what extent did high school academic preparation program choice (BA, QA, or RS) impact the number of years enrolled in a post-secondary setting?

RQ2. To what extent did high school academic preparation program choice (BA, QA, or RS) impact student graduation in a post-secondary setting?

RQ3. To what extent did high school academic preparation program choice (BA, QA, or RS) impact student choice of a two-year or four-year post-secondary institution?

RQ4. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose two-year post-secondary public institutions?

RQ5. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose four-year post-secondary public institutions?

RQ6. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose two-year post-secondary private institutions?

RQ7. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose four-year post-secondary private institutions?

RQ8. To what extent did high school academic preparation program choice (BA, QA, or RS) impact students who graduated from a post-secondary setting within a five-year window?

Definition of Terms

This section provides definitions of terms used throughout the current study. For purposes of clarity, terms are defined in the current study when clarity of language was needed for those outside the study's field of expertise (Creswell, 2003). The following terms were researcher-generated definitions.

Academic preparation program choice. The program of study a student chooses in high school in order to be prepared for post-secondary persistence.

College structure. A post-secondary institution that offered a two-year pathway to a degree, traditionally known as a community or junior college, or a post-secondary institution that offered a four-year pathway to a bachelor's degree.

College funding level. Differentiation between public, taxpayer-funded post-secondary institutions and private, non-taxpayer-funded post-secondary institutions.

Five-Year Window. Researcher-generated definition for the period indicating the average number of years of enrollment, which concluded with graduation from college.

National Student Clearinghouse. A non-governmental, non-profit organization centering on "provide[ing] educational reporting, data exchange, verification, and research services, along with longitudinal student data" (National Student Clearinghouse, 2015, p. 1), which provided data related to persistence in a post-secondary setting.

Persistence. Persistence was defined by the researcher as the number of years that students were enrolled, along with graduation rates, as reported by the NSC. In the current study, this data was limited to the following six categories: one, two, three, four, five years persistence, and graduation from college.

Overview of the Methodology

The current study used a non-parametric quantitative cross-tabulation and a one-way ANOVA test covering nominal and interval data. These tests examined the relationship between the high school academic preparation program choice and the student's one, two, three, four, and five years persistence and college graduation. Because of the five-year window to graduation and the year the data were collected, students who attended and graduated from Eudora High School between 2006 and 2008 were selected for this study.

Student persistence was evaluated to determine the extent of the relationship between the three variables—academic preparation program pathway choice (BA, QA, or RS), college structure, and college funding level. Archived Eudora High School transcript data were collected during the 2015–16 school year to determine the choice of academic preparation program pathways. Additional persistence data, which included college structure chosen, were collected from the NSC during the 2013-24 school year. All post-secondary institution options, including two-year and four-year colleges as reported by the NSC, were included in the study, regardless of the post-secondary setting chosen following high school.

Two tests were calculated to determine the strength of the relationship between the variables: academic preparation program choices (BA, QA, or RS) and categories of persistence (one, two, three, four, and five years and college graduation). Categories of persistence were limited to those mentioned, even though NSC included all data, regardless of how long a student was enrolled in a post-secondary setting. The first test was a non-parametric quantitative cross-tabulation chi-square test of independence

(Tanner, 2012). This test was used to measure significant differences between a categorical independent variable and a categorical dependent variable. The second test, a one-way ANOVA (Tanner, 2012), was used to determine if there were differences between the academic preparation program choices BA, QA, or RS and number of years enrolled in a post-secondary setting. JASP software was used to analyze and calculate the data retrieved (Love et al., 2015).

Organization of the Study

This study includes five chapters. The first chapter introduced the components of the study including the following: background information, statement of the problem, purpose, significance of the study, delimitations, assumptions, research questions, definition of terms, and overview of the methodology. Chapter two includes a review of the literature relative to the roles of high school academic preparation program pathway choice, and persistence in a post-secondary setting. The methodology used in the study is explained in chapter three. The hypothesis testing and data analysis results are presented in chapter four. The outcomes of the data analysis, along with recommendations for action and suggestions for additional research are presented in chapter five.

Chapter Two

Review of the Literature

The purpose of chapter two is to provide background information pertaining to academic preparation program pathway choice and student persistence. It is organized into two sections. The first section examined the role of high school curriculum choice in post-secondary persistence, along with the history of curriculum nationally, in Kansas, and Eudora Unified School District. The second section explored student persistence in a post-secondary setting and examined the literature on both cognitive and non-cognitive factors that impacted student persistence in a post-secondary setting.

Overview of Academic Preparation Program Choice in American High Schools

Public high school education for all Americans was first established around the turn of the twentieth century (Thattai, 2001). To conceptualize the purpose of the high school, the National Education Association (NEA) founded the Committee of Ten in 1893 (Copa & Pease, 1993). This group consisted of university presidents and others, set the curriculum for high schools nationally with a strong liberal arts emphasis (Copa & Pease, 1993; Mirel, 2006). The Committee of Ten concluded that the general purpose of high school was to prepare students for college and life. Differentiating between students' post-high school choices was not necessary because many of the same skills could be used in both scenarios (Copa & Pease, 1993). The committee believed that preparation for college was the same as preparing for work and that all high schools should prepare students for either.

During the post-World War I era, enrollment in high school increased substantially, pushing the percentage of 14- to 17-year-olds who attended high school

from less than 6% to almost 51%, in part due to the tightening labor market (Mirel, 2006). In light of these changing demographics from the post-World War I era, the NEA convened another group, the Commission on the Reorganization of Secondary Education, whose chief purpose was to reevaluate what secondary education should address (Copa & Pease, 1993; Mirel, 2006). In 1918, this group released a report, *The Cardinal Principles of Secondary Education*. These principles changed the format of American high schools, which included expansion and differentiation of education to better address the needs of the waves of immigrants (Mirel, 2006). This differentiation was driven by both student interest and student ability. The Commission believed that schools should offer broad curricular offerings, becoming the first "comprehensive high school" (Mirel, 2006, p. 18), providing up to four options for learning, including college preparatory, commercial, vocational, and general pathways. The Commission, relying on the social efficiency model, a philosophy whereby students' plans should drive their coursework choices, fashioned high schools in that image, and it remained intact for the first half of the twentieth century (Lee & Ready, 2009; Mirel, 2006).

After the conclusion of World War II, the debate over high school curriculum was reignited, and in 1945, a panel of educators was assembled by the Division of Vocational Education in Washington, DC (U.S. Department of Education, n.d.). This panel affirmed the social efficiency model, expressed through the Prosser Resolution, as proposed by the Commission (Ravitch & Vinovnskis, 1993). The authors of the Prosser Resolution found the belief that 20% of youth could be prepared for skilled occupations through vocational education and that another 20% could be prepared for college by high school. The remaining 60% would need life-adjustment training before they could move into

vocational or college pathways. High schools were expected to deliver this life-adjustment training (Ravitch & Vinovnskis, 1993). Life adjustment training was the focus on non-academic needs and was first used by Benjamin Willis. Life adjustment training included care of the student's mental and physical health, along with emotional well-being, as well as individual personal satisfaction. Commissioner John Studebaker of the United States Office of Education approved this training as part of educational expectations between the 1930s and 1940s. Life adjustment training ended in the 1950s (Ravitch, 1995).

The 1950s brought an era of peace to the United States. No longer concerned with winning a war, the country evaluated domestic priorities. The launch of the Russian satellite Sputnik in 1957 seemed a sharp rebuke to United States technological and military superiority that won the day in World War II (Wraga, 2000). This launch posed questions about the U.S. capabilities in mathematics and science. Suddenly the American high school was under fire from all quarters (U.S. Department of Education, n.d.). As a result, calls for curricular reform followed, with more emphasis on mathematics and science as a means to prepare students for the academic rivalry that would characterize the 1950s (Wraga, 2000).

This curricular reform also forced a shift in educational philosophies from the social efficiency model of the *Cardinal Principles* (Mirel, 2006) to become more rigorous and have higher academic standards. This movement was accelerated by the National Defense Education Act of 1958, which provided money to American high schools that worked on achievement in mathematics, science, and foreign languages. The continued Cold War academic preparation resulted in an enrollment increase in these

classes. This focus would continue through the early to mid-1960s (Ravitch & Vinovnskis, 1993; Wraga, 2000).

The 1960s brought social unrest, the war on poverty, and the civil rights movement (Copa & Pease, 1993; Ravitch & Vinovnskis, 1993). Along with social change, curriculum reform shifted once again as schools were blamed for the alienation of students and the disconnect between schools and their communities (Copa & Pease, 1993; Ravitch & Vinovnskis, 1993). These social protest movements led to yet another evolution of choice-driven high school curriculum (Lee & Ready, 2009). Before the choice-driven curriculum, students were placed in rigid, pre-determined curricular tracks and permitted little option for movement between academic or vocational-type classes. The choice-driven curriculum removed the rigidity of tracking and allowed students to choose classes that best fit their post-secondary plans (Lee & Ready, 2009). This choice-driven curriculum would become known as a "comprehensive curriculum" (Lee & Ready, 2009, p. 138) and covered a variety of courses aligned both vertically and horizontally. The choice-driven curriculum continued through the 1970s, allowing for a variety of program choices. Students were able to select a vocational track or, in some cases, even a college preparatory track per their post-secondary plans (Lee & Ready, 2009; Ravitch & Vinovnskis, 1993).

Increased public scrutiny of schools and curriculum reappeared in the 1980s, spurred by the landmark report *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Education, 1983). In this report, American high schools were criticized for failing to increase standards (Lee & Ready, 2009) and were accused of "shoddy practices and slipping standards" (Wraga 2000, p. 8). Schools were asked to

refocus on a very narrow, specific curriculum moving forward. The report encouraged a focus on strengthening the high school curriculum in the core areas, including mathematics, science, social studies, and English. Graduation credit requirements expanded from a little more than 17 credits to nearly 20 credits between 1980 and 1993 (Lee & Ready, 2009).

Additionally, the *Nation at Risk* report suggested a New Basics curriculum for the college-bound, consisting of four years of English, three years of mathematics, three years of science, three years of social studies, two years of foreign language along with half a year of computer science (National Commission on Education, 1983*).* Districts also sought to increase offerings in advanced courses and adopted increasingly rigorous textbooks (Hamilton, Stecher & Yuan, 2008). This New Basics curriculum became a standard for districts over the next two decades as policymakers and educators sought to frame a response to the *Nation at Risk* report (Hamilton et al., 2008). Similar to the original Committee of Ten report, *A Nation at Risk* suggested that districts offer a core curriculum to all students, regardless of their post-secondary plans (National Commission on Education, 1983).

With the publication of *A Nation at Risk*, the standards-based reform movement gained traction with additional reforms proposed in the 1990s. Key pieces of legislation impacted the high school curriculum, which were passed and signed by President Bill Clinton in 1994 (Hamilton et al., 2008). Both statutes—Goals 2000: Educate America Act and Improving America's Schools Act (Hamilton et al., 2008)—were established to improve the rigors of high school curriculum options for students (U.S. Department of Education, 1995).

The standards-based reform also focused on developing assessments to ensure student learning. Hamilton et al. (2008) found that by the turn of the millennium, states had responded to the standards-based reform movement by implementing increased rigor in the curriculum and assessments matching the curricular changes. In 2001, President George W. Bush, along with Congress, passed and signed the seminal No Child Left Behind (NCLB) Act of 2001, designed to force schools to close the gap in achievement across all subgroups identified in the school, including major ethnic groups, economically disadvantaged students, and students receiving special education services (NCLB, 2001). In doing so, the legislation set a target of every student reaching proficiency in reading and mathematics by the 2013–14 school year (Yell, 2006). States responded to this requirement by instituting exit exams or end-of-course exams before students could graduate (Hamilton et al., 2008). In 2003, 19 states had incorporated exit exams in response to the changing standards under the NCLB Act (Gayler & Chudowsky, 2003).

Curricular offerings in high school were influenced by the changed American society and demographics. The educational reform pendulum swung from the narrow curricular focus espoused by the Committee of Ten to a broader differentiated curriculum encouraged by the *Cardinal Principles*. With each swing, American high school educators were asked to do more for students, communities, and America itself. College and career readiness was the next challenge for high schools as schools moved into the twenty-first century (Chait & Venezia, 2009). With all the demands to prepare students for college and career readiness, there was still negligible progress in completing a post-secondary degree (Kena et al., 2015).

Disconnect between K-12 and college completion. Porter (1989) found that college retention rates had not changed significantly since his 1987 study. Since then, Conley (2005) noted that nearly 75% of all post-secondary institutions allowed entry to students who met their admission requirements. Out of that 75%, only about 33% earned a degree within five years (Conley, 2005). The American College of Testing reported that dropout rates in the first year of post-secondary institutions approached 16% (American College of Testing, 2014). NCES (2015) reported those students who had enrolled and persisted saw a college graduation rate of only 59% in 2013.

Kirst and Venezia (2004) found that students, once admitted to college, were not prepared for the challenges that came with college material. Students often were placed in remedial classes to burnish their academic skills to compensate for the lack of preparedness (Kirst & Venezia, 2004). Remedial classes were non-credit-bearing classes, adding time to degree completion and increasing the likelihood of leaving the institution before a degree was conferred.

Similarly, Conley (2005) noted that students knew how to get into college but were not succeeding while there, arguing that the current high school model focused on preparing students for college entrance rather than college success once enrolled. He further noted that most high school curricular options did not prepare students for the rigor and challenges that were part of the college curriculum. An additional issue was the focus on state and federally mandated assessments (Conley, 2005). High schools had historically spent a significant amount of time and resources on test preparation. Conley (2006) reported that such state assessments were often not aligned with post-secondary learning. Kirst and Venezia (2004) and Conley (2005) noted the need for K-16

integration along with a logical, rigorous high school curriculum to improve student persistence in college. Colleges needed to communicate required expectations to students and parents alike so that students' achievement in their entry-level classes was successful (Conley, 2006).

Kirst (1998) suggested a regular review of such alignment to continue to clarify the message about what was expected in college. To avoid remediation and ensure success in entry-level college classes, K-16 alignment was necessary (Conley, 2005; Kirst & Venezia, 2004). Additionally, other groups called for alignment between the high school and post-secondary institutions. The National Commission on the High School Senior Year (2001) encouraged the two institutions to come together to improve expectations for curriculum, standards, and assessments so that students had a clear view of what was expected in college. According to the Education Commission of the States (ECS), 24 states were engaged in K-16 alignment, across three different categories: "developing cross-system structures and programs; educating teachers; and aligning standards and coordinating programs" (Minnesota House of Representatives Research Department, 2002, p. 4). Since 2002, The National Science Foundation Math and Science Partnership actively worked to facilitate P-20 partnerships. The League for Innovation in Community Colleges offered a plan for collaboration not only with high schools but also with four-year colleges (Albertine, Brown, & Rhodes, 2011)

Conley (2005) encouraged high schools and post-secondary institutions to collaborate to create a seamless system focused on the same outcomes. He further advocated for clear standards linking high school and college, referencing his tool, Knowledge and Skills for University Success Standards (Conley, 2005) as a means to

accomplish this goal. This tool identified specific skills, knowledge, and cognitive abilities that high school students should possess upon entering college. Wise (2008) further stressed the need for alignment as beneficial for all students, regardless of post-secondary plans. The skills provided in a K-16 aligned program were suitable for all students, regardless of whether post-secondary plans included college.

High school curriculum as a predictor. Academic achievement and college retention were recognized as a predictor of post-secondary persistence **(**Kirby & Sharpe, 2001**;** McGrath & Braunstein, 1997; Ryland et al., 1994; Wyatt et al., in press). Students with high academic achievement while in high school consistently did better in a post-secondary setting. A rigorous college preparatory curriculum was defined by Adelman (1999, 2006) to include four years of English, four years of mathematics, three years of science, two or more years of a foreign language, and more than one advanced placement course. Those students without a strong track record of scholastic success while in high school struggled while enrolled in college. Adelman's study (1999) found that the best indicator of bachelor degree completion was the quality and intensity of the student's high school curriculum, which was supported in 2006 when he updated his research (Adelman, 2006).

In both cases, Adelman (1999, 2006) found that when degree completion was the task, a student's academic background was a much stronger predictor than other factors for post-secondary success such as high school GPA, class rank, or test scores. Academic background also outweighed demographic factors such as gender, family composition, or socioeconomic status.

Reinforcing the importance of a rigorous high school curriculum, Horn, Kojaku and Carroll (2001) investigated the relationship between rigor in high school and college persistence, which confirmed Adelman's original findings. Horn et al. (2001) found that 79% of students who completed a rigorous high school curriculum were more likely to be continuously enrolled in college, while only 55% of students who completed a less-rigorous curriculum were likely to be continuously enrolled in college.

Warburton, Burgarin, Nuñez, and Carroll (2001), in a study for the NCES, found that a positive relationship existed between a highly rigorous high school curriculum and success in college. Their study examined the persistence level of first-generation students (those whose parents had not gone to college) versus students whose parents attended college. They defined rigorous curriculum as four years of English, and three years of science, mathematics, and social studies. Warburton et al., (2001) found that students who took rigorous courses while in high school were less likely to participate in remedial classes in a post-secondary setting. According to the study, student persistence at a post-secondary level and attainment of a bachelor's degree were related to the rigor of the choice of high school curriculum.

Similarly, Berger, Turk-Bicakci, Garet, Knudson, and Hoshen (2014) reported that the experiences of high school students prior to graduation were important. They found that high school students who completed a rigorous high school curriculum were more likely to succeed in college. Students who completed Algebra I in eighth grade and Algebra II in ninth grade were less likely to need a remediation course in a post-secondary setting. Students who took Advanced Placement (AP) or International

Baccalaureate (IB) classes and scored a three or better on the exams indicated a positive relationship between college enrollment and persistence.

Successful post-secondary students who graduated with a baccalaureate degree within five years most likely completed a rigorous high school curriculum, according to the literature summarized in the current study. Furthermore, each of the studies defined a rigorous curriculum beyond the suggested college preparatory curriculum recommended by the *Nation at Risk* report (National Commission on Education, 1983). Curriculum requirements in the studies reflected the reality of most high school requirements along with minimum college-entrance requirements. Each study reported what many high schools and colleges already acknowledged: a basic curriculum might sufficiently prepare high school students for the rigors of college work.

History of Kansas curriculum. Kansas has valued education for all students and even included the idea of education in its constitution. Article 6 of the Kansas Constitution explains how Kansas education should be funded and governed, and included both state and local control elements (Constitution of the State of Kansas, n.d.). The history of Kansas education has closely resembled national trends, according to Martinez and Snider (2001). Early in the country's history, student knowledge was centered on a common knowledge base, with memorization as a key component of pedagogy (Martinez & Snider, 2001). Additional responsibilities were added to the school's duties and included additional curricular offerings in science, career education and non-cognitive concepts including meal programs, driver's education, and drug abuse awareness.

Kansas followed these national trends in many ways. From the move to emphasize science in the 1950s to the standards-based reforms of the 1980s, Kansas schools have sought to keep pace with the changes. In 1992, the Kansas State Board of Education and the Kansas Legislature wanted to improve outcome competencies for Kansas students in response to an increasingly complex world (Martinez & Snider, 2001). The groups collaborated on what would become the School District Finance and Quality Performance Act (Martinez & Snider, 2001), signed into law in 1992. This legislation mandated revision of curricular areas. Additionally, new state assessments based on these new standards were developed in all core areas. Quality Performance Accreditation (QPA) was a result of this process and required districts to develop a school improvement plan and track progress to meet those goals (Martinez & Snider, 2001). Following QPA, Kansas educators and legislators worked with requirements mandated by the No Child Left Behind Act of 2001, a federal law mandating 100% proficiency in reading and mathematics by the year 2014 (No Child Left Behind Act of 2001). Curricular reforms and assessments were put into place to address the ever-challenging benchmarks outlined in the NCLB Act. In 2010, the Kansas State Board of Education voted to adopt the Kansas College and Career Academic Readiness Standards (KCCRS), with the mission of preparing students for college or the workforce (Kansas State Department of Education, 2015). As a result, curricular offerings underwent modification, and standards and assessments were changed to reflect the new college and career standards (Kansas State Department of Education, 2015). For example, under the KCCRS, the reporting format of assessments was changed from a simple cut score to assessments that were now reported on a four-point scale. Each point on the scale indicated certain student

achievement characteristics that could be utilized to inform instruction. Curricular requirements changed as well, moving to a format that reflected less emphasis on content to the use of content to hone critical thinking skills along with problem-solving skills. In 2012, Kansas was granted a waiver from requirements of the NCLB Act, providing flexibility in meeting the mandates of the legislation (Tobias-Perez, 2015). This waiver allowed the state more flexibility in meeting the requirements that student achievements were on grade level in mathematics and English. Furthermore, the waiver required districts to continue to improve teacher and principal performance, which resulted in the adoption of new evaluation tools. In 2015, educational officials provided a continuance to the waiver to allow Kansas to complete what it had started under the 2012 waiver (Tobias-Perez, 2015).

Kansas Board of Regents. Kansas had supported educational endeavors, so it was no accident that one of the first actions by the newly established state was to create the Kansas State Normal School in 1863 (Kansas Board of Regents, n.d.a), followed by the creation of the university in Lawrence and Manhattan's agricultural college. By 1911, the university system included five universities, which prompted Governor Walter Stubbs to evaluate the governing board of each institution and suggested the creation of a single governing board covering all institutions (Kansas Board of Regents, n.d.a). This Board of Administration governed all institutes, along with specialized schools such as schools for the deaf and blind (Kansas Board of Regents, n.d.a). Additional duties for this board included overseeing correctional, penal, and charitable institutions.

The legislature created a new version of the Board of Administration in 1925 (Kansas Board of Regents, n.d.a) but this time separated institutions of higher learning

and set post-secondary institutions as the focus for the new citizen-led group. This evolution became the format for the Kansas Board of Regents (Kansas Board of Regents, n.d.a). In 1966, voters considered the duties and expectations of this group and passed a constitutional amendment codifying those duties. The amendment, as passed, required the governor to appoint members, who then must be confirmed by the Senate. Each member served a four-year staggered term and resided in each of the Congressional districts in the state of Kansas (Kansas Board of Regents, n.d.a)

History of Eudora Unified School District curriculum. Mirroring the importance of education to the state, the community of Eudora founded one of the earliest multi-grade-level schools in 1851 to teach Shawnee Indians. Public education officially came to Eudora in 1860 when the city council voted to construct a school building in the city. In 1902, high school curricular offerings included classes in English, algebra, physics, bookkeeping, and geography. By 1937, curricular offerings had grown to include modern history, music appreciation, geometry, Latin, and agriculture (Higgins, 2014).

In the 1980s, records from the Eudora Community Museum indicated that between the decades of 1940 and 1960, class offerings at Eudora High School stayed remarkably consistent and included home economics, general science, chemistry, algebra, government, and typing (Eudora Community Museum, 2016). In the 1970s, classes in debate and forensics, as well as upper-level science such as physics and upper-level mathematics such as calculus were added to the curricular offerings at Eudora High School (Eudora Community Museum, 2016). As student enrollment grew, curricular

offerings, along with increased course sections, continued to increase in Eudora Unified School District.

Teacher Bonnie Daigh recalled that starting in the 1990s, trends in the Eudora curriculum followed both state and national trends. When she arrived at Eudora High School in 1985, curricular requirements to graduate included four credits of English, two credits of mathematics, two credits of science, and two credits of social science, along with several electives (B. Daigh, personal communication, March 28, 2016). Since that time, increased academic rigor was established for graduation from Eudora High School.

Elements of Eudora High School curriculum choice. Eudora High School offered three academic preparation program pathway choices with differing requirements for graduation (see Appendix A). There was no quantifiable data as to how or why the pathways were chosen as students entered Eudora High School. But of the three pathway options, the majority of students, or 68.9% of the group, chose BA; 9.8% of the group chose QA; and 20.5% of the group chose RS. The first pathway, the Eudora BOE-approved curriculum (BA), required the following credits:

1. Four credits of English.
2. Three credits each of social studies, mathematics, and science.
3. Two credits of practical arts.
4. One credit of physical education.
5. Seven credits of electives (Eudora High School, 2015).

The second pathway, the KBOR Kansas Qualified Admissions curriculum (QA), required the following credits:

1. Four credits of English.

2. Three credits of mathematics and an ACT score of 22 in mathematics; or four credits of mathematics.
3. Three credits of social studies.
4. Three credits of science, one year of which must be a full year of either chemistry or physics (Kansas Board of Regents, n.d.b)

The third pathway, the KBOR Kansas (Regents) Scholars curriculum (RS), required the following credits:

1. Four credits of English.
2. Four credits of mathematics, which must include Algebra I and II, geometry, and an advanced mathematics class such as calculus.
3. Three credits of social studies.
4. Three credits of science, which must include a full year of biology, chemistry, and physics.
5. Two credits of world languages (Kansas Board of Regents, 2014).

Overview of Persistence

As defined in this study, persistence was an individual goal—a student persisted to reach a goal such as a college degree (Reason, 2009). In 2005, ACT reported a persistence-to-degree (the ability of a student to persist through college to earn a degree) rate of 39.5% in a typical public four-year college (American College of Testing, 2011). A decade later that number had fallen to 36.4% (American College of Testing, 2011). Students were not persisting in a post-secondary setting, and the reasons were as varied as the students themselves (Therriault & Krivoshey, 2014).

Cognitive Factors. Colleges have used traditional cognitive variables such as high school GPA and standardized test scores to assess a student's likelihood of persisting through to graduation (Cooper, 2014). These cognitive factors continued to be the primary mechanism through which colleges predicted performance and retention (Komarraju, Ramsey, & Rinella, 2013; Lucio, Hunt, & Bornovalova, 2012).

Standardized test scores such as the ACT or Scholastic Assessment Test (SAT), were indicators of student persistence in a post-secondary setting. Lotkowski, Robbins, and Noeth (2004) reported that there was a positive relationship between ACT scores and student persistence in a post-secondary setting. High scores on the ACT were used to determine student academic readiness for college (Allen & Sconing, 2005) and had a strong relationship to success in the first year of college (American College of Testing, 1997; Noble & Sawyer, 2004).

The SAT was another indicator of student persistence in a post-secondary setting. In two studies, the strength of the SAT as a predictor was confirmed. Wilson (1980) found that SAT scores were related to student persistence in a post-secondary setting, Camara and Echternacht (2000) found that students with high SAT scores (1100 or better) were more likely to graduate from college. The strength of this relationship was first reported by NCES (1984) and continued to be a predictor of student persistence in a post-secondary setting. Students who took the SAT or other similarly structured standardized test were more likely to enroll in and complete credit-bearing classes. Scoring within the accepted framework of the SAT indicated a strong likelihood of post-secondary success (Hein, Smerdon, & Sambolt, 2013). However, standardized testing as a predictor of post-secondary success might be waning. Hiss (2014) found that "There is

no significant difference in the success rates of students who submitted their standardized test scores to colleges and those who don't" (p. 1). Hiss (2014) looked at 123,000 students across a variety of post-secondary institutions and found that the differences in graduation rates were very slight (Hiss, 2014).

While success on standardized testing was an important predictor of post-secondary success, research supported the idea of high school grade point average as the best predictor of post-secondary success, more so than other cognitive factors (Hiss & Franks, 2014; Pintrich, 2003). Historically, high school GPAs were considered to be an unreliable indicator of post-secondary success, but Geiser and Santelices (2007) challenged this idea and found that high school grades alone could be one of the best predictors of college freshman grades. In their research for the Chicago Public Schools, Nagaoka, Roderick, and Coca (2009) found that grades indicated mastery of a variety of classroom materials offered and as a result, grades were important to post-secondary success.

Non-cognitive factors. Non-cognitive factors were those factors outside of the academic sphere. Tinto (1975) first suggested looking beyond traditional cognitive factors to predict student persistence in a post-secondary setting. Additional research was born from Tinto's work and included a variety of constructs, including achievement motivation, academic goals, self-efficacy, institutional commitment, and perceived social support (Robbins, 2004). Results indicated that there was a moderate relationship between persistence in a post-secondary setting and academic goals and self-efficacy. The belief in self and achievement is further solidified by research from Valentine, DuBois, and Cooper (2004) who found that self-efficacy could lead to achievement.

These non-cognitive factors would continue to be evaluated. Credé and Kuncel (2008) found that "study habit, skill, and attitude inventories and constructs were found to rival standardized tests and previous grades as predictors of academic performance" (p. 1). The next sections evaluated grit, student level, goal commitment, institutional aspects, finances, and parent education related to persistence in a post-secondary setting

Grit. Ting's (2003) findings that students with long-term goals tended to perform well academically, which was supported by Duckworth, Peterson, Matthews, and Kelly (2007), who defined grit as "trait-level perseverance and passion for long-term goals" (p. 1087). Grit was long-term persistence for goal achievement (Duckworth et al., 2007). As such, students who exhibited higher levels of grit would be more likely to persist in a post-secondary setting (Duckworth et al., 2007; Duckworth & Quinn, 2009). Strayhorn (2014) found that, after controlling for educational objectives and prior achievement, grit predicted academic success. Grit was also found to be part of the larger trait of conscientiousness (Ivcevic & Brackett, 2014) and as such was strongly related to academic success (Poropat, 2009). Conscientiousness was a behavioral personality trait that described self-regulatory behavior and impulse control. Conscientiousness and grit were linked to typical daily behavior and as such could influence student achievement.

Student level. Student-level factors were additional elements that may be within a student's locus of control in preparation for entering and succeeding in a post-secondary setting. Three student-level factors could play a role in student persistence in a post-secondary setting: precollege indicators, college indicators, and life experiences (Therriault & Krivoshey, 2014). Precollege indicators were based on information presented while the student was in high school and identified students who needed extra

support in high school to prepare them to persist while in college (Therriault & Krivoshey, 2014). Students who did not take a rigorous high school curriculum or had lower grade point averages were those who could use additional support in high school to prepare them for college.

College indicators included both academic and social factors. Academic factors of persistence have included, but were not limited to, college GPA, credits earned, and full versus part-time enrollment (Therriault & Krivoshey, 2014). Student performance in these areas indicated persistence in a post-secondary setting. Academic indicators also included experiences with instructors (Pascarella & Terenzini, 1991) and college classes (Tinto, 1997). Additionally, the longer a student persisted, academic concerns became the center of emphasis (Neumann & Finaly-Neumann, 1989) and allowed a student to shift focus to graduation.

Social factors of persistence included, but were not limited to, interactions with faculty and peers, and extracurricular activities. Students who were involved with peer groups were more likely to identify with the institution and persist as a result (Berger & Milem, 1999; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Pascarella & Terenzini, 1980; Titus, 2006). Social integration was noted as important by Tinto (1997) and included those daily activities that help a student become fully integrated into the institutional community. Furthermore, this involvement impacted learning (Astin, 1984, 1993; Friedlander, 1980; Ory & Braskamp, 1988; Parker & Schmidt, 1982; Pascarella & Terenzini, 1991). Students who were involved in their colleges were more likely to acquire greater knowledge and skill development.

Life experiences directly influenced persistence in a post-secondary setting (Reason, 2009). Life factors such as single-parent status, a first-generation college student, or low socioeconomic status provided challenges for college students and was associated with lower rates of persistence. In the case of students who were also parents, Sibulkin and Butler (2005) found that having a child within five years of beginning at a post-secondary institution decreased the probability of persistence and graduation. Yakaboski (2010) found that single mothers faced obstacles that could negatively influence persistence in a post-secondary setting. With first-generation college students, merely making college accessible was not enough (Ishitani, 2003). Post-secondary administrators needed to design policies and supports to encourage first-generation college students to persist through to graduation. Students who were identified early on as first-generation college students could benefit from post-secondary institutions providing support early in the student's post-secondary career, thus enhancing a student's chance of persisting through to graduation. Improved retention programming relative to college awareness starting as soon as middle school was essential to supporting first-generation students (Somers, Woodhouse, & Cofer, 2004). Elkins, Braxton, and James (2000) found that students who came from higher socioeconomic status-level families or circumstances were more likely to garner support for post-secondary attendance and graduation. These student-level factors added complexity to studying student persistence in a post-secondary setting, and future researchers should be aware of these as they continue to study persistence. As the body of research increased, it was evident that persistence was not a one-size-fits-all variable.

Goal commitment. Goal commitment, or the simple desire to obtain a college degree, was linked to student persistence in a post-secondary setting (Napoli & Wortman, 1998). Goal commitment, defined by Locke (1982), was simply the determination to try for a goal and pursue it over time. Individuals performed best when the goal was specific and challenging, such as college degree attainment (Locke & Latham, 1990). Furthermore, performance was enhanced when students set the goal, believed that they could achieve the goal, and had the necessary skills for achieving the goal (Locke & Latham, 1990). According to research (Cooper, 2014; Kamphoff, Hutson, Amundsen, & Atwood, 2007; Sabharwal 2005; Sorrentino 2006), goal orientation predicted persistence in a post-secondary setting.

Institutional aspects. Characteristics of the institution chosen are also related to college persistence and completion (Bean, 1980; Berger & Milem, 1999; Pascarella & Terenzini, 1980; Tinto, 1975; Titus, 2004). These characteristics included classroom instruction and academic support systems (Therriault & Krivoshey, 2014). Students who found classroom instruction problematic, as measured by student evaluation forms, might not persist to graduation (Pascarella, Seifert, & Whitt, 2008). The idea of problematic classroom instruction as a factor in student persistence was supported by Therriault and Krivoshey (2014), who found that those post-secondary institutions that reported programming dedicated to increasing academic involvement could lead to increased persistence in a post-secondary setting. Academic support was another area in which institutions could influence retention. In 2010, Tinto reported results of a student survey that found student perceptions of the institution's willingness to support both academic and social needs were a strong predictor of student achievement. Additional institutional

programs such as remedial courses and classroom support all provided a stronger likelihood of student retention (Tinto, 2010).

Other institutional factors included meeting post-secondary expectations for effort, assessment, and feedback (Tinto, 2010). Post-secondary faculty must state expectations for their classes clearly to garner higher achievement for students (Tinto, 2010). The conclusions drawn from a survey conducted by the National Survey of Student Engagement (NSSE) were strong: students who perceived a high level of effort was expected, provided that level of effort (Kuh et al., 2008). Consistent feedback about student progress was another factor in student retention. Institutions that provided a culture of clear, regular, and consistent feedback about a student's progress were more likely to see students persist to graduation (Tinto, 2010). This feedback could take a variety of forms, from monitoring student progress to implementing early warning systems along with a variety of classroom assessments (Tinto, 2010).

Finances. As college costs skyrocketed (The College Board, 2016a), finances and persistence were linked along with other issues surrounding costs. In 1975, tuition and fees for a public four-year institution were $2,387, and by 2016 public four-year institution costs had risen to $9,410, a 294% increase (The College Board, 2016a). Cabrera, Nora, and Castaneda (1992) found that the availability of financial aid influenced persistence in a post-secondary setting because it allowed students to participate fully in both academic and social aspects of post-secondary education (Cabrera et al., 1992). Voorhees (1985) found that "campus and non-campus-based grants" (p. 20) influenced student persistence. Furthermore, Murdock (1989) found that the amount of the aid package offered had an impact on student persistence. In Ryan's

(2004) research, a one percent increase in monies offered to students led to a quarter of a percent increase in graduation rates. Cabrera, Stampen, and Hansen (1990) evaluated the relationship between the ability to pay for college and its impact on student persistence. They found that the "ability to pay has a direct effect on persistence" (Cabrera et al., 1990, p. 32), which further underscored the importance of financial aid in student retention. Whether through grants, loans, or other payment mechanisms, the role of financial aid in student retention was an important factor.

Parent education. The educational level of the parents or guardians in the house was shown to be a barrier for students seeking post-secondary education (Demetriou & Schmitz-Sciborski, 2011). Parents who had not been to college were an indicator of lack of student persistence in a post-secondary setting. The list of obstacles faced by first-generation post-secondary students was lengthy (Demetriou & Schmitz-Sciborski, 2011). First-generation students often did not obtain the guidance from home to assist with the college process. First-generation college-bound students also often came from low-income families and graduated from high schools that tended to lack resources (Demetriou & Schmitz-Sciborski, 2011). Additional obstacles included ethnicity and dependent children (Engle, 2007), lessening the probability of post-secondary persistence. Post-secondary attendance and graduation were lower when evaluated through the lens of ethnicity. Racial minorities were more likely to leave college without a degree (Carter, 2006). In 2002, only 39% of African Americans who attended public four-year post-secondary institutions persisted to graduation (The College Board, 2016b). Results were similar for Hispanic students, with 46% persisting to graduation (The College Board, 2016b). In 2013, the Institute for Women's Policy Research reported that

25% of college students had dependent children. Fifty-three percent of these students were likely to leave a post-secondary institution without a degree because of the demands placed on parents attending college (Nelson, Froehner, & Gault, 2013).

Nunez and Cuccaro-Alamin (1998) found that first-generation college students were less likely to persist than non-first-generation college students. Nunez and Cuccaro-Alamin (1998) controlled for other variables that might influence student persistence in a post-secondary setting and found that parent education or background was significant in predicting persistence. Choy (2001) found that students whose parents had not earned degrees beyond high school were less likely to persist through to graduation from college. In the study, Choy controlled for other factors such as educational expectations and preparation, and found that when controlling other factors, a parent's educational level was still an important predictor of persistence in a post-secondary setting.

Two models of student retention. Student retention issues were initially viewed through the lens of psychology (Tinto, 2006), but as time passed, factors beyond the student were considered. The study of student retention began in the 1970s. Spady (1970) created the first widely recognized student attrition model, a sociological model based loosely on Durkheim's (1951) suicide model, which posited that suicide was not something that happened in a vacuum but rather as part of a larger social construct, and that the two were linked. Similarly, Spady's (1970) model was drawn from this concept; if the post-secondary institution was viewed as a social institution, then non-persistence was the academic version of suicide. A year later, Spady (1971) published empirical findings that found academic performance to be the leading factor in student retention.

Building on this work, Tinto (1975) evaluated the idea of integrating other factors in student retention in a post-secondary setting, culminating in his student integration theory. This model presupposed that individual factors such as motivation and academic skills, institutional factors, and social characteristics figured into persistence (Cabrera et al., 1990). Early iterations of this model were narrowly focused and lacked complexity (Tinto, 2006). Similarly, the work of retaining students fell to a small group of student affairs professionals to provide the services needed for students to persist in a post-secondary setting (Tinto, 2006). Decades later, the student integration model evolved into a range of models, covering a variety of determinants of student retention, including sociological and economic factors (Tinto, 2006), and providing more detailed information, which in turn offered policy ideas for universities that valued student retention. These changes fell into three categories. The first was an understanding of student backgrounds (Tinto, 2006). Earlier models did not take into account the array of cultural, economic, and other factors that might influence student retention. Second, the student integration model did not include how various institutions addressed student retention concerns and did not evaluate retention models across the many different kinds of institutional settings—for example, two-year versus four-year institution choice, or residential versus commuter campuses (Tinto, 2006). Third, as Tinto's (2006) research became more inclusive of all factors, its simplicity was underscored and the model has become more inclusive of other elements, including psychological, economical and sociological factors (Tinto, 2006).

The second model of student retention, the student attrition model, evolved as an alternative model to explain post-secondary persistence. Bean (1980, 1982, 1983, 1985),

Metzner and Bean (1987), and Bean and Vesper (1990) offered the student attrition model. Bean's model was adopted directly from Price's (1977) model, which explained workplace employee turnover rates. "Accordingly, Bean has argued that student attrition is analogous to turnover in work organizations, and stresses the importance of behavioral intentions to stay or leave as predictors of persistence behavior" (Cabrera et.al., 1990, p. 3). In 1990, Bean and Vesper evaluated several non-cognitive factors, very few of which accounted for dropout rates for freshmen at a Midwestern college. This research illustrated that non-cognitive factors could impact persistence in a post-secondary setting. A comparison of the two models—student integration as well as student attrition by Cabrera et al., (1992)—reveals that when a combination of both the student integration model and the student attrition model were utilized, a better understanding of persistence was realized. By integrating the two models, more variables were researched, providing additional insights as to why students persisted in a post-secondary setting.

Summary

This review of the literature presented a historical perspective and evolution of the American high school system, along with the divide between PK-12 curriculum and expectations in post-secondary settings. Additionally, the persistence literature, broken down by both cognitive and non-cognitive factors, was reviewed and documented. A detailed overview of the methodology used in the research for this study is presented in chapter three. The hypothesis testing and data analysis are presented in chapter four. The outcomes of the data analysis, along with ideas for action and suggestions for additional research are presented in chapter five.

Chapter Three

Methods

There were three purposes to the current study. The first was to evaluate the extent to which student persistence depended on the type of academic preparation program pathway choice (BA, QA, or RS) offered at Eudora High School (see Appendix A). A second purpose was to evaluate the extent to which student persistence depended on the type of college structure chosen. The third purpose was to evaluate the extent to which student persistence depended on the type of college funding level chosen. This chapter contains the research design along with a discussion of the population and data-collection procedures. The methodology of the data analysis and hypothesis testing are also explained. Finally, limitations of the study are described.

Research Design

Two tests were used for the current study. The first test, a one-way ANOVA test, used archived data with one independent variable, the academic preparation program pathway choice (BA, QA, or RS), which was nominal data with three categories. The second test was a non-parametric quantitative cross-tabulation chi square test of independence design, using archived data with three independent variables: (a) academic preparation program pathway choice, which was nominal data with three categories (BA, QA, or RS); (b) type of college structure, which was nominal data with two categories (post-secondary institution offering a two-year pathway to a degree, or post-secondary institution offering a four-year pathway to a bachelor's degree); and (c) type of collegiate funding level, which was nominal data with two categories (public, taxpayer-funded post-secondary institution or private, non-taxpayer-funded post-secondary institution).

Archived transcript data from Eudora High School and the NSC were used to evaluate the relationship between the high school academic preparation program pathway choice, and the student's one, two, three, four, and five years persistence in college and attainment of a baccalaureate degree within those five years. The dependent variable was the student's persistence through to graduation.

Study Group. The population for this study involved high school graduates who attended any post-secondary institution. The study group was comprised of 270 Eudora High School senior students who were enrolled at Eudora High School between the years 2006 and 2008. Students were selected based on their enrollment and graduation from Eudora High School during that period, and excluded if the NSC did not report persistence and graduation data. Students were also excluded if they had no academic preparation program choice data reported by Eudora High School.

Study Group Procedures

Three criteria were developed in order to form study groups. The first criteria established that participants graduated from Eudora High School between the years 2006 and 2008. The second criteria included attendance at any post-secondary institution following graduation. A third criteria was the data had to be reported by both NSC and Eudora High School. Students who met all three criteria were included in the study.

Instrumentation

Data Collection. Data were gathered from the NSC by the Eudora High School principal during the 2013–14 school year. Data included student name, post-secondary institution chosen along with any changes or transfers, and the student's institutional persistence. Data from the NSC also included college structure options, college funding

level, school reporting codes, and student identification numbers. Additionally, the data reported graduation information for those students who persisted through post-secondary education. Archived transcript information was collected for Eudora High School graduates in the years 2006 to 2008 to determine which of the three academic preparation program pathways students had selected. Once the data were gathered, a Eudora High School staff member removed all student-identifying variables, thus protecting student anonymity.

Validity and reliability. This study considered the validity and reliability of archived data. Validity is "the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests. . . . The process of validation involved accumulating evidence to provide a sound scientific basis for the proposed score interpretations" (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999, p. 9).

The National Student Clearinghouse Research Center (NSCRC) reported that data were continually verified upon admission (Goldrick-Rab & Harris, 2010). Furthermore, in 2008, to perform an external validity check, the NSCRC followed two cohort groups for nine years and concluded that the data led to realistic degree-completion rates when compared to other similar post-secondary tracking programs or groups (Goldrick-Rab & Harris, 2010). The archived data from Eudora High School was not assessed for validity.

According to the American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education (1999), reliability was defined as follows:

> The degree to which test scores for a group of test takers are consistent over repeated applications of a measurement procedure and hence are inferred to be dependable, and repeatable for an individual test taker; the degree to which scores are free of errors of measurement for a given group. (p. 180)

NSC data was reported as one of the best available tracking systems in evaluating post-secondary institutions, persistence, and graduation rates (Goldrick-Rab & Harris, 2010). However, because of the NSC's complex system and data pieces available, Dynarski, Hemelt, and Hyman (2013) reported several main sources of error involving the use of NSC data, including enrollment coverage of students, degree coverage, matching errors, and suppressed student information, all of which could impact a researcher's data set and as such might hinder accurate outcomes. Archived data from Eudora High School was not assessed for reliability.

Data Collection Procedures

Before conducting the research, an informal discussion was held with the superintendent of Eudora Unified School District to discuss dissertation topics. Written permission to conduct research was given on January 19, 2016 (S. Splichal, personal communication, January 19, 2016; see Appendix B).

The Institutional Review Board (IRB) application was submitted to Baker University prior to collecting data and conducting research on February 12, 2016 (Appendix C). The Baker University IRB committee approved the IRB proposal on February 24, 2016 (Appendix D). After obtaining written permission from the IRB committee to conduct research, school personnel were contacted to begin data collection.

Data Analysis and Hypothesis Testing

The research testing focused on eight research questions (RQs). Nine hypotheses (Hs) were developed. A description of each hypothesis along with the statistical test conducted was included for each research question:

RQ1. To what extent did high school academic preparation program choice (BA, QA, or RS) impact the number of years enrolled in a post-secondary setting?

***H1*.** High school academic preparation program choice (BA, QA, or RS) impacted a student's number of years enrolled in a post-secondary setting.

The independent variable was a student's academic preparation program choice, with three categories, and the dependent, numeric variable was the number of years enrolled in a post-secondary setting. A one-way ANOVA test was used to determine if there were differences between the three academic preparation program choices (BA, QA, or RS) and the number of years enrolled in a post-secondary setting. The level of significance was set at .05.

RQ2. To what extent did high school academic preparation program choice (BA, QA, or RS) impact student graduation in a post-secondary setting?

***H2*.** High school academic preparation program choice (BA, QA, or RS) impacted student graduation from a post-secondary setting.

The independent variable was a student's academic preparation program choice, with three categories, and the dependent variable was whether or not the student graduated from a post-secondary institution, with two categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS) and student graduation

from a post-secondary institution. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05.

RQ3. To what extent did high school academic preparation program choice (BA, QA, or RS) impact student choice of a two-year or four-year post-secondary institution?

***H3a*.** High school academic preparation program choice (BA, QA, or RS) impacted student choice of a two-year post-secondary institution.

The independent variable was a student's academic preparation program choice, with three categories, and the dependent variable was the student's choice of a two-year post-secondary institution, with two categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS) and the student's choice of a two-year post-secondary institution. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05.

***H3b*.** High school academic preparation program choice (BA, QA, or RS) impacted student choice of a four-year post-secondary institution.

The independent variable was a student's academic program pathway choice, with three categories, and the dependent variable was the student's choice of a four-year post-secondary institution, with two categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS) and the student's choice of a four-year post-secondary institution. A three-by-two cross-tabulation was used to determine the

expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05.

RQ4. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose two-year post-secondary public institutions?

***H4*.** High school academic preparation program choice (BA, QA, or RS) impacted students who graduated from a two-year post-secondary public institution.

The independent variable was a student's academic program pathway choice, with three categories, and the dependent variable was the students who chose a two-year post-secondary public institution, with two categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS), and those students who attended two-year post-secondary public institutions and graduated. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05.

RQ5. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose four-year post-secondary public institutions?

***H5*.** High school academic preparation program choice (BA, QA, or RS) impacted students who graduated from a four-year post-secondary public institution.

The independent variable was a student's academic preparation program pathway choice (BA, QA, or RS) with three categories, and the dependent variable was the student's graduation from a four-year post-secondary public institution, with two

categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS) and those students who attended four-year post-secondary public institutions and graduated. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05.

RQ6. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose two-year post-secondary private institutions?

***H6*.** High school academic preparation program choice (BA, QA, or RS) impacted graduation for students who attended a two-year post-secondary private institution.

The independent variable was a student's academic preparation program choice, with three categories, and the dependent variable was the student graduation from a two-year post-secondary public institution, with two categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS), and those students who attended two-year post-secondary private institutions. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05

RQ7. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose four-year post-secondary private institutions?

H7. High school academic preparation program choice (BA, QA, or RS) impacted graduation for students who attended a four-year post-secondary private institution.

The independent variable was a student's academic preparation program choice, with three categories, and the dependent variable was the student graduation from a four-year post-secondary private institution, with two categories. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice (BA, QA, or RS), and those students who attended four-year post-secondary private institutions and graduated. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05

RQ8. To what extent did high school academic preparation program choice (BA, QA, or RS) impact students who graduated from a post-secondary setting within a five-year window?

H8. High school academic preparation program choice (BA, QA, or RS) impacted graduation for students who attended a post-secondary setting within a five-year window.

The independent variable was a student's high school academic preparation program choice, with three categories, and the dependent variable was graduation within a five-year window. A chi-square test of independence was used to answer this question by calculating the interaction between the student's academic preparation program choice and those students who graduated from a post-secondary setting within a five-year window. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05

Limitations

The researcher must declare limitations because they "may have an effect on the interpretation of the findings or on the generalizability of the results" (Lunenburg & Irby, 2008, p. 133). Limitations to the current study included the following:

1. This study was based on one school district in Kansas with an enrollment of 1,743 students (S. Splichal, personal communication, October 5, 2016), and as such, the results may not apply to districts that do not share the same characteristics.
2. Other limitations included competing factors not related to the academic preparation program pathway choice, which could affect students' prompt degree completion.

Summary

This chapter included a description of the research for the current study, as well as information about the use of a non-experimental study research design. Descriptions of the population and the study group, as well as detailed sampling and data collection procedures were explained. The methodology for data analysis and hypothesis testing was presented, which included eight research questions and nine hypotheses. This chapter concluded with the identification of research limitations. Hypothesis testing and data analysis are presented in chapter four. The outcomes of the data analysis, along with recommendations for action and additional research are presented in chapter five.

Chapter Four

Results

The current study had three purposes. The first purpose was to evaluate to what extent student persistence was dependent on the type of academic preparation program pathway choice offered at Eudora High School, which included the following curricular offerings: Eudora Board of Education Approved Curriculum (BA), Kansas Board of Regents (KBOR) Kansas Qualified Admissions Curriculum (QA) and Kansas (Regents) Scholars Curriculum (RS) (see Appendix A). The second purpose was to evaluate the relationship between academic preparation program pathway choice and persistence regardless of college structure chosen. The third purpose was to evaluate the relationship between academic preparation program choice and persistence at a specific college funding level, public or private. This chapter contains descriptive statistics, hypothesis testing, and additional data analysis. Results of all analyses are presented.

Descriptive Statistics

This study population included 270 students who attended and graduated from Eudora High School between the years 2006 and 2008, chose to attend any post-secondary institution, and had data reported by the National Student Clearinghouse. Of the 270 students selected, 264 had the necessary data components reported and were included in the current study.

Academic preparation program choice. The current study included three academic preparation program choice options: BA, QA, or RS (see Appendix A). The majority of students, or 68.9% of the group, chose the BA curriculum; 9.8% of the group chose the QA curriculum; and 20.5% of students chose the RS curriculum.

College structure chosen. The current study defined college structure as any post-secondary institution offering a two-year pathway to a degree, traditionally known as a community or junior college, or any post-secondary institution offering a four-year pathway to a bachelor's degree. Students enrolled in a two-year post-secondary setting comprised 38.8% of the study group and students enrolled in a four-year post-secondary setting comprised 53.4% of the study group.

College funding level. The current study defined college funding as the differentiation between public, taxpayer-funded post-secondary institutions; and private, non-taxpayer-funded post-secondary institutions. Of the students choosing two-year post-secondary institutions, 100% of them chose publicly funded institutions. Of the students choosing four-year post-secondary institutions, 13.5% chose privately funded institutions, and 86.5% chose publicly funded post-secondary institutions. One student transferred to a private, two-year post-secondary institution after attending a public, two-year post-secondary institution.

Other categories of descriptive statistics. There were six levels of student persistence—one, two, three, four, and five years of post-secondary attendance, and graduation from a post-secondary setting. Of the 270 students who were selected for the current study, 49 graduated from a post-secondary institution within five years. The mean years of student enrollment in a post-secondary setting was 2.951; the mode was 2.000. The minimum number of years enrolled in a post-secondary institution was zero, and the maximum number of years enrolled in a post-secondary institution was 7.5. The number of students who persisted through to college graduation was 16.6%, and the number who did not persist to graduation was 83.4%.

Hypothesis Testing

Data were collected on Microsoft Excel sheets, coded to include all variables in the current study, and then imported into JASP software (Love et al., 2015). Each research question was statistically analyzed. Research questions along with hypotheses and statistical analysis results are listed below.

RQ1. To what extent did high school academic preparation program choice (BA, QA, or RS) impact the number of years enrolled in a post-secondary setting?

***H1*.** High school academic preparation program choice (BA, QA, or RS) impacted the number of years a student enrolled in a post-secondary setting.

A one-way ANOVA was used to determine if there were differences between the three academic preparation program choices and the number of years enrolled in a post-secondary setting. The level of significance was set at .05. Results of this one-way ANOVA indicated that there was a statistically significant relationship ($F(2,259) = 25.46$, $p = <.001$) between academic preparation program choice (BA, QA, or RS) and total number of years enrolled in a post-secondary institution, as shown in Table 1.

Table 1

Relationship of High School Academic Program Pathway Choices BA, QA and RS and Total Years Enrolled in Post-Secondary Institution

	SS	df	MS	*F*	*p*
High school academic program	297.0	2	148.512	25.46	< .001
Number of years	1510.8	259	5.833		

A Tukey post-hoc test was conducted as a follow-up to the one-way ANOVA test. As can be seen in Table 2, students enrolled in pathway RS were significantly more likely to attend post-secondary schools than either students enrolled in pathway BA ($p < .001$) or pathway QA ($p = .021$). Results from the post-hoc test indicated that there was not a statistically significant difference in years enrolled between students who chose academic program pathway BA and students who chose academic program pathway QA, but there was a statistically significant difference in years enrolled between students who chose BA and students who chose RS. There was also a statistically significant difference in years enrolled between students who chose academic program pathway QA and students who chose academic program pathway RS. Post-hoc comparisons indicated that the mean difference between pathways BA and QA were not significantly different, however mean differences between BA and QA and BA and RS were significantly different. In other words, students who chose the RS curriculum were more likely to be enrolled in a post-secondary setting, as shown in Table 2.

Table 2

Post-Hoc Comparison of High School Academic Program Pathway Choices

Pathway choice		Mean difference	SE	*t*	p_{tukey}
BA	QA	–1.104	0.506	–2.181	0.073
BA	RS	–2.644	0.374	–7.065	< .001
QA	RS	–1.540	0.577	–2.671	0.021

Note. BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

RQ2. To what extent did high school academic preparation program choice (BA, QA, or RS) impact student graduation in a post-secondary setting?

***H2*.** High school academic preparation program choice (BA, QA, or RS) impacted student graduation from a post-secondary setting.

The independent variable was the student's academic preparation program choice, with three categories (BA, QA, or RS), and graduation from a post-secondary institution, with two categories (yes, graduated; or no, did not graduate), and was evaluated using the chi-square test of independence. A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05. Results of the chi-square test of independence indicated that there was a statistically significant relationship between academic program preparation choice (BA, QA, or RS) and graduation from a post-secondary institution ($X^2 = 45.28$, $df = 2$, $p < .001$). The findings shown in Table 3 indicate that high school academic program choice (BA, QA, or RS) impacted student graduation from a post-secondary setting. Those students enrolled in BA (21.4%) and QA (34.6%) curriculums were less likely to graduate from a post-secondary institution than those enrolled in the RS (70.4%) curriculum.

Table 3

Cross-Tabulation of High School Academic Program Pathway Choice and Graduation from Any Post-Secondary Institution

	High School Academic Program Pathway Choice by Percent		
Graduation	BA	QA	RS
No	78.6% (n = 143)	65.4% (n = 17)	29.6% (n = 16)
Yes	21.4% (n = 39)	34.6% (n = 9)	70.4% (n = 38)
Total	100.0% (n = 182)	100.0% (n = 26)	100.0% (n = 54)

Note. BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

RQ3. To what extent did the high school academic preparation program choice (BA, QA, or RS) impact student choice of a two-year (a) or four-year (b) post-secondary institution?

***H3a*.** High school academic preparation program choice (BA, QA, or RS) impacted student choice of a two-year post-secondary institution.

The independent variable was a student's academic preparation program choice, with three categories (BA, QA, or RS), and the dependent variable was student choice of a two-year institution, with two categories (yes, attended a two-year post-secondary institution; or no, did not attend a two-year post-secondary institution). A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05. Results of the chi-square test of independence indicated that there was not a statistically

significant relationship between academic preparation program choice and two-year institution choice ($X^2 = 0.961$, $df = 2$, $p < .618$). This finding failed to support the hypothesis. Regardless of the chosen pathway, about 65% of all students chose not to attend a two-year college, and instead chose a four-year college or not to attend a post-secondary institution. Results of the chi-square test for research question three are shown in Table 4.

Table 4

Cross-Tabulation of High School Academic Program Pathway Choice and Choice of Any Two-Year Post-Secondary Institution

	High School Academic Program Pathway Choice by Percent		
Two-year institution choice	BA	QA	RS
No	68.9% (n = 104)	66.7% (n = 13)	60.5% (n = 23)
Yes	31.1% (n = 47)	33.3% (n = 6)	39.5% (n = 15)
Total	100.0% (n = 151)	100.0% (n = 18)	100.0% (n = 38)

Note. BA = BOE-Approved; QA= KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

H3b. High school academic preparation program choice (BA, QA, or RS) impacted student choice of a four-year post-secondary institution.

The independent variable was a student's academic preparation program choice, with three categories (BA, QA, or RS), and the dependent variable was student choice of a four-year institution, with two categories (yes, attended a four-year post-secondary institution; or no, did not attend a four-year post-secondary institution). A statistically

significant relationship between academic preparation program choice and four-year institution choice ($X^2 = 38.60$, $df = 2$, $p < .001$) was found. High school academic preparation program choice (BA, QA, or RS) impacted student choice of a four-year post-secondary institution. Those students choosing QA (76.9%) and RS (85.2%) curricular options were more likely to attend a four-year college. Results of the chi-square test are shown in Table 5.

Table 5

Cross-Tabulation of High School Academic Program Pathway Choice and Choice of Any Four-Year Post-Secondary Institution

	High School Academic Program Pathway Choice by Percent		
Four-year institution choice	BA	QA	RS
No	58.8% (n = 107)	23.1% (n = 6)	14.8% (n = 8)
Yes	41.2% (n = 75)	76.9% (n = 20)	85.2% (n = 46)
Total	100.0% (n = 182)	100.0% (n = 26)	100.0% (n = 54)

Note. BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

RQ4. To what extent did the high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose a two-year post-secondary public institution?

***H4*.** High school academic preparation program choice (BA, QA, or RS) impacted those students who graduated from a two-year post-secondary public institution.

The independent variable was a student's academic preparation program choice, with three categories (BA, QA, or RS), and the dependent variable was students who chose a two-year post-secondary public institution, with two categories (yes, chose a public two-year institution; or no, did not choose a public two-year institution). A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05. Results of the chi-square test of independence indicated there was a statistically significant relationship between academic preparation program choice and graduation rate from a chosen two-year post-secondary public institution ($X^2 = 13.69$, $df = 2$, $p < .0001$). High school academic preparation program choice (BA, QA, or RS) impacted student graduation at a two-year post-secondary public institution. Those students choosing the RS (47.4%) curriculum were more likely to graduate from a two-year post-secondary public institution. Students who chose the BA (81.5%) curriculum were not likely to graduate from a two-year post-secondary institution. Results of the chi-square test for research question four are shown in Table 6.

Table 6

Cross-Tabulation of High School Academic Program Pathway Choice and Graduation from Any Two-Year Post-Secondary Public Institution

	High School Academic Program Pathway Choice by Percent		
	BA	QA	RS
No	81.5% (n = 123)	72.2% (n = 13)	52.6% (n = 20)
Yes	18.5% (n = 28)	17.8% (n = 5)	47.4% (n = 18)
Total	100.0% (n = 151)	100.0% (n = 18)	100.0% (n = 38)

Note. BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

RQ5. To what extent did the high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose a four-year post-secondary public institution?

***H5*.** High school academic preparation program choice (BA, QA, or RS) impacted students who graduated from a four-year post-secondary public institution.

The independent variable was a student's academic preparation program pathway choice, with three categories (BA, QA, or RS), and the dependent variable was student graduation from a four-year post-secondary public institution with two categories (yes, graduated from a four-year post-secondary public institution; or no, did not graduate from a four-year post-secondary public institution). A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05. Results of the chi-

square test of independence indicated that there was a statistically significant relationship between academic preparation program choice and graduation rates from a chosen four-year public post-secondary institution ($X^2 = 45.28$, $df = 2$, $p < .001$). High school academic preparation program choice (BA, QA, or RS) impacted student choice of a four-year post-secondary public institution. Results of the chi-square test are shown in Table 7. Students who chose QA (34.6%) or RS (70.4%) curricula were more likely to graduate from a four-year post-secondary public institution than students who chose the BA (21.4%) curriculum.

Table 7

Cross-Tabulation of High School Academic Program Pathway Choice and Graduation from Any Four-Year Post-Secondary Public Institution

	High School Academic Program Pathway Choice by Percent		
	BA	QA	RS
No	78.6% (n = 143)	65.4% (n = 17)	29.6% (n = 16)
Yes	21.4% (n = 39)	34.6% (n = 9)	70.4% (n = 38)
Total	100.0% (n = 182)	100.0% (n = 26)	100.0% (n = 54)

Note. Legend: BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

RQ6. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose a two-year post-secondary private institution?

H6. High school academic preparation program choice (BA, QA, or RS) impacted graduation for students who attended a two-year post-secondary private institution.

The independent variable was a student's academic preparation program choice, with three categories (BA, QA, or RS), and the dependent variable was student graduation from a two-year post-secondary private institution, with two categories (yes, graduated from a two-year post-secondary private institution; or no, did not graduate from a two-year post-secondary private institution). An inspection of the data indicated that the population of this group was one student, leading to insufficient information to effectively measure the relationship.

RQ7. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who chose a four-year post-secondary private institution?

H7. High school academic preparation program choice (BA, QA, or RS) impacted graduation for students who attended a four-year post-secondary private institution.

The independent variable was a student's academic preparation program choice, (BA, QA, or RS), and the dependent variable was student graduation from a four-year post-secondary private institution, with two categories (yes, graduated from a four-year post-secondary private institutions; or no, did not graduate from a four-year post-secondary private institution). A three-by-two cross-tabulation was used to determine the expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05. Results of the chi-square test of independence indicated that there was not a statistically significant relationship between academic preparation program choice and graduation rates from a chosen four-year post-

secondary private institution ($X^2 = 0.024$, $df = 2$, $p < .988$). This finding failed to support the hypothesis that program pathway choice made a difference for students who chose a four-year post-secondary private institution, with at least 50% of all students in each category not graduating from a four-year post-secondary private institution. Results of the chi-square test for research question 7 are shown in Table 8.

Table 8

Cross Tabulation of Academic Program Pathway Choice and Graduation from Any Four-Year Post-Secondary Private Institution Choice

	High School Academic Program Pathway Choice by Percent		
	BA	QA	RS
No	53.8% (n = 7)	50.0% (n = 2)	50.0% (n = 1)
Yes	46.2% (n = 7)	50.0% (n = 2)	50.0% (n = 1)
Total	100.0% (n = 14)	100.0% (n = 4)	100.0% (n = 2)

Note. BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

RQ8. To what extent did high school academic preparation program choice (BA, QA, or RS) impact graduation for students who attended a post-secondary setting within a five-year window?

***H8*.** High school academic preparation program choice (BA, QA, or RS) impacted graduation for students who attended a post-secondary setting within a five-year window.

The independent variable was a student's academic preparation program choice, with three categories (BA, QA, or RS), and the dependent variable was post-secondary

graduation within five years with two categories (yes, graduated within five years from a post-secondary institution; or no, and did not graduate within five years from a post-secondary institution). A three-by-two cross-tabulation was used to determine expected frequency. The observed frequency was compared to the expected chance frequency. The level of significance was set at .05. Results of the chi-square test of independence indicated that there was a statistically significant relationship between academic program preparation choice and graduation rates from a post-secondary institution within a five-year window ($X^2 = 25.71$, $df = 2$, $p < .001$). High school academic preparation program choice (BA, QA, or RS) impacted student graduation from any post-secondary institution within five years. Students choosing BA (85.4%) or QA (77.8%) curricula were not likely to graduate from any post-secondary institution within five years. Students who chose the RS (57.1%) curriculum were likely to graduate from any post-secondary institution within five years. Results of the chi-square test for research question eight are shown in Table 9.

Table 9

Cross-Tabulation of High School Academic Program Pathway Choice and Graduation from Any Post-Secondary Institution within Five Years

	High School Academic Program Pathway Choice by Percent		
	BA	QA	RS
No	85.4% (n = 134)	77.8% (n = 14)	42.9% (n = 12)
Yes	14.6% (n = 23)	22.2% (n = 4)	57.1% (n = 16)
Total	100.0% (n = 157)	100.0% (n = 18)	100.0% (n = 28)

Note. BA = BOE-Approved; QA = KBOR Qualified Admissions; RS = KBOR Kansas Regents Scholars

Summary

This chapter included the descriptive statistics, hypothesis testing, and data analysis associated with the impact of high school academic preparation program pathway choice and persistence through to graduation from a post-secondary institution. Results of the one-way ANOVA test and the seven chi-square tests were described. Chapter five includes a study overview, the purpose statement and research questions, a review of the methodology, and major findings. Additional information in chapter five includes findings related to the literature, recommendations for action, future research suggestions, and concluding statements.

Chapter Five

Interpretation and Recommendations

Chapter five included a summary of the study, including an overview of the problem, the purpose statement and research questions, a review of the methodology, and major findings. It also contains a discussion of the findings as they relate to the literature, recommendations for Eudora Unified School District, and for other districts of similar size and demographics, along with suggestions for future research in this area. The last section contains concluding remarks.

Overview of the Problem. In the early years of the twenty-first century, schools were under pressure to ensure all students were ready for post-secondary training after high school. Districts searched for ways to improve college and career readiness after high school (Chait & Venezia, 2009). The problem was identifying which variables might improve persistence in a post-secondary setting. The current study evaluated whether three variables—academic preparation program choice, Eudora Board of Education Approved Curriculum (BA), KBOR Qualified Admissions Curriculum (QA), and KBOR (Regents) Scholars Curriculum (RS) college structure choice, and college funding level—could influence post-secondary persistence.

The relationship between persistence in a post-secondary setting and high school academic preparation program pathway choice was the first variable in the study. Lee and Bryk (1988) found that course studies were major mediating factors linking student background and academic achievement. Adelman (2006) and others (Horn et al., 2001; Kuh, 2007) identified the fact that high school academic preparation does matter when evaluating college readiness and persistence.

The relationship between persistence in a post-secondary setting and college structure was the second variable in the study. While various studies focused on retention in a four-year post-secondary setting (Astin, 1993; Bean, 1980, 1982, 1983, 1985; Tinto, 1975, 1993, 1997), there was less research on whether these models applied in a two-year college setting. One reason for this was the differing characteristics of students enrolled in a two-year college compared to that of students enrolled in a four-year college. Aslanian (2001) found that students enrolled in a two-year college were more likely to be older than the average four-year college student. Furthermore, community colleges were more likely to enroll higher numbers of minority students (Cohen & Brawer, 2003), and these students were more likely to be from low-income situations and only enrolled on a part-time basis. Fike and Fike (2008) reported that two-year colleges were more likely to enroll students who utilized the two-year remedial system because these students were underprepared for college.

The relationship between persistence in a post-secondary setting and college funding level was the third variable in the study. College personnel have evaluated retention using the traditional university model (Astin, 1993; Bean, 1980, 1982, 1983, 1985; Tinto, 1975, 1993, 1997) with differing results. Tinto (2004) found that students enrolled in a four-year private university led to greater rates of completion. "Among those who first entered private, not-for-profit, four-year institutions, 69 percent earned their bachelor's degree within six years compared to 53 percent of those who began in a public four-year institution" (Tinto, 2004, p, 1). More recently, NCES reported that in 2012, first-time students at private nonprofit four-year institutions had an overall retention rate of 81%, ranging from 64% at the least-selective institutions to 97% at the

most-selective institutions. One reason for this level of retention included admissions protocols—private schools were more likely to enroll students whose educational and socioeconomic backgrounds were such that they were more likely to graduate (Basu, 2011). The current study sought to address the problem of whether there was a relationship between the variables stated above and student persistence in a post-secondary setting so that educational leaders had information on which to base policy choices as well as to help guide students who sought post-secondary training following high school graduation.

Purpose Statement and Research Questions. The current study had three purposes. The first purpose was to evaluate to what extent the type of academic preparation program pathway chosen from the three pathways offered at Eudora High School (BA, QA, or RS) (see Appendix A) had on student persistence. The second purpose of this study was to evaluate the relationship between academic preparation program pathway and persistence in a post-secondary setting and college structure chosen. The third purpose of this study was to evaluate the relationship between academic preparation program choice persistence in a post-secondary setting and college funding level chosen. The data were analyzed to evaluate the strength of the relationships.

Review of the Methodology. The current study used two types of tests: a non-parametric quantitative cross-tabulation (crosstab) research design and an ANOVA research design, which covered nominal and interval data, to examine the relationship between the high school academic preparation program choice, college structure, and college funding level, based on students' one, two, three, four, and five years persistence

and college graduation. Because of the five-year window to graduation and the year the data were collected, students who attended and graduated from Eudora High School between the years 2006 and 2008 were included in the study.

The three variables—academic preparation program pathway choice, college structure, and college funding level—were evaluated to determine the extent to which the type of student persistence was dependent on the variables listed. Transcript data were collected during the 2015-16 school year from archived data hosted at the Eudora High School office to determine the choice of academic program pathway choice (BA, QA, or RS). Additional persistence data were collected from the NSC, including data indicating college structure chosen, defined as a post-secondary institution that offered a two-year pathway to a degree, traditionally known as a community or junior college, or a post-secondary institution that offered a four-year pathway to a bachelor's degree. NSC data also included college funding level chosen, defined as the differentiation between public, taxpayer-funded post-secondary institutions and private, non-taxpayer-funded post-secondary institutions. All post-secondary institution options, whether two-year colleges or four-year colleges as reported by the NSC, were included in the study, regardless of the post-secondary setting students chose. Data were collected utilizing Excel spreadsheet software. JASP software was used to analyze and calculate the data (Love et al., 2015).

Major findings. Test results determined that statistically significant results were found between the variables in six of the nine hypotheses. Statistically significant results were found for hypotheses one, two, three (b), four, five and eight, indicating that academic preparation program choice impacted number of years enrolled in a post-

secondary setting, graduation rates from post-secondary institutions, choice of a four-year post-secondary institution, graduation rates from both two-year post-secondary public and four-year post-secondary public institution and graduation from a post-secondary institution within a five year window. Statistically significant relationships were not found for hypotheses three (a), six and seven, some of which can be explained by the data. Results indicate that the best choices for post-secondary persistence while enrolled at Eudora High School are the Kansas Board of Regents curricular options – either the Qualified Admissions (QA) or Regents Scholars (RS) curriculum.

Findings Related to the Literature

Few studies have evaluated the relationship between academic achievement and post-secondary persistence; therefore, this study reduced the research gap. The current study addressed other factors such as college structure and college funding levels as possible indicators of why students succeed in a post-secondary setting. Also, data for students enrolled in Eudora District Schools was significant in many areas but did not include any formal tracking of post-secondary persistence. Results from the current study were similar to findings in the reviewed literature. This section links the results of the current study to previous studies investigating the relationship between high school academic preparation program pathway choice and persistence to graduation from a post-secondary institution.

The current study revealed statistically significant relationships between the high school academic preparation program pathway choice and variables such as total number of years enrolled in a post-secondary setting, as well as graduation rates from post-secondary institutions. These findings were consistent with those of Conley (2005, 2006)

and Adelman (1999, 2006). Likewise, Horn et al. (2001) found that 79% of students who completed a rigorous high school curriculum were more likely to be continuously enrolled in college, while only 55% of students who completed a less rigorous curriculum were less likely to be continuously enrolled in college.

The current study also evaluated the relationship between the high school academic preparation program choice and the college structure chosen (two-year versus four-year). A statistically significant relationship existed between high school academic preparation program choice and four-year post-secondary institutions but not for two-year post-secondary institutions. This finding was consistent with the literature (Bean, 1980, 1982, 1983, 1985; Tinto, 2006;) in that the role of college structure was just beginning to be considered.

The current study also evaluated the relationship between high school academic preparation program choice (BA, QA, or RS) and college funding level (public versus private). Statistically significant relationships were found between the high school academic preparation program pathway choice and graduation rates from two-year and four-year post-secondary public institutions. This was consistent with the findings of Conley (2005, 2006) and Adelman (1999, 2006). By contrast, however, there was not a statistically significant relationship between high school academic preparation program choice and graduation rates from two-year and four-year post-secondary private institutions. This finding could be a direct result of the small number of students who chose to attend private institutions at some point.

Conclusions

Strong relationships existed between high school academic preparation program pathways and post-secondary attendance and graduation rates for students who graduated from the Eudora School District between 2006 and 2008. Strong relationships exits between high school academic preparation program pathways and post-secondary attendance and graduation rates. Students whose post-high school plans included post-secondary education would benefit from the QA or RS curriculum options. The BA curriculum was not the best plan for students who planned to attend a post-secondary institution. Additional findings supported curricular choice matters for students who wanted to attend a post-secondary institution. Students enrolled in the BA (21.4%) or QA (34.6%) curricula were less likely than those enrolled in the RS (70.4%) curricula to graduate. Overall, students who chose the RS curricula were more likely to graduate from any post-secondary institution within five years than those students who chose the BA curricula.

Some findings did not support hypotheses three (b), six, and seven. When evaluating the results from research question three (b), which addressed high school academic preparation program choice and student choice of a two-year institution, the finding failed to support the hypothesis. Regardless of the chosen pathway, about 65% of all students chose not to attend a two-year post-secondary institution. Similarly, evaluating hypothesis six, which addressed high school academic preparation program choice and student graduation rates at two-year post-secondary private institutions, data indicated that the population of this group was one student, leading to insufficient information to effectively measure the relationship. Finally, evaluating hypothesis seven,

which addressed high school academic preparation program choice and graduation for students who chose a four-year post-secondary private institution, the high school academic preparation program choice did not make a difference, with at least 50% of all students in each category not graduating from a four-year post-secondary private institution.

Recommendations for action. The findings of this study included recommendations for Eudora Unified School District, as well as districts of similar size and demographics. Statistically significant relationships between high school academic preparation program pathway choice, and persistence and graduation from a post-secondary institution were identified. This information may help education leaders make decisions about curriculum choices as well as provide information to parents regarding rigorous coursework while in middle school or junior high, so students are on the correct curricular pathway based on their post high school graduation plans.

Additionally, high school leaders, counselors, and teachers could use the information provided to advocate for all college-bound students to choose a rigorous curriculum in high school. Because students begin to plan for their future in their eighth-grade year, this data provided information about students who were successful in a post-secondary setting and the corresponding curriculum option chosen. As the current study indicates, students from Eudora Unified School District choosing a rigorous curriculum improved their chances of post-secondary success. This is a relatively simple and cost-effective measure for students enrolled in Eudora Unified School District to improve their changes of post-secondary success, which is important given its economically

disadvantaged status. By selecting a more rigorous curriculum, such as QA or RS, students had a stronger probability for persistence in a post-secondary setting.

At the district level, the findings of the current study could be useful for guiding professional development and any necessary curricular alignment. The data presented provides district officials and school board members information as they consider decisions regarding graduation requirements, courses of study, and high school curriculum choices. Additionally, this study reinforces the necessity of QA and RS curricular options in preparing students for post-secondary persistence.

Recommendations for future research. The goal of this research was to evaluate variables within the Eudora Unified School District's control to improve post-secondary graduation rates for those students who chose college as a post-high school graduation plan. Overall, there was a statistically significant relationship between the high school academic preparation program choice and several variables, including years enrolled and graduation in a post-secondary setting.

Suggestions for future research include conducting research that breaks down the study population into subgroups, such as those having minority or low socioeconomic status, to see how these students perform in a post-secondary setting relative to persistence and graduation rates. Another suggestion would be to use a much broader and more comprehensive study population; the study here was specific to Eudora District Schools, and while schools of similar size, demographics, and geographic location might be able to extrapolate these findings, this may not be the case for districts not matching these characteristics. Another suggestion would be to conduct follow-up interviews with selected students to thoroughly evaluate the reasons for their persistence or lack thereof

in a post-secondary setting. An additional suggestion would be to explore the itinerant nature of college students, as Eudora Unified School District had students attend several universities in search of degrees, which could be another source of research. Finally, conducting research on the role of parent engagement in post-secondary persistence might be a variable for consideration for future research.

Concluding remarks. As noted in chapter one, American high schools are challenged to equip students with skills to allow them to be college-ready and successful in post-secondary education. Preparing students is important because they are facing a future in which post-secondary training is viewed as essential—a mechanism to economic security (Barrow et al., 2013). Despite the need for post-secondary training, Kena et al. (2015) reported through NCES that the percentage of students who had acquired bachelor's degrees only improved from 23% in 1990 to 34% in 2014. Based on the data found in this study, educators could prepare their students by creating a culture of high expectations in which all students who choose to attend a post-secondary institution are prepared for the expectations of college work. This study confirms the role of a rigorous high school academic preparation program pathway choice and adds to the body of research about the relationship between high school curriculum and post-secondary persistence. Eudora District Schools may use this information to promote post-secondary persistence for its students in 2016 and beyond.

References

Adelman, C. (1999). *Answers in the toolbox: Academic intensity, attendance patterns, and bachelor's degree attainment*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. Retrieved from http://www.ed.gov/pubs/Toolbox/toolbox.html.

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education.

Albertine, S., Brown, N. C., & Rhodes, T. (2011, March 10). *K-16 alignment on outcomes and assessments: Has its time finally come?* Retrieved from Association of American Colleges & Universities website: https://www.aacu.org/leap/liberal-education-nation-blog/k-16-alignment-outcomes-and-assessment-has-its-time-finally-come

Allen, J., & Sconing, J. (2005). *Using ACT assessment scores to set benchmarks for college readiness*. Iowa City, IA: American College Testing, Inc. Retrieved from http://files.eric.ed.gov/fulltext/ED489766.pdf

American College of Testing. (1997). *ACT technical manual*. Iowa City, IA: American College Testing, Inc.

American College of Testing. (2011). *National collegiate retention and persistence to degree rates*. Retrieved from https://www.ruffalonl.com/papers-research-higher-education-fundraising/student-retention-white-papers-and-trend-reports/act-collegiate-retention-persistence-rates.

American College of Testing. (2014*). College dropout rate decreases as student readiness increases*. Retrieved from http://www.act.org/newsroom/college-dropout-rates-decrease-as-student-readiness-increases/

American College of Testing. (2016). *The condition of college and career readiness 2016.* Retrieved from http://www.act.org/content/act/en/research/condition-of-college-and-career-readiness-2016.html

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing* (pp. 9–36). Washington, DC: AERA Publications.

Aslanian, C. B. (2001). *Adult students today*. New York: The College Board.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, *25*(4), 297–308.

Barrow, L., Brock, T., & Rouse, C. E. (2013). Postsecondary education in the United States: Introducing the issue. *The Future of Children*, *23*(1), 3–16.

Basu, K. (2011, November 29). *Better data, better rates*. Inside Higher Ed. Retrieved from https://www.insidehighered.com/news/2011/11/29/report-suggests-approach-improving-graduation-rates.

Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, *12*(2), 155–187.

Bean, J. P. (1982). Conceptual models of student attrition: How theory can help the institutional researcher. In E. T. Pascarella (Ed.), *Studying student attrition* (pp. 17–33). San Francisco: Jossey-Bass Inc., 1982.

Bean, J. P. (1983). The application of a model of turnover in work organizations to the student attrition process. *Review of Higher Education, 6*(2), 129–148.

Bean, J. P. (1985). Interaction effects based on class level in an exploratory model of college student dropout syndrome. *American Educational Research Journal*, *22*(1), 35–64.

Bean, J. P., & Vesper, N. (1990). *Quantitative approaches to grounding theory in data: Using LISREL to develop a local model and theory of student attrition*. Paper presented at the annual meeting of the American Educational Research Association, Boston, MA, April 16–20.

Berger, J. B., & Milem, J. F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education*, *40*(6), 641–664.

Berger, A., Turk-Bicakci, L., Garet, M., Knudson, J., Hoshen, G. (2014, January). *Early college, continued success: Early college high school initiative impact study*. Washington, DC: American Institutes for Research. Retrieved from http://www.air.org/ sites/default/files/AIR_ECHSI_Impact_Study_Report-_NSC_Update_01-14-14.pdf.

Cabrera, A. F., et al., (1990). *The convergence between two theories of college persistence*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Portland, OR, November 1–4.

Cabrera, A. F., Castaneda, M. B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *The Journal of Higher Education*, *63*(2), 143-164.

Cabrera, A. F., Nora, A., & Castaneda, M. B. (1992). The role of finances in the persistence process: A structural model. *Research in Higher Education*, *33*(5), 571–593.

Cabrera, A. F., Stampen, J. O., & Hansen, W. L. (1990). Exploring the effects of ability to pay on persistence in college. *The Review of Higher Education*, *13*(3), 303.

Camara, W. J., & Echternacht, G. (2000, July). *The SAT7 I and high school grades: Utility in predicting success in college* (Report No. CB-RN-10). New York: The College Board. (ERIC Document No. ED446592)

Carnevale, A. P., Smith, N., & Strohl, J. (2013). *Recovery: Job growth and education requirements through 2020*. Washington, DC: Georgetown University, Georgetown Public Policy Institute. Retrieved from https://cew.georgetown.edu /wp-content/uploads/2014/11/Recovery2020.ES_.Web_.pdf.

Carter, D. F. (2006, Summer). Key issues in the persistence of underrepresented minority students. *New Directions for Institutional Research, 130,* 33–46.

Chait, R., & Venezia, A. (2009). *Improving academic preparation for college: What we know and how state and federal policy can help*. Washington, DC: Center for American Progress. Retrieved March, 12, 2009, from https://www. americanprogress.org/issues/labor/report/2009/01/27/5411/improving-academic-preparation-for-college/.

Choy, S. P. (2001). *Students whose parents did not go to college: Postsecondary access, persistence, and attainment*. Findings from the Condition of Education 2001. Washington, DC: National Center for Education Statistics.

Cohen, A. M., & Brawer, F. B. (2003). *The American community college*. San Francisco, CA: John Wiley & Sons.

College Board, The. (2016a). *Tuition and fees and room and board over time, 1975–76 to 2015–-16, selected years*. Retrieved from http://trends.collegeboard.org/college-pricing/figures-tables/tuition-and-fees-and-room-and-board-over-time-1975-76-2015-16-selected-years.

College Board, The. (2016b). *Completion rates by sector and race/ethnicity*. Retrieved from https://trends.collegeboard.org/education-pays/figures-tables/completion-rates-sector-and-race-ethnicity

Conley, D. T. (2005). *College knowledge: What is really takes for students to succeed and what we can do to get them ready*. San Francisco, CA: Josey-Bass.

Conley, D. T. (2006). What we must do to create a system that prepares students for college success. In *Policy perspectives*. San Francisco, CA: WestEd. Retrieved from EBSCOhost database. Doc. No. ED493061.

Constitution of the State of Kansas. (n.d.). Article VI. Education, §§ 1 to 7.

Cooper, A. D. (2014). *Exploring the use of non-cognitive factors in predicting college academic outcomes*. Unpublished master's thesis, University of Tennessee at Chattanooga.

Copa, G. H., & Pease, V. H. (1993). The comprehensive high school: An historical perspective. In *New designs for the comprehensive high school. Vol. II—Working papers.* Berkeley, CA: National Center for Research in Vocational Education. (ERIC Doc. No. ED352520)

Credé, M., & Kuncel, N. R. (2008). Study habits, skills, and attitudes: The third pillar supporting collegiate academic performance. *Perspectives on Psychological Science, 3*(6), 425–453.

Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed method approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Demetriou, C., & Schmitz-Sciborski, A. (2011). Integration, motivation, strengths and optimism: Retention theories past, present and future. In R. Hayes (Ed.), *Proceedings of the 7th National Symposium on Student Retention, 2011, Charleston* (pp. 300-312). Norman, OK: The University of Oklahoma.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*(6), 1087.

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT–S). *Journal of Personality Assessment*, *91*(2), 166-174.

Durkheim, E. (1951). *Suicide: A study in sociology* (J. A. Spaulding & G. Simpson, Trans.). Glencoe, IL: Free Press. (Original work published 1897)

Dynarski, S. M., Hemelt, S. W., & Hyman, J. M. (2013). *The missing manual: Using National Student Clearinghouse data to track postsecondary outcomes* (NBER Working Paper No. 19552). National Bureau of Economic Research.

Elkins, S. A., Braxton, J. M., & James, G. W. (2000). Tinto's separation stage and its influence on first-semester college student persistence. *Research in Higher Education*, *41*(2), 251-268.

Engle, J. (2007). Postsecondary access and success for first-generation college students. *American Academic*, *3*(1), 25-48.

Eudora Community Museum. (2016, March 29). Eudora High School historical information [various items from Eudora High School]. Eudora High School Collection, Eudora, KS.

Eudora High School. (2015). *Course catalog*. Retrieved April 20, 2015, from http://www.edlinesites.net/pages/Eudora_High_School/Cardinal_Career_Center/EHS_Graduation_Requirements.

Friedlander, J. (1980). Are college support programs and services reaching high-risk students? *Journal of College Student Personnel*, *21*(1), 23-28.

Fike, D. S., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community College Review*, *36*(2), 68–88.

Gayler, K., & Chudowsky, N. (2003). *State high school exit exams: Put to the test*. Washington, DC: Center on Education Policy.

Geiser, S., & Santelices, M. V. (2007). *Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes* (Research & Occasional Paper Series: CSHE.6.07). Berkeley, CA: University of California, Center for Studies in Higher Education.

Goldrick-Rab, S., & Harris, D. N. (2010, October 2). *Observations on the use of NSC data for research purposes*. White Paper). Retrieved from http://www.finaid study.org/documents/NSC%20Dear%20colleagues%20letter.pdf.

Hamilton, L. S., Stecher, B. M., & Yuan, K. (2008). *Standards based reforms in the United States: History, research and future directions*. Washington, DC: Center on Education Policy. (ERIC Doc. No. ED503897)

Hein, V., Smerdon, B., & Sambolt, M. (2013). *Predictors of postsecondary success*. Washington, DC: American Institutes for Research, College and Career Readiness and Success Center. Retrieved from http://files.eric.ed.gov/fulltext/ED555671.pdf.

Higgins, C. (2014). *Eudora schools*. Retrieved from http://eudora kshistory.com/schools/eudora_schools.htm.

Hiss, W.C. (2014). *Report finds virtually no difference in graduation rates for students who submit or do not submit standardized test scores to colleges and universities.* Retrieved from The National Association for College Admissions Counseling website: http://www.nacacnet.org/media-center/PressRoom/2014/Pages/BillHiss.aspx.

Hiss, W. C., & Franks, V. W. (2014). *Defining promise: Optional standardized testing policies in American college and university admissions*. Retrieved from http://www.nacacnet.org/research/research-data/nacacresearch/Documents/DefiningPromise.pdf.

Horn, L., Kojaku, L. K., & Carroll. C. D. (2001, August). *High school academic curriculum and the persistence path through college: Persistence and transfer behavior of undergraduates 3 years after entering 4-year institutions* (NCES 2001–163). Washington DC: U.S. Department of Education, Office of Educational Research and Improvement. Retrieved January 15, 2014, from http://nces.ed.gov/pubs2001/2001163.pdf.

Ishitani, T. T. (2003). A longitudinal approach to assessing attrition behavior among first-generation students: Time-varying effects of pre-college characteristics. *Research in Higher Education, 44*(4), 433–449.

Ivcevic, Z., & Brackett, M. (2014). Predicting school success: Comparing conscientiousness, grit, and emotion regulation ability. *Journal of Research in Personality*, *52*, 29-36.

Kamphoff, C. S., Hutson, B. L., Amundsen, S. A., & Atwood, J. A. (2007). A motivational/empowerment model applied to students on academic probation. *Journal of College Student Retention: Research, Theory & Practice*, *8*(4), 397-412.

Kansas Board of Regents. (n.d.a). *A brief history of the Kansas Board of Regents system*. Retrieved April 21, 2015, from http://www.kansasregents.org/about/history.

Kansas Board of Regents. (n.d.b). *Qualified admissions*. Retrieved April 21, 2015, from http://www.kansasregents.org/qualified_admissions.

Kansas Board of Regents. (n.d.c). *Kansas scholars curriculum*. Retrieved April 20, 2015, from http://www.kansasregents.org/students/student_financial_aid/kansas_scholars_curriculum.

Kansas Board of Regents. (2014). *Qualified admissions: Kansas residents*. Retrieved April 20, 2015, from http://kansasregents.org/resources/PDF/Academic_Affairs/Qualified_Admissions/2865-QA2015-2016_KansasBoardofRegents_QualifiedAdmissionsQuickFacts_April2014-1-13-2015_1.pdf.

Kansas State Department of Education. (2014). *Report card 2013–2014*. Retrieved May 15, 2015, from http://online.ksde.org/rcard/district.aspx?org_no = D049.

Kansas State Department of Education. (2015). *Kansas college and career academic readiness assessment*. Retrieved from http://www.ksde.org/Portals/0/SES/SEAC/OC_KSDE_09032015_EducatorTalkingPoints.pdf?ver=2016-02-03-222958-483.

Kena, G., Musu-Gillette, L., Robinson, J., Wang, X., Rathbun, A., Zhang, J., et al. (2015). *The condition of education 2015* (NCES 2015–144). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Kirby, D., & Sharpe, D. (2001). Student attrition from Newfoundland and Labrador's public college. *Alberta Journal of Educational Research, 47,* 353–368.

Kirst, M. (1998). *Improving and aligning K-16 standards, admissions and freshmen placement policies*. Stanford, CA: National Center for Postsecondary Improvement. Retrieved from http://web.stanford.edu/group/ncpi/documents/pdfs/2-06_kirstk16.pdf

Kirst, M. W., & Venezia, A. (Eds.). (2004*). From high school to college: Improving opportunities for success in postsecondary education*. San Francisco, CA: Josey-Bass. Retrieved from EBSCOhost database (Doc. No. ED496375), http://cepa.stanford.edu/content/high-school-college-improving-opportunities-success-postsecondary-education.

Komarraju, M., Ramsey, A., & Rinella, V. (2013). Cognitive and non-cognitive predictors of college readiness and performance: Role of academic discipline. *Learning and Individual Differences*, *24*, 103–109. doi: 10.1016/j.lindif.2012.12.007

Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education*, *79*(5), 540–563.

Lederman, D. (2014, February 28). *The enrollment slowdown*. Inside Higher Ed. Retrieved from https://www.insidehighered.com/news/2014/02/28/us-projects-college-enrollment-grow-14-through-2022.

Lee, V. E. & Ready, D. D. (2009). U.S. high school curriculum: Three phases of contemporary research and reform. *Future of Children*, *19*(1), 135–156. Retrieved from EBSCOhost database. Doc. No. EJ842066.

Locke, E. A. (1982). Relation of goal level to performance with a short work period and multiple goal levels. *Journal of Applied Psychology*, *67*, 512–514.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting & task performance*. Upper Saddle River, N.J: Prentice-Hall, Inc.

Lotkowski, V. A., Robbins, S. B., & Noeth, R. J. (2004). *The role of academic and non-academic factors in improving college retention* (ACT Policy Report). Iowa City, IA: American College Testing, Inc.

Love, J., Selker, R., Marsman, M., Jamil, T., Dropmann, D., Verhagen, A. J., et al. (2015). JASP (Version 0.7) [Computer software].

Lucio, R., Hunt, E., & Bornovalova, M. (2012). Identifying the necessary and sufficient number of risk factors for predicting academic failure. *Developmental Psychology*, *48*(2), 422–428

Lunenburg, F. C., & Irby, B. (2008). *Writing a successful thesis or dissertation: Tips and strategies for students in the social and behavioral sciences.* Thousand Oaks, CA: Corwin Press.

Martinez, S., & Snider, L. A. (2001). *History of Kansas education*. Kansas State Department of Education. Retrieved from http://www.ksde.org/Portals/0/Research%20and%20Evaluation/historyofeducationfinal.pdf?ver=2014-01-29-132055-783

McGrath, M., & Braunstein, A. (1997). The prediction of freshmen attrition: An examination of the importance of certain demographic, academic, financial and social factors. *College Student Journal*, *31*(3), 396–408.

Metzner, B. & Bean, P. (1987). The estimation of a conceptual model of nontraditional undergraduate student attrition. *Research in Higher Education, 22*(1), 15–38.

Minnesota House of Representatives Research Department. (2002, September). *States K-16 education systems.* Retrieved from http://www.house.leg.state.mn.us/hrd/pubs/k16educ.pdf

Mirel, J. (2006, Winter). The traditional school: Historical debates over its nature and function. *EducationNext, 6*(1), 14–21. Retrieved from http://educationnext .org/the-traditional-high-school/.

Murdock, T. A. (1989). Does financial aid really have an effect on student retention? *Journal of Student Financial Aid*, *19*(1), 1.

Nagaoka, J., Roderick, M., & Coca, V. (2009). *Barriers to college attainment: Lessons from Chicago*. Washington, DC: Center for American Progress.

Napoli, A. R., & Wortman, P. M. (1998). Psychosocial factors related to retention and early departure of two-year community college students. *Research in Higher Education*, *39*(4), 419–455.

National Center for Educational Statistics (NCES). (n.d.) *Fast facts: Enrollment*. Retrieved from http://nces.ed.gov/FastFacts/display.asp?id=98.

National Center for Educational Statistics (NCES) (1984). *High school course grade standards* (Publication No. NCES 1984-221B). Retrieved from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=1984221b

National Center for Educational Statistics (NCES). (2015). *Fast facts: Graduation rates*. Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=40.

National Commission on Education. (1983). *A nation at risk: The imperative to educational reform*. Retrieved from https://www2.ed.gov/pubs/NatAtRisk/risk.html.

National Commission on the High School Senior Year. (2001). *Raising our sights: No high school senior left behind* (Final Report). Princeton, NJ: Woodrow Wilson National Fellowship Foundation. (ERIC Doc. No. ED459516)

National Student Clearinghouse (NSC). (2015). *Clearinghouse facts*. Retrieved from http://www.studentclearinghouse.org/about/clearinghouse_facts.php.

Nelson, B., Froehner, M., & Gault, B. (2013, March). *College students with children are common and face many challenges in completing higher education* (Briefing Paper # IWPR C404). Washington, DC: Institute for Women's Policy Research.

Neumann, Y., & Finaly-Neumann, E. (1989). Predicting juniors' and seniors' persistence and attrition: A quality of learning experience approach. *The Journal of Experimental Education*, *57*(2), 129–140.

Niche. (2015a). *Eudora Unified School District: School district home*. Retrieved May 20, 2015, from https://k12.niche.com/d/eudora-unified-school-district-ks/.

Niche. (2015b). *Eudora Unified School District: Student culture & diversity*. Retrieved May 20, 2015, from https://k12.niche.com/d/eudora-unified-school-district-ks/student-culture-and-diversity/.

Niche. (2015c). *Eudora High School: Teachers*. Retrieved November 23, 2015, from https://k12.niche.com/eudora-high-school-eudora-ks/teachers/.

Noble, J., & Sawyer R. (2004). Is high school grade point average better than achievement test scores for predicting academic success in college? *College and University*, *29*(4), 18–22.

No Child Left Behind Act of 2001, Pub. L. 107–110, 20 U.S.C. § 6301, 115 Stat. 1425 (2001). Retrieved January 18, 2016, from http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf.

Nunez, A. M., & Cuccaro-Alamin, S. (1998, June). *First-generation students: Undergraduates whose parents never enrolled in postsecondary education* (NCES 98–082). Statistical Analysis Report. Washington, DC: U.S. Department of Education.

Ory, J. C., & Braskamp, L. A. (1988). Involvement and growth of students in three academic programs. *Research in Higher Education, 28*(2), 116–129.

Parker, J., & Schmidt, J. (1982). Effects of college experience. In H. Mitzel (Ed.), *Encyclopedia of educational research* (5th ed.). New York: Free Press.

Pascarella, E. T., Seifert, T. A., & Whitt, E. J. (2008). Effective instruction and college student persistence: Some new evidence. *New Directions for Teaching and Learning*, *115*, 55–70. Retrieved from http://jesserbishop.wiki.westga.edu/file/view/Pascarella_Effective+Instruction.pdf.

Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *The Journal of Higher Education*, *51*(1), 60–75.

Pascarella, E. T., & Terenzini, P. T. (1991). How college affects students. In *Findings and insights from twenty years of research*. San Francisco: Jossey-Bass.

Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, *95*(4), 667–686. doi: 10.1037/0022-0663.95.4.667

Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin*, *135*(2), 322.

Porter, O. F. (1989). *Undergraduate completion and persistence at four-year colleges and universities: Completers, persisters, stopouts, and dropouts*. Washington, DC: National Institute of Independent Colleges and Universities.

Price, J. L. (1977). *The study of turnover*. Iowa State Press.

Ravitch, D. (1995). *Learning from the past: What history teaches us about school reform*. Baltimore, MD: Johns Hopkins University Press.

Ravitch, D., & Vinovnskis, M. (1993). *Historical perspectives on the current education reforms*. Washington DC: Office of Educational Research and Improvement. Retrieved from EBSCOhost database. Doc. No. ED359623.

Reason, R. D. (2009). An examination of persistence research through the lens of a comprehensive conceptual framework. *Journal of College Student Development, 50*(6), 659–682.

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, *130*(2), 261.

Ryan, J. F. (2004). The relationship between institutional expenditures and degree attainment at baccalaureate colleges. *Research in Higher Education*, *45*(2), 97–114.

Ryland, E. B., Riordan, R. J., & Brack, G. (1994). Selected characteristics of high-risk students and their enrollment persistence. *Journal of College Student Development*, *35*, 54–58.

Sabharwal, M. (2005). Factors affecting persistence rates among Arizona State University freshmen and Implications for policymaking. *Perspectives in Public Affairs*, *2*, 21-33.

Sibulkin, A. E., & Butler, J. S. (2005). Differences in graduation rates between young black and white college students: Effect of entry into parenthood and historically black universities. *Research in Higher Education*, *46*(3), 327–348.

Somers, P., Woodhouse, S. R., & Cofer Sr., J. E. (2004). Pushing the boulder uphill: The persistence of first-generation college students. *NASPA Journal*, *41*(3), 418–435.

Sorrentino, D. M. (2006). The SEEK mentoring program: An application of the goal-setting theory. *Journal of College Student Retention: Research, Theory & Practice*, *8*(2), 241-250.

Spady, W. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, *1*, 64–85.

Spady, W. (1971). Dropouts from higher education: Toward an empirical model. *Interchange*, *2*, 38–62

Strayhorn, T. L. (2014). What role does grit play in the academic success of black male collegians at predominantly White institutions? *Journal of African American Studies*, *18*(1), 1-10.

Tanner, D. (2012). *Using statistics to make educational decisions*. Fresno, CA: Sage Publications.

Thattai, D. (2001). *History of public education in the United States*. Retrieved January 17, 2016, from http://chicagomarshallhighschool.org/ourpages/auto/2011/4/4/42634393/history%20of%20public%20education%20in%20the%20us%20_readings_.doc.

Therriault, S. B., & Krivoshey, A. (2014). *College persistence indicators research review*. Washington, DC: American Institutes for Research. Retrieved from http://www.earlywarningsystems.org/wp-content/uploads/2014/10/14-3028_College-Persistence_Indicators_Aug_2014.pdf.

Ting, S. M. (2003). A longitudinal study of non-cognitive variables in predicting academic success of first-generation college students. *College and University*, *78*(4), 27.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*(1), 89–125.

Tinto, V. (1993). Building community. *Liberal Education*, *79*(4), 16–21.

Tinto, V. (1997). Colleges as communities: Taking research on student persistence seriously. *The Review of Higher Education*, *21*(2), 167–177.

Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention: Research, Theory and Practice*, *8*(1), 1–19.

Tinto, V. (2010). From theory to action: Exploring the institutional conditions for student retention. In *Higher education: Handbook of theory and research* (pp. 51–89). Springer Netherlands.

Titus, M. A. (2004). An examination of the influence of institutional context on student persistence at 4-year colleges and universities: A multilevel approach. *Research in Higher Education*, *45*(7), 673–699.

Titus, M. A. (2006). Understanding the influence of the financial context of institutions on student persistence at four-year colleges and universities. *The Journal of Higher Education*, *77*(2), 353–375.

Tobias-Perez, S. (2015, June 23). Kansas granted extension of No Child Left Behind waiver. *The Wichita Eagle*, p. 1. Retrieved from http://www.kansas.com/news/local/education/article25334731.html.

U. S. Department of Education. (n.d.). *From there to here: The road to reform of American high schools* (Contract No. ED-99-CO-0163). Washington, DC: U.S. Department of Education. Retrieved from http://www2.ed.gov/about/offices/list/ovae/pi/hsinit/papers/history.pdf.

U.S. Department of Education. (1995). *Forming new partnerships for educating all students to high standards: An idea book. 1994 federal educational legislation*. Washington, DC: National Clearinghouse for Bilingual Education. (ERIC Doc. No. ED392280)

Valentine, J. C., DuBois, D. L., & Cooper, H. (2004). The relation between self-beliefs and academic achievement: A meta-analytic review. *Educational Psychologist*, *39*(2), 111–133.

Voorhees, R. A. (1985). Financial aid and persistence: Do the federal campus-based aid programs make a difference? *Journal of Student Financial Aid*, *15*(1), 2.

Warburton, E. C., Burgarin, R., Nuñez, A. M., & Carroll, C. D. (2001, May). *Bridging the gap: Academic preparation and postsecondary success of first-generation students* (NCES 2001–153). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. Retrieved from http://nces.ed.gov/pubs2001/2001153.pdf

Wilson, K. (1980). The performance of minority students beyond the freshman year: Testing the "late-bloomer" hypothesis in one state university setting. *Research in Higher Education*, *13* (1), 23–47.

Wise, B. (2008). High schools at the tipping point. *Educational Leadership*, *65*(8), 1–7, Retrieved from http://www.csun.edu/~krowlands/Content/SED610/lessons/Week%201/Wise-hs%20at%20tipping%20point.pdf.

Wraga, W. G. (2000). *The comprehensive high school in the United States: A historical perspective*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA, April 24–28. Retrieved from EBSCOhost database. Doc. No. ED443170.

Wyatt, J., Patterson, B. F., & Di Giacomo, F. T. (in press). *A comparison of the college outcomes of AP and dual enrollment students* (College Board Research Report). New York: The College Board.

Yakaboski, T. (2010). Going at it alone: Single-mother undergraduate's experiences. *Journal of Student Affairs Research and Practice, 47*, 456–474. doi: 10.2202/1949- 6605.6185

Yell, M. L. (2006). The goals of No Child Left Behind. In *The law and special education* (p. 181). Merrill Pearson Education Inc. Retrieved from http://www.education.com/reference/article/goals-no-child-left-behind/.

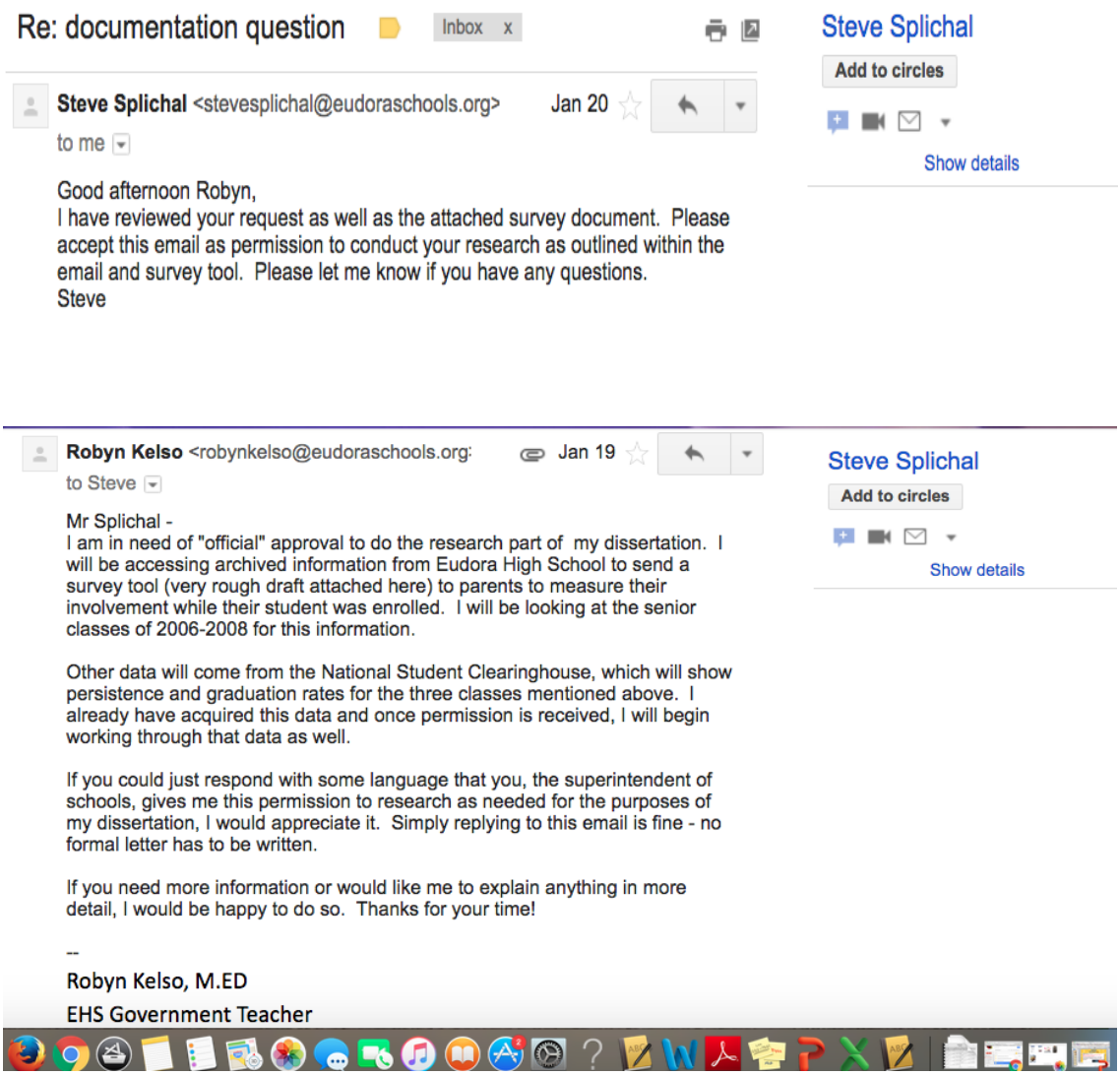
Appendices

Appendix A: Graduation Credit Requirements for Three Academic Preparation Program Pathway Choices at Eudora High School

Course	Eudora BOE-approved curriculum (BA) (credits)	Kansas BOR Kansas qualified admissions curriculum (QA) (credits)	Kansas BOR Kansas (Regents) scholars curriculum (RS) (credits)
English	4	4	4
Social Studies	3	3	3
Mathematics	3	4	4
Science	3	3	3
Practical Arts	2	N/A	N/A
PE/Health	1	N/A	N/A
Fine Arts	1	N/A	2
Electives	7	3	N/A

Note. Adapted from Eudora High School. (2015). *Course catalog*. Retrieved April 20, 2015, from http://www.edlinesites.net/pages/Eudora_High_School/Cardinal_Career_Center/EHS_Graduation_Requirements; Kansas Board of Regents. (2014, April). Qualified admissions: Kansas residents. Retrieved April 20, 2015, from http://kansasregents.org/resources/PDF/Academic_Affairs/Qualified_Admissions/2865-QA2015-2016_KansasBoardofRegents_QualifiedAdmissionsQuickFacts_April2014-1-13-2015_1.pdf; Kansas Board of Regents. (n.d.c). Kansas scholars curriculum. Retrieved April 20, 2015, from http://www.kansasregents.org/students/student_financial_aid/kansas_scholars_curriculum;

Appendix B: Written Permission to Begin Research



Re: documentation question Inbox x

Steve Splichal <stevesplichal@eudoraschools.org> Jan 20

to me

Good afternoon Robyn,
I have reviewed your request as well as the attached survey document. Please accept this email as permission to conduct your research as outlined within the email and survey tool. Please let me know if you have any questions.
Steve

Steve Splichal
Add to circles
Show details

Robyn Kelso <robynkelso@eudoraschools.org> Jan 19

to Steve

Mr Splichal -
I am in need of "official" approval to do the research part of my dissertation. I will be accessing archived information from Eudora High School to send a survey tool (very rough draft attached here) to parents to measure their involvement while their student was enrolled. I will be looking at the senior classes of 2006-2008 for this information.

Other data will come from the National Student Clearinghouse, which will show persistence and graduation rates for the three classes mentioned above. I already have acquired this data and once permission is received, I will begin working through that data as well.

If you could just respond with some language that you, the superintendent of schools, gives me this permission to research as needed for the purposes of my dissertation, I would appreciate it. Simply replying to this email is fine - no formal letter has to be written.

If you need more information or would like me to explain anything in more detail, I would be happy to do so. Thanks for your time!

--
Robyn Kelso, M.ED
EHS Government Teacher

Steve Splichal
Add to circles
Show details

Appendix C: Institutional Review Board Application

BAKER UNIVERSITY

SCHOOL OF EDUCATION
GRADUATE DEPARTMENT

Date:
IRB PROTOCOL NUMBER _____
(IRB USE ONLY)

IRB REQUEST

Proposal for Research
Submitted to the Baker University Institutional Review Board

I. Research Investigator(s) (Students must list faculty sponsor first)

Department(s) **School of Education Graduate Department**

	Name	Signature	
1.	Dr. Sharon Zoellner	Sharon L Zoellner	Major Advisor
2.	Dr. Phil Messner	Philip E. Messner	Research Analyst
3.	Dr. Verneda Edwards		University Committee Member
4.			External Committee Member

Principal Investigator: Robyn M. Kelso
Phone: 785-542-2931
Email: rkelsoehs@hotmail.com
Mailing address: 2174 N. 900 Rd, Eudora, KS 66025

Faculty sponsor: Dr. Sharon Zoellner
Phone:
Email:

Expected Category of Review: __Exempt _X_ Expedited _ _Full

II: Protocol: (Type the title of your study)

College degree completion as it relates to high school curriculum choice and parent engagement.

Summary

In a sentence or two, please describe the background and purpose of the research.
This research will serve two purposes: One is to investigate the role of the high school academic preparation program has on college success as defined by student's enrollment in college for one semester, two semesters, three semesters, or five semesters as well as graduating from college within five years. A second purpose is to investigate the role of K-12 parental engagement in college success as defined by the student's enrollment in college by one semester, two semesters, three semesters, five semesters and eventually graduation.

Briefly describe each condition or manipulation to be included within the study.
There are no conditions or manipulations to be included within the study.

What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.
Data will be collected via two instruments: National Student Clearinghouse archived student data and a survey distributed to parents. Data from the National Student Clearinghouse will be collected by the Eudora High School Principal and will be presented in a spreadsheet. The parent survey will be created and disseminated via Survey Monkey by the researcher. The Harvard Family Research Project group granted permission to use the survey to measure parental engagement.

Will the subjects encounter the risk of psychological, social, physical, or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.
Subjects will not encounter psychological, social, physical, or legal risk.

Will any stress to subjects be involved? If so, please describe.
There will be no stress to subjects involved.

Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.
Subjects will not be deceived or misled in any way.

Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.
There will not be a request for information that subjects might consider to be personal or sensitive.

Will the subjects be presented with materials, which might be considered to be offensive, threatening, or degrading? If so, please describe.
Subjects will not be presented with materials that might be considered to be offensive, threatening, or degrading.

Approximately how much time will be demanded of each subject?
Adult subjects will be expected to complete a ten-item survey taking 10–15 minutes to complete.

Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.
Adult participants will be solicited via email and asked to complete a parent survey. The survey tool that will be sent is provided at the end of this document.

What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?
Participation is voluntary in that parents can opt not to complete the survey. No inducements will be offered to subjects for their participation.

How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.
The researcher will use archived student data, so there is no student participation in the research. By completing the survey, parental consent is given.

Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.
No aspect of the data will be part of any permanent record.

Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher or employer? If so, explain.
The fact that a subject did or did not participate in this study will not be made part of any permanent record available to a supervisor, teacher, or employer.

What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with it after the study is completed?
An employee of the Eudora School District will remove any names or identifying student numbers. Data will be stored on a flash drive and kept in a locked cabinet at the researcher's home. Data will be stored for five years and then destroyed or deleted.

If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?
There are no risks involved in this study.

Will any data from files or archival data be used? If so, please describe.
Data from the National Student Clearinghouse archive facility and parent survey data will be used.

Appendix D: Institutional Review Board Approval of Proposal

Baker University Institutional Review Board

02/24/2016

Dear Robyn Kelso and Dr. Zoellner,

The Baker University IRB has reviewed your research project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at CTodden@BakerU.edu or 785.594.8440.

Sincerely,

Chris Todden EdD
Chair, Baker University IRB

Baker University IRB Committee
Verneda Edwards EdD
Sara Crump PhD
Erin Morris PhD
Scott Crenshaw