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Best Practices in Tutoring Services and the Impact of Required Tutoring on High-Risk Students

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DEDICATION

This dissertation is dedicated to my loving and patient husband, John Vance, for his support and encouragement. Thank you not just for being my partner in life and adventures, but my accountability partner in this process. This is also dedicated to my parents, James and Linda Kreiling, who raised me to set high goals and to be resilient in my journey to accomplish them.

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ABSTRACT

This study examined the best practices in tutoring high-risk, first-year students. The study was conducted in three phases. First, the study investigated the tutoring practices at two four-year universities with similar admissions standards as Eastern Kentucky University (EKU) but with higher retention rates: Austin Peay State University and the University of Alabama in Huntsville. The qualitative and quantitative results of that phase of the study revealed five best practices.

The second phase of the study focused on the extent to which EKU's tutoring practices align with the best practices found in phase one. The data revealed that, at least to a certain degree, EKU's practices align with all of the identified best practices. In addition to the best practices found in the first phase, EKU also utilizes required tutoring for high-risk students enrolled in a bridge program.

The third phase of the study focused on the required tutoring hours of high-risk students who are placed in a bridge program at EKU. Students were divided into three groups for study: full participation, those who reached the tutoring hours required by the bridge program; partial participation, those who participated in the program but did not reach the required number of tutoring hours; and null participation, those who did not participate in the program.

Quantitative data revealed that the full participation group had higher grade-point-averages than students who were in the null participation group. The data did not reveal that full participants have significantly higher grade-point-averages than partial participants. Also, the study revealed that the retention rates among the three groups are not significantly different.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

Overview

The Chronicle of Higher Education calls it "An Era of Neglect" (Fischer & Stripling, 2014). Kretovics (2010) states, "…the traditional state institutions have gone from state funded to state supported to state in name only" (p. 13). Since the Morrill Act of 1862 through a variety of education acts, including the National Defense Education Act of 1958, higher education has served as a way to provide upward mobility to citizens of the United States. State cuts to higher education, however, threaten that legacy by decreasing accessibility (Mettler, 2014). Since the Recession of 2008, states have increasingly cut budgets for higher education; in fact, 47 states spend less per student now than they did before the recession (Mitchell & Leachman, 2015). As a result, colleges and universities have had to respond with significant tuition increases. Tuition at four-year public institutions has risen 29% since the recession, and the cost of attending college has grown faster than the median income.

Since the recession recovery, some states have started to restore funding; however, three states, West Virginia, Oklahoma, and Kentucky, have continued cuts through the past two years and are expected to continue those cuts in 2016. In 2016, Kentucky Governor Matt Bevin proposed and passed a retroactive budget cut to higher education that cut 2% from state-supported institutions immediately and added an additional 9% of cuts over the following two years (Bailey, 2016). Cuts in the prior year placed Kentucky as having the highest cuts per student in higher education in the country

(Colston, 2015). Additionally, public colleges and universities in the state have increased tuition, making it one of five states with the highest increase in tuition at a 3.9% increase for the 2014-15 academic year. For the 2015-16 academic year, students at Eastern Kentucky University face a 5% tuition increase (Tuition rates set, 2016).

In 2014, the Eastern Kentucky region received national attention due to its pervasive poverty when President Obama labeled it a "Promise Zone" (Estep, 2014, p. 1). This status allowed the region to be considered a priority for Federal funding. Researchers often point to poorly funded schools as a root of the problem, claiming that only by improving school quality and sending young adults to college can the area overcome poverty (Oakes, 2003; Strange, 2011). This area falls within the service region of Eastern Kentucky University (EKU). Located in Richmond, Kentucky, EKU is a comprehensive, regional university with an enrollment of approximately 16,000 students.

EKU's most recent Strategic Plan refers to the institution as "a school of opportunity" (Make no little plans, 2015, p. 1). With a 67.2% retention rate of the 2014 freshmen cohort and a 45.4% six-year graduation rate of the 2009 freshmen cohort, EKU is focusing on increasing these rates while continuing to offer educational opportunities to underserved students, including those in its service region (Office of Institutional Research, 2014). Additionally, higher education in Kentucky is facing performance-based funding measures proposed by Governor Bevin (Blackford, 2016). In his proposal, Kentucky's colleges and universities may no longer automatically receive funding from the state and will instead receive funding based on retention and graduation rates within the few years. To increase these rates and continue to provide opportunities to under-

served students, EKU has special admissions programs, as well as a variety of support services on campus, including tutoring and programming that targets high-risk students.

One of the special admissions programs is *Success First*. The first-year students admitted through the Success First initiative are considered academically unprepared for college because they have a 2.0 to 2.49 cumulative high school grade-point-average (GPA) and a 15 to 19 ACT composite score (Eastern Bridge, 2015). Because of their low GPA and test scores, these students are considered to be of high risk for dropping out of college; therefore, Success First students are admitted under the condition that they participate in a program that serves students who are not considered college-ready. The majority of students admitted through the Success First program are enrolled in the Eastern Bridge program, an initiative established to support their educational and social needs through research-based best practices like tutoring, advising, and freshmen seminar courses.

Tutoring Services

Even during the times of the earliest colleges in the United States in the seventeenth century, students have sought assistance from tutors after class hours (Dvorak, 2004). When students leave classroom instruction and are expected to complete assignments and prepare for exams, they often find themselves needing clarification or deeper understanding of topics (Van T. Bui, 2002). High-risk, first-year students, particularly, also need assistance in developing soft skills like preparing for college-level exams, time management, and organization. By allowing students to receive extra instruction, explanation, and practice—often in small group or one-on-one settings—students are able to engage more with the content and address areas of weakness.

Research indicates that tutoring has a positive impact on grade-point-averages and strengthening soft skills, especially with high-risk students (Laskey & Hetzel, 2011; Tinto, 2012). Faculty report that students who use tutoring services come to class better prepared than students who do not use the services (Engstrom, 2008). Additionally, tutoring helps students engage socially on campus and gives students a sense of connection to the campus community (Wilson & Arendale, 2011).

Tutoring Services in Bridge Programs

One oft-mentioned approach to helping high-risk students is academic support services, including advising, remedial courses, developmental courses with structured learning support, first-year programming, freshmen seminar courses, career and majors counseling, and tutoring. Bridge programs (like the Eastern Bridge program) focus on transitioning incoming students into college by building some of these academic services into the structure of the program. While components of bridge programs may vary, many rely on tutoring—especially peer-to-peer tutoring—because it is a research-based means of providing students with academic assistance outside of the classroom.

Because tutoring proves to have a strong impact on students' academic achievement, one element of the Eastern Bridge program is a tutoring requirement. In Eastern Bridge, first-year students are expected to log into a tutoring center for one-on-one tutoring or quiet study time where tutors are available. They are expected to log four hours a week. Each tutoring center on campus is staffed with trained tutors (Eastern Kentucky University tutoring services, 2015).

While tutoring on EKU's campus is decentralized and various departments organize their centers and labs, tutor training is somewhat centralized as the university is

a College Reading and Learning Association (CRLA) International Tutor Training Program (ITTP) Level II certified campus (Eastern Kentucky University tutoring services, 2015). Boylan, Bliss, and Bonham (1997) report that students benefit most when their tutors are trained. Most of the active tutors at EKU complete level-one training during their first semester as a tutor. The CRLA reports that over 1,000 tutoring programs at colleges and universities have certification through the ITTP (College Reading and Learning Association, 2015). Considering the large number of institutions that participate in ITTP certification, tutor training may be considered a best practice for tutoring programs; however, research does not reveal a delineated list of best practices.

Statement of the Problem

The changing environment of higher education poses a new challenge with performance-based funding. Some institutions choose to meet that challenge by restricting admission to those students who are likely to be successful in college. Conversely, other institutions still choose to admit students who are at high risk of leaving college without a degree—putting the university at risk of losing funding during a time of decreasing state support. Because EKU calls itself a school of opportunity, it is one such institution that admits students who may not be fully ready for college-level coursework. Complete College America (2010) pointed out, however, that "…access without success is an empty promise and a missed opportunity with severe economic consequences for students, states, and our country" (p. 2). The problem for universities like EKU lies in determining the best strategies to serve underprepared students in order to retain and ultimately graduate them.

Often, high-risk students arrive on campus unaware of the services they need or what help is available. In an effort to retain students, colleges and universities provide first-year students with bridge programs and other support. One common support service is tutoring; yet, underprepared students often state that they do not need tutoring and/or that they study better in their dorm rooms. In fact, various researchers have found that high-risk students are less likely than college-ready students to use tutoring services (Engle, Tinto, & the Pell Institute, 2008; Hodges & White, 2001; Solórzano, Datnow, Park, & Watford, 2013).

If students, especially first-year, high-risk students, are more likely to be retained when they use tutoring services, how can colleges and universities bring them into tutoring centers? The answer may lie in mandating use. Multiple researchers point to the possibility that requiring tutoring may provide the structure that first-year, high-risk students need to use the service; yet, none of them offer data to support such a requirement (Engle, Tinto, & Pell Institute, 2008; Frishberg, Lee, Fletcher, & Webster, 2010; Hodges & White, 2001). The literature, however, not only reveals a gap in research regarding the impact of mandated tutoring services, but also very little research delineates best practices in serving high-risk students in tutoring programs.

Even if a program requires students to use tutoring services, colleges may not be using best tutoring practices with high-risk students due to a lack of research on the topic. The literature suggests some best practices in tutoring services but does not provide a thorough list, especially as they pertain to supporting and retaining high-risk students. Assessing the impact of tutoring services has little meaning without a clear understanding of the best practices used in tutoring programs; yet, best practices in tutoring are hard to

define. The Association for the Tutoring Profession (ATP) provides programs with their Code of Ethics, and the CRLA's ITTP provides standards for tutors to reach levels of tutoring certification; however, neither organization provides a list of best practices for the programs themselves (Association for the Tutoring Profession, 2014; College Reading and Learning Association, 2015).

To give a full picture of the impact of required tutoring on first-year, high-risk students, programs must provide a description of the quality of the services, as well as the quantitative results of the requirement. To increase the likelihood that colleges and universities will retain and graduate high-risk students, this study will identify the best practices in tutoring that denote quality services as evidenced by the success at institutions that enroll high-risk students. Additionally, this study will determine the impact of required tutoring on high-risk, first-year students.

Conceptual Models for College Retention

As institutions of higher education are increasingly expected to serve underprepared college students, they must find ways to provide a bridge for students to transition smoothly into college. Several retention theories are used as models to help first-year students in their transition to college. Their goal is to retain students into their second year of college and beyond by helping students become part of the campus community as well as impel them to use support services that will increase their likelihood of academic success.

One retention theory by Tinto (1988) focused on the importance of first-year students becoming part of the college community. High-risk students, according to

Tinto, have difficulty transitioning to college because they lack the coping skills necessary to adjust to an unfamiliar environment. This would be especially true for first-generation college students who do not have the contextual experiences that would prepare them for some of the challenges they will encounter their first year of college.

Rather than focusing on the risks associated with the characteristics of newly enrolled high-risk students, Bean and Eaton (2000) recommended analyzing how universities respond to these characteristics. Since high-risk students are less likely to seek student support services, programs must consider what factors may contribute to that behavior and determine how to structure support so that they can resolve these issues. Once programs are able to motivate students to use the services and students experience success, students develop a positive relationship with the university and begin to see success as within their control.

Furthermore, Rodgers and Summers (2008) asserted that universities must not only consider the characteristics students bring with them to college, programs must also understand the cultural differences among students. While a cohort of students may be first-generation and low income, African American males should be served differently from female Latina students, for example, due to their diverse backgrounds. Their cultural values may impact how they respond to being offered assistance. For example, if a student comes from a cultural background where family is placed first in priority, that student may find more motivation from family than from intrinsic motivation. Tailoring programs to special populations of students, however, will not necessarily prompt students to use those services. With these approaches to student retention in mind, one

consideration for programs that serve high-risk students is requiring the use of services like tutoring that attempt to provide students with individualized services.

Purpose and Significance of the Study

The purpose of this study was to a) determine best practices in exemplary tutoring programs at institutions with success in serving high-risk students, b) use the best practices identified in the first phase of the study as guidelines to evaluate the services offered at EKU in order to determine to what extent EKU's services are in keeping with best practices at other institutions, and c) analyze the differences between high-risk college students at EKU who are in a program that mandates tutoring versus students who are not in such a program in order to discover whether required tutoring makes a difference in the academic success of high-risk students. The findings were then used to determine whether programs that serve high-risk students should mandate tutoring services. The findings were also used to address the calls for further research in other studies (Engle, Tinto, & Pell Institute, 2008; Frishberg, Lee, Fletcher, & Webster, 2010; Hodges & White, 2001).

Universities with Best Practices

Because the literature does not reveal a standard of assessment for tutoring programs, this study sought to determine the best practices in tutoring program at universities that successfully serve high-risk students. The participants in this study were tutoring programs at two universities similar to EKU: Austin Peay State University and the University of Alabama in Huntsville (UAH).

The tutoring coordinators at each of these universities agreed to participate in the study. These universities were selected because they are four-year, public, state universities; have mission statements that refer to valuing diversity; have similar admissions requirements or have appeals processes that indicate they will conditionally admit underprepared students; have higher retention rates than EKU; and offer tutoring services. Of the other public, four-year universities in Kentucky, none had both (a) similar admission standards and (b) significantly higher retention rates as compared to EKU.

Research Questions

The study answered the following research questions:

1) What are the best practices of exemplary tutoring programs at universities that are showing success in retaining first-year, high-risk students?
2) To what extent do EKU's tutoring services meet the standards of best practices at those institutions?
3) What are the differences in academic achievement among first-year, high-risk EKU college students who a) met the number of tutoring hours required by an academic program, b) did not meet the number of tutoring hours required by an academic program, and c) were not required to participate in the academic program?

Definition of Terms

For the purpose of this study, these terms are used according to the definitions that follow them:

Association for the Tutoring Profession (ATP): A professional organization centering on tutor and tutor training development as well as providing networking and professional development opportunities to tutors and tutor trainers.

College Reading and Learning Association (CRLA): A professional organization focusing on student learning at the college and adult levels and is designed to enhance professional development of those in the field. The organization also provides International Tutor Training Program Certification.

College Reading and Learning Association International Tutor Training Program Certification: Levels of certification for college and university tutoring programs. CRLA offers three levels of certification: level one, two, and three. Each level represents the content and number of hours that tutors participate in training for their work with students. Level one requires that tutors participate in ten hours of training; level two requires 20 hours of training; and level three requires that tutors not only complete the training in the first two levels but also develop and lead training for other tutors. Each level is also based on the number of face-to-face tutoring hours that the tutor works.

College readiness: Benchmark standards indicating that a student is academically prepared to be successful in college. In Kentucky, these standards are set by the Council on Postsecondary Education (CPE) based on standardized test scores. The CPE helps Kentucky's colleges and universities ensure quality standards.

Developmental classes: Courses that are provided to students who do not reach college-readiness benchmark standards on standardized or college placement exams and may lack the foundational knowledge and skills to be successful in a college-level course. Often, these courses are not credit-bearing courses and are pre-requisites to take credit-bearing courses.

Eastern Bridge: A student-service program for students admitted to EKU through the *Success First* program, which is aimed at retaining and graduating high-risk students. In 2013, this program was required for students who were admitted to EKU who needed two or more developmental courses. In 2014, this program was required for students who were admitted to EKU that had a 15-19 ACT Composite score and a 2.0-2.49 high school grade-point-average.

First-generation college student: A student whose parents do not have a four-year degree from a college or university.

First-year students: Students who are in their initial terms of college. These students are often traditional college students, age 18 or 19 years old, and are college freshmen.

High-risk students: College students who are less likely to be retained or graduate college due to a variety of adverse factors that may include lack of preparation for college-level academic work, college culture, financial issues, or other reasons.

Minority students: For the purpose of this study, students in a Predominately White Institution (PWI) who are not White, including African American and Hispanic students.

Peer tutoring: Academic assistance that occurs outside of the classroom between college students. Often both of these college students are undergraduates, although the academic tutoring may occur between graduate and undergraduate students, students at the same academic level, and/or students at different levels.

Pell eligible: Students who are qualified for Federal grants. These students are from low-income households.

Success First: An admission status at EKU that requires students to participate in a student support program.

Tutees: Students who receive tutoring services.

Tutoring: Academic assistance that occurs outside of the classroom, often from other college students. (Also see *peer tutoring*.)

Underprepared college students: College students who lack academic and social skills needed to be successful in college. These students often have low standardized test scores and may need developmental coursework their first year of college.

Under-represented students: Students who are in high-risk populations, such as minority students or low-income students. These students are often from demographic populations that are not retained in college.

CHAPTER TWO

REVIEW OF LITERATURE

This chapter will provide a review of literature that will identify and describe high-risk college students, describe their challenges, and will explore programs that work for the retention of those students. This review of literature will be divided into four main sections. The first section will focus on the retention and graduation of college students. It will explain why higher education has experienced an increased emphasis on retention and graduation as well as the global and national importance of graduating college students.

The second section will identify high-risk students. A variety of demographics and academic backgrounds can place a student in the category of high-risk for dropping out of college. This section will also explain the importance of retaining and graduating high-risk students.

The third section, a review of successful approaches to retaining high-risk students, will describe theories and general strategies for first-year students, as well as bridge programs, developmental courses that work to strengthen the academic skills of underprepared students, and student services that target both the general student population and high-risk students.

Finally, the fourth section will detail the successes of tutoring in the college environment. It will explain the key factors and practices behind successful tutoring programs, address why high-risk students tend to avoid going to tutoring, and share the research of programs that use tutoring in targeting the retention of high-risk students.

Retaining and Graduating College Students

Institutions of higher education have increasingly focused on raising their retention rates due to the Federal Student Right-to-Know and Campus Security Act of 1991 that requires colleges and universities to publish retention and graduation data (Astin, 1997). Presently, performance-based funding centered largely on this data is being considered by states across the country, attaching financial pressure to these numbers. According to Complete College America (2011), only 60.6% of full-time students earn a bachelor's degree within eight years. In Kentucky, the eight-year graduation rate is 52.9%, the six-year rate is 48.3%, and the four-year rate is 20.0%. Those rates are even lower for low-income and under-represented students. Since colleges and universities are under increasing scrutiny regarding these rates, institutions are growing more concerned about how to increase their retention and graduation numbers.

Economic Considerations

According to the Task Force on Higher Education and Society (2000) and Abel and Deitz (2011), the value of human capital (the workforce necessary for production) now exceeds those of other resources. In the United States, human capital is worth at least three times the value of physical capital. Human capital is developed through education—particularly, higher education. Economic growth increasingly relies on an educated workforce; yet, the human capital that can most benefit the economy continues to suffer an increase in poverty.

Hout (2011) asserted that American history shows the nation has improved due to larger numbers of citizens obtaining college degrees. The author further stressed that

those who benefit the most from a college education are those who are not as likely to pursue a degree. Hout's research revealed that education paid both societal and personal returns on investment. This finding was reinforced in a study by Brand and Yu (2010) who concluded that men and women in the low-income brackets can expect higher wages with a college degree, and society can expect them to add more to the labor market. Hout (2011) noted that a better educated populace positively impacts communities by improving family stability, health, and social morale.

Education and Economics in Kentucky

In Kentucky, it is estimated that 57% of jobs by 2020 will require a certificate or college degree. In 2015, only 21.5% of Kentucky's adults have an associate's degree or higher, leaving a 25% skills gap (U.S. Census Bureau, 2015). A shortage in skilled workers could cause industries to leave Kentucky, reduce the economic appeal of the state, and reduce an already poor economic climate.

Since President Johnson's declaration of war on poverty in 1964 and Harry Caudill's dire warning regarding the decline of coal and the imminent decay of Eastern Kentucky in 1963, economic issues facing Kentucky have been widely publicized (Caudill, 1963; Cheves, 2013). Despite this attention, the region continues to suffer, marked by its inclusion in the Promise Zone by President Obama (Estep, 2014). According to the U.S. Census Bureau (2015), from 2009-2013, 18.8% of Kentuckians lived below the poverty line, compared to 15.4% nationally. Considering the skills gap and the low retention levels of low-income students, the future does not look promising for improvements in these numbers. In fact, Adam (2006) points out that even for those low-income students who choose to go to college, Pell Grants, money for college that is

given to students under certain income levels, now pay only about half of the costs of college and the average student debt has doubled over the past ten years.

The Reality of Retention Rates

Some researchers and higher education institutions point out that access to college is improving and retention rates are slowly increasing, but these numbers do not show the whole picture (Complete College America, 2011). As retention rates are used to market colleges and their programs, and as more and more states are considering performance-based funding, colleges are seeking ways to increase their retention numbers, and some seem to be succeeding. Astin (1997), however, questioned the legitimacy of some of those high retention rates: "Perhaps the most dangerous aspect of such an approach to accountability is that it provides negative incentives for institutions to enroll underprepared students" (p. 656).

The degree completion rate for colleges and universities rests largely on the characteristics of the students when they enter college (Astin, 2005). In fact, more than 67% of the variation among the completion rates of colleges is due to the differences in student population. Astin (1997; 2005) suggested that colleges use a formula to compute the expected completion rate of incoming cohorts and then compare their actual completion rate. The author also pointed out, however, that it is unlikely that state or federal governments would implement such an approach in their consideration of performance-based funding.

Options for Institutions of Higher Education

Thus, higher education is left with some choices: admit only those students which data show will succeed, thereby increasing retention rates; admit high-risk students and

suffer low retention rates and probably decreases in funding; or admit high-risk students and provide them with programs that are proven to be successful. If institutions choose the third option, Tinto (2004) asserted that high-risk students need financial, academic, and emotional support. When students are provided with these supports, they are better equipped to maintain momentum towards their degree, increasing their odds of success (Tinto, 2013).

High-Risk Students Defined

The desire to earn a college degree is increasing among high-risk students, but they tend to lack the skill sets needed for college. On the surface, one might define a high-risk student as one who has low grades; however, according to Roderick, Nagaoka, and Coca (2009), these students may have an above-average high school grade-point-average. In fact, the researchers found that grade-point-average was not a reliable predictor of success. Instead, they stated that the best indicator of success for these students was attending a school with a college-going climate, helping high-risk students build the skills they need to be successful in college. This section of the chapter will examine the demographics and other characteristics of students who are considered "high-risk" and will explain why these students may lack college readiness skills.

First-Generation College Students

While freshmen are generally considered most at-risk of dropping out of college, first-generation students are also likely to drop out during their second year of college (McMurray & Sorrells, 2009). One definition of *first-generation college students* is that they are students whose parents have not attended college (Van T. Bui, 2002). These

students are more likely to be low-income, be from a minority group, speak a language other than English in their home, and score lower on standardized tests than those students who have a parent who attended college (Van T. Bui, 2002; Engberg & Wolniak, 2010). They are generally demographically different from their classmates.

A study by Inman and Mayes (1999) showed that first-generation students tend to have lower self-efficacy and self-esteem than their classmates. When they go to college, they are often moving from an area where they were perceived as highly competent to one where they feel they have low competence. Hand and Payne (2008) found that first-generation students from Appalachia did not feel well-prepared for college. These college-readiness skills are not just academic—they also include time-management, study techniques, familiarity with the college system, the ability to set goals, and self-advocacy, all of which are crucial to college success (Byrd & MacDonald, 2005).

According to national data on yearly earnings and educational levels, the educational level of a person is a predictor of income and vice versa. In the United States in 2014, the median weekly earnings of someone with only a high school diploma was $668 versus someone with a bachelor's degree who earned $1,101 (Bureau of Labor Statistics, 2015). Thus, first-generation students tend to come from homes where their parents earn less money than students who come from homes where their parents have college degrees. Additionally, students from these homes lack an informed advocate in preparing for and going to college, making support difficult. Mudge and Higgins (2011) asserted that these families are often marginalized and lack the competence and risk-taking tendencies to assist their children in this realm.

Under-Represented Students

Multiple studies indicate that under-represented minorities, including African-American and Hispanic students, are at a significant disadvantage when they enter college (Roderick et al, 2009; Strayhorn, 2014). These studies show that under-represented students lack sufficient academic preparation for college as well as having low efficacy. A study by Strayhorn (2009) revealed that the college aspirations of an African-American male were related to his socio-economic status (SES) as well as the neighborhood where he lives. Additionally, the researcher found that the student's academic preparation was also indicative of his aspirations. African-American students from lower SES homes, from urban areas, and who had low academic achievement in high school had lower aspirations for college.

Another study by Strayhorn (2014) showed other discrepancies. This study found that within minority populations, male students were academically less prepared than female students, and first-generation minority students were less prepared than students who come from families with college graduates. Reading scores on standardized tests tended to be lower for African-Americans, Hispanics, and Native Americans, as well. In the same study, Strayhorn found that time spent studying in high school relates directly to student achievement in college across all ethnicities. The author stressed the need for high schools to promote a college-going culture in order to develop these behaviors in students. While Roderick et al. (2009) reported that college aspirations have increased among high school students, a gap exists between the number of minority and white students who take advanced classes, particularly math, science, and Advanced Placement classes that prepare them for college material.

High schools do not bear the sole responsibility for preparing students for college. Guiffrida (2005) studied high-achieving and low-achieving African-American college students, focusing on their ties to home. The author reported that high-achievers described strong emotional and financial support from home while low-achieving students and those who left college related that they received little support from home and also told of additional emotional stress as a result of pressures from home or guilt about being away. Likewise, Latino students were more likely than White students to have difficulty with the stress of being away from home and adjusting to a college environment that may not be sensitive to their cultural differences (Cerezo & McWhirter, 2012). Underrepresented students are more likely, also, to be first-generation college students, adding the complexities of being unfamiliar with the college process to their cultural struggles (Van T. Bui, 2002).

Low-Income Students

Many first-generation and minority students come from low-income families (Engle, O'Brien, & Pell Institute for the Study of Opportunity in Higher Education, 2007). A study by McGrath and Braunstein (1997) found that freshmen who were retained at the institution in their study had higher high school grade-point-averages, higher standardized test scores, and higher grade-point-averages during their first semester of college. These students were also financially secure. Braunstein, McGrath, and Pescatrice (2001) later found at the same college that upper-income students with higher grade-point-averages tended to be the students who persist in college.

Part of this relationship with retention has to do with college preparation. Low-income students enter college less prepared for the college curriculum, have lower

standardized test scores, are more likely to need developmental classes, and are more likely to stop out and return to college (Engle et al., 2007). Engle et al. pointed out that this may be due to a less "rigorous" (p. 11) high school curriculum at low-income schools. According to the ACT (2012), students at high schools with a higher number of low-income students did not make significant academic progress from eighth grade to the twelfth grade. Of those students who did not meet benchmark in the eighth grade, only 6% met benchmark in reading by the twelfth grade and only 3% met benchmark in math.

Still, the question of financial stress must be considered. The Southern Education Foundation (2013) pointed out that a majority of students attending public schools in the South are low-income students, based on receiving free or reduced lunch. The report showed that 57% of public-school students in Kentucky are low-income students. The Foundation charged that the recession in 2008 accounted for a large part of that growth but also stated that the numbers had been gradually increasing prior to 2008, indicating that while the national number of students from low-income homes stands at 48%, the number will likely exceed half. The 2012 reduction in the income level that qualified students for Pell Grants not only increased the number of students with a greater financial burden, it also increased the volume of paperwork necessary to prove qualifications (Reichert, 2012). Additionally, the reduction decreased the number of semesters that students can receive grants, which increases pressure on students who need developmental courses that do not count towards a degree.

While universities could settle on serving college-ready students, the long-term impact on neglecting students who are first-generation, minorities, or low-income reaches far beyond the walls of higher education. The children of these students are more likely

to grow up in a low-income home and may also lack opportunities to attend college, further increasing generational poverty. On the other hand, parents who have graduated from college are more likely to participate in the education of their children, and their children are more likely to graduate from college themselves (Choy, 2001). While not everyone is expected to go to college, providing opportunities to those who want to but cannot simply due to where they live could help to address this issue.

Academic Preparedness

First Generation, low-income, and under-represented students tend to have one thing in common: they are underprepared for the academic work of college. The ACT (2012) states that this achievement gap begins well before high school as many of these students enter kindergarten lacking the skills they need to be successful, and then the gap widens over time. Roderick, Nagaoka, and Coca (2009) point out four main areas that underprepared college students lack.

The first two areas pertain to the content knowledge and basic skills that high-risk students lack. These basic skills, such as written and oral communication, critical thinking, and research skills span across all subjects, and are foundational in the classroom. With an additional deficiency in content knowledge, these students may find themselves frustrated in that they do not have an area of strength on which to rely. Underprepared students also often have not developed the non-cognitive skills necessary for success, such as self-reflective behaviors, help-seeking behaviors, time management and organizational skills, among others. These soft skills provide students with the problem-solving and coping tools to overcome other deficits. Lastly, the students tend

not to have the social capital they need to navigate the complexities of college as well as to understand the expectations of college culture.

While different programs in colleges try to target populations like First Generation, low-income, and under-represented students, the commonality of being underprepared ties directly to the achievement gap between these students and their higher income peers. Upper income students with higher grade-point-averages tend to be the ones to persist in school (Braunstein, McGrath, & Pescatrice, 2001). These gaps pose complex issues for colleges and universities that wish to address them

Ethical Dilemmas

Unfortunately, research shows that many children are considered high-risk of dropping out of college before they even begin kindergarten. In a longitudinal study of children in low-income homes from birth to third grade, Rouse, Fantuzzo, and LeBoeuf (2011) found that risks like low maternal education, low birth weight, and lead exposure increased the likelihood of truancy and low academic success. A nation-wide survey of 3,600 kindergarten teachers reported that up to 48% of incoming kindergartners have difficulty transitioning to school (Smythe-Leistico, Young, Mulvey, McCall, Petruska, Barone-Martin, Capozzoli, Best, & Coffee, 2012). The authors pointed out that these readiness standards may seem simple to educators. The expectation is that children would have been exposed to normal classroom behavior such as sitting attentively, listening to directions, or working with a partner. The children also lacked early academic skills such as identifying colors, numbers, and/or the letters in their names. Furthermore, most of the parents of these children were very unfamiliar with the school

environment because they had not visited the school, did not know the school staff, and did not know what would be expected of them.

In circumstances where families are not able to prepare their children adequately for school, schools are expected to pick up the slack. High schools are expected to graduate college- and career-ready students regardless of their starting point. Often, however, the schools in low-income neighborhoods do not receive the resources to serve those students properly. A study of schools in 2008-09 found that more than 40% of Title I schools receive less funding than other schools in the same district (U.S. Department of Education, 2011). Resources such as good facilities, qualified teachers, and intensive academic environments promote a college-going school culture that encourages students to consider college as a viable option (Oakes, 2003). Such resources could make a difference. A study by the University of California found that low-income students placed in schools with proper funding and support systems were more likely to enroll in a four-year college than the students in the comparison group that were left in underfunded schools (Strick, 2012).

The lack of funding for schools does not just impact students in K-12 but may have a long-term impact on them as adults. First-generation students have a 27.4% four-year graduation rate and a 54.1% six-year graduation rate from public universities while students from college-experienced parents graduate at 42.1% in four years and 68.2% in six years (DeAngelo, Franke, Hurtado, Pryor, & Tran, 2011). These low graduation rates pose a moral dilemma. College students who have acquired loans and dropped out of school tend to leave with a median loan balance of $7,000 (Hanford, 2011). If first-generation students are not likely to graduate from college, is it ethical to lower standards

to admit them in the first place? Are universities setting them up to deal with college debt that they cannot recover because they did not earn a college degree? Additionally, universities are risking their own retention and graduation rates by accepting students who will likely drop out. In a country where an increasing emphasis is being put on retention and graduation rates, universities could begin to see financial repercussions by admitting high-risk students.

High-Risk Students in College

Considering the possibility of performance-based funding measures by states, when colleges and universities admit first-generation, low-income, and minority students, they may be risking state financial support. According to the National Center for Education Statistics, 59% of the 2007 cohort graduated from college in six years (Ginder, Kelly-Reid, & Mann, 2014). Of the 2003 cohort, 36.4% of White students graduated in six years, but 16.7% of African American and 16.9% of Hispanic students graduated in six years (Radford, Berkner, Wheeless, & Shepherd, 2010). By income level, while 58.6% of students in upper income levels ($92,000 or more a year) graduated in six years, only 25.5% of low-income students (less than $32,000 a year) graduated within that time. A variety of approaches have been taken to attempt to address problems that high-risk students often encounter.

Bridge Programs

Adams (2012) pointed out that the number of students entering college who are academically underprepared is growing. As a result, more colleges are offering bridge programs, particularly during the summer, to help first-year students who need

remediation, as well as help those students in their transition to college. Summer bridge programs attempt to give students a head-start on college by offering developmental courses, guidance on the skills required to be successful in college, and academic support services such as tutoring and mentoring. Many summer bridge programs, however, struggle with recruiting students for the programs. Even when universities pay for the costs, students do not commit to the programs. According to Adams, either intrinsic motivation or a need to work during the summer prevents students from attending summer programs. Barnett, Bork, Mayer, Pretlow, Wathington, and Weiss (2012) stated that cost and recruitment were problematic in the eight summer programs they studied.

Recruitment is not as necessary in a program like that studied by Strayhorn (2011). In this study, a highly-selective college required high-risk students to attend its summer bridge program. This program targeted historically under-represented students, attempting to address the students' academic self-efficacy, sense of belonging at the college, academic skills, and sociability. Other programs, however, are optional. For example, students volunteered for a program studied by Allen and Bir (2012). This program was established in 2002 in order to address the needs of academically under-prepared students who were primarily from low-income and underserved backgrounds. It now serves about 150 students each summer, so the students are grouped into learning communities of about 20 students per group.

The results of participation in bridge programs vary. Adams (2012) cited the National Center for Postsecondary Research that found students who attended summer bridge programs were more likely to pass college-level math and writing courses in the fall following the programs. Allen and Bir (2012) studied four cohorts of students in a

summer bridge learning community. The results showed the bridge students out-performed and out-persisted the control group. Additionally, they found that the bridge students also reported a boost in confidence after the program. The research by Strayhorn (2011) indicated that the summer bridge program had a positive influence on students' self-efficacy and academic skills. The researcher also found that academic success prior to college was the best predictor of success during the fall term. Finally, academic self-efficacy also positively predicted the summer bridge students' first semester GPAs.

On the other hand, the study by Barnett, et al. (2012) analyzed participants in summer bridge programs at eight different colleges in Texas during the summer of 2009, including two four-year colleges and six community colleges. All of the students had at least one area of developmental course need and lacked knowledge of cultural capital deemed necessary for smooth transitions to college. The programs did show a positive impact on college-level course completion in math and writing for a year and a half following the program as well as progression through developmental courses. The research, however, did not show evidence of impact on first college-level course completion in reading. While students in the program passed their first college-level math and writing courses at higher rates than control group students, after two years the differences between the group were no longer statistically significant. Additionally, no evidence was found that the programs impacted persistence.

Developmental Courses

Lack of academic readiness is a major problem, and many institutions attempt to address this with developmental courses. Academic college readiness is measured by

benchmark scores on standardized tests, and students who do not reach these benchmarks may lack the academic skills necessary to succeed in courses. In 2014, the ACT reported that 64% of high school students met benchmark in English, 44% in reading, 43% in mathematics, and 37% in science. Only 26% of students met benchmark in all four areas. While 49% of White students reached three or more benchmarks, only 23% of Hispanic students and 11% of African American students reached three or more. Students who do not meet benchmark are likely to be placed in developmental or remedial courses in college. According to Bettinger and Long (2006), "Remedial classes are designed to address academic deficiencies and prepare students for subsequent college success" (p. 24). These courses are typically not credit-bearing. Low-income students are also more likely to be placed in remediation. Bettinger and Long (2006) attributed this "to differences in high school quality by income" (p. 19).

The literature shows various approaches to developmental courses. Fike and Fike (2012) recommended that students should be required to enroll in developmental math from the beginning of their enrollment in college classes. Some universities do not rely solely on college admissions exams to determine course placement. In those cases, the university may use placement exams to raise standards for course placement (Jacobson, 2006). An assessment of changes in developmental education over ten years showed an increase in required placement in developmental classes based on test scores (Gerlaugh, Thompson, Boylan, & Davis, 2007). Since these courses count towards a degree, being placed in them makes it nearly impossible for a student to obtain a degree in four years, not only increasing the student's time to degree, but also increasing the amount of debt accrued.

First-Year Programs

Getting high-risk students off to the right start can make a difference in retention. According to Tinto (2012), the habits and skills of first-year student can still be shaped. When colleges and universities structure academic and social support, the institution will have the greatest impact on student success. Early intervention is key (Engle et al., 2008). First-year programs attempt to personalize services for students who may have similar backgrounds, but have individual needs. One such approach is a first-year orientation course that provides programmatic interaction with low-income and first-generation students and is intentional with its support.

Another retention approach provides first-year college students with an advising structure referred to as *intrusive advising*. While providing first-year courses and developmental courses that are integrated and collaborative, students must be placed in the courses that will serve them according to their needs, and this is where intrusive advising plays a part (Fowler & Boylan, 2010). Kuh and the Center for Higher Education Policy Analysis (2006) indicated that while early intervention is important, the intervention needs to be sustained to have the most impact. Through intrusive advising, academic advisors can intervene at key transition points through the student's first year of college and at other points during college where research shows students commonly stop out. The primary goal of first-year programs is to retain students into their second year of college, increasing the possibility of earning a degree.

Retention Theories

Researchers have proposed a variety of theories regarding student retention, particularly regarding first-year students. This section will discuss retention theories particularly pertaining to first-year and/or high-risk students.

Tinto's Theory of Retention

The first theory by Tinto (1975, 1988) is perhaps the most widely discussed and influential. In 1975, Tinto proposed a sociological approach to retention based on Van Gennep's research on rites of passage. Due to the higher likelihood that a first-year student will drop out than upperclassmen, Tinto focused on the first-year student. The author highlighted the three phases of becoming part of a group during a rite of passage. First, the student must go through the process of separation from his or her home environment, including the student's high school associations. Tinto emphasized that this separation stage is important so that students can become a part of their new environment, and that living on campus is key. This puts commuter students at a disadvantage.

The second stage of Tinto's (1988) approach to first-year retention is the transition phase. While students experience a sense of loss and bewilderment during their transition to college, coping skills are crucial to their adjustment. If students lack the cultural capital necessary to navigate college, and if they do not have a support system knowledgeable about college life, the transition to college can be even more frustrating. Furthermore, high-risk students often lack the ability to cope with obstacles that will facilitate their resiliency during this stage. Without a smooth transition, the third stage of incorporation into the college environment will be stalled. While transition programs are

designed to help students incorporate into college, these programs usually do not serve all student populations, leaving many groups of students without help in transitioning past the orientation programs or classes.

Terenzini and Pascarella's Theories on First-Year Experience

The second retention theory was developed when Terenzini and Pascarella (1978) studied three sets of variables to determine the adequacy of Tinto's model: sociodemographic traits, academic preparation and performance, and student dispositions. According to Terenzini and Pascarella, Tinto recommended considering the incoming students' characteristics. Those characteristics influence performance and commitment to the college, which determine how students interact and integrate into the college, impacting their persistence. The researchers found that social and academic integration had a statistically significant impact on whether a student persisted. The contact students had with faculty outside of the classroom and the affective appeal of their academic program had a significant impact on their retention. Terenzini and Pascarella (1978) concluded that "what happens to a student after matriculation may be more important in subsequent voluntary attrition among freshmen than are attributes the student brings to college" (p. 362). The authors recommended that pre-college traits could determine how to help students and that the sex, academic major, and ethnicity and/or race should be considered to ensure positive administrator and faculty interactions, as well.

Subsequent research reinforced Pascarella and Terenzini's (1980) previous findings, adding that neither grade-point-average nor extracurricular activities of freshmen had significant impact on the persistence or dropout rate of the students in the

study. While these findings support Tinto's predictive model, they also found that the informal contact between faculty and students had a significant impact on student decisions to persist or drop out. Pascarella and Terenzini (1983) later found that the interactions students had with the university, even prior to enrollment, was more significant in retention than the characteristics the students had when they arrived. Any of these high-risk elements can also be mediated by the first-year experience because that experience can increase a student's sense of institutional fit, which also impacts persistence.

Bean and Eaton's Psychological Model

In the third retention theory Bean and Eaton (2000) approached student retention with a psychological model. The researchers treated leaving college as a result of cognitive processes leading to certain student behaviors. Bean and Eaton focused on four theories in their discussion of retention: attitude-behavior theory, coping behavioral theory, self-efficacy theory, and attribution theory. Attitude-behavior theory focuses on the attitudes and beliefs that students have upon arrival to college. These establish a student's intention to perform certain behaviors, like graduating from college or leaving college, which lead to the actual behavior. For example, a student who enters college with the attitude that he or she may drop out will be more likely to do so.

Bean and Eaton's (2000) coping behavioral theory analyzes a student's ability to adapt to an environment. Integration to both the social and academic environment of college is an important element. To be fully integrated into an environment, students must adapt to the new setting, and because of the need to adapt, students use approach or avoidance behaviors. Students with approach behaviors are more likely to be successful

in college. These behaviors include responding to stress by tackling challenges. When a student exhibits avoidance behaviors, they avoid what causes them stress—for example, skipping class or not studying for a test. These are signs that a student is not adapting to college and signal that a student is more likely to leave.

Bean and Eaton's (2000) self-efficacy theory and attribution theory show that students' past experiences influence their likelihood of persisting because students become convinced of their control over situations. In self-efficacy theory students who have successfully overcome challenges in the past have a higher sense of self-efficacy and are more willing to deal with future challenges with a sense of confidence. This also works when high-risk students see students who are like them successfully accomplish goals.

Attribution theory focuses on a student's perception of their locus of control (Bean & Eaton, 2000). Students with an internal locus of control believe that their own actions lead to outcomes. A student with an internal locus of control is more likely to graduate from college because he or she knows that one's own hard work can lead to higher grades. A student with an external locus of control believes that problems are not within his or her control. These students are more likely to blame fate or that they are not smart enough to succeed in college.

Bean and Eaton (2000) also focused on the entry characteristics of students and how they will respond to the new environment. Students are influenced by their self-efficacy and coping skills and continually evaluate their responses and how it impacts them within their college experience. When their experiences are positive, their self-efficacy improves and their assessment of their locus of control becomes more internal.

This leads to a better relationship with their environment, enabling them to invest more in their experience. The behavior becomes cyclical. The authors recommended that researchers investigate which psychological processes best apply to a group of students. Programs can subsequently analyze how these can be approached to help lead students to develop an internal locus of control.

Rodgers and Summers's and Guiffida's Theories on Under-Represented Student Retention

In the fourth retention theory, Rodgers and Summers (2008) and Guiffrida (2005) criticized the retention models of Bean and Eaton (2000) and Tinto (1988) because they did not address ethnic and cultural differences, especially at predominantly white institutions. The authors suggested revisions to Bean and Eaton's model for the retention of African American and other under-represented students (Rodgers & Summers, 2008). The authors reported that African American students have more external motivations than White students, such as a desire to help their families or prove themselves to others. The authors also investigated goal theory, value of education, self-handicapping, and biculturalism as they apply to student achievement.

Likewise, Guiffrida (2005) questioned the need for separation that was proposed in Tinto's (1988) research. Guiffrida asserted that African American students rely on support from home during their transition to college and that these relationships and their connection to transitioning are complex and significant. Rodgers and Summers (2008) recommended that universities evaluate their retention models to determine whether they are applicable to minority students. When the strategies are not positively impacting minority students, they should be revised to address the issues mentioned above.

The Role of Student Services

Because of the financial need to admit high-risk students, the national trend across the country is for colleges and universities to establish offices devoted solely to student services. Separate from academic programs, these offices focus on the retention and graduation of students by offering an array of services on campuses such as advising, counseling, student health, housing, tutoring, supplemental instruction, student life, recreation, financial aid, and a variety of other services. Intervention from student services can have a strong impact on first-year students. Students in their first year are malleable and can be shaped by academic support services (Tinto, 2012). Even low-income students who enter college academically prepared lack the cultural capital necessary to navigate college, and these services are designed to meet those needs (Tinto, 2004).

Students need financial, academic, and emotional support to graduate from college, and the services mentioned above are crucial to that end. According to Tinto (2004), "Whatever the form, successful retention efforts must empower students to access support when needed" (p. 8). Students who graduate do so because they maintain momentum in their classes. Tinto (2013) listed courses with support, learning communities, summer bridge programs, module math classes, intrusive advising, and curricular structure as strategies that support that momentum.

In addition to maintaining momentum, early and sustained intervention improve the chances that high-risk students will remain in college. Kuh and the Center for Higher Education Policy Analysis (2006) stressed the importance of early intervention. By establishing clear expectations early, providing regular feedback, and offering resources

so that students can meet these expectations, students know what they need to do to be successful. Additionally, this intervention should be sustained and implemented at key transition points during college. These interventions include orientation programs, tutoring, performance alert systems, mentoring, intrusive advising, financial aid, and others. To achieve this, academic offices and student services must partner to provide timely and appropriate approaches.

Unfortunately, research shows that the likelihood that high-risk students will use those services is low. These students are often unaware of or unsure how to use student support services (Engle et al., 2007). Additionally, low-income students often have jobs, and student services may not be offered at convenient times. Students are also frequently concerned about the stigma associated with using support services. Without coordination of services, Engle et al. state that high-risk students can "fall through the cracks" (p. 5). Tutoring has proven to be one of the most beneficial services if high-risk students can be convinced to use it.

Tutoring in Higher Education

Tutoring has long been a mainstay of higher education, dating back even to the earliest colleges in the United States (Dvorak, 2004). Dvorak asserted that college administrators need to look at tutoring as an additional method to enhance learning. The active process of tutoring enables tutors to model the learning process to students and addresses the diverse needs of students. Tutors are able to develop learning strategies that assist the students, and they can discuss content and interact with students, helping them develop problem-solving skills. In fact, Cleveland (2008) argued that the Socratic

form of education mirrors tutoring approaches used today. The goal of tutoring is to teach students the learning process to empower them to become independent learners. Students learn to ask questions, verbalize their thoughts, support their opinions, and process subject matter actively. The process establishes a community of learning that discusses content and deeper meaning.

Increasing student numbers in higher education has caused an increase in class sizes which results in less direct faculty-student contact. Larger class sizes also mean that instructors have less time to offer after class sessions due to larger workloads. Less contact with faculty has caused an increased demand for tutoring services (Topping, 1996). Cleveland (2008) asserted that tutoring helps address the decrease in faculty contact by teaching students how to learn more independently. Colleges and universities have tried a variety of approaches to meet the demand for tutoring.

Peer Tutoring

One cost-effective response to the increasing need for tutoring programs is peer tutoring. Peer tutors are fellow students who are often paid to tutor other students (Rheinheimer, Grace-Odeleye, Francois, & Kusorgbor, 2010). They are usually hired based not just on their content knowledge, but also based on recommendations from faculty for their potential ability to work with other students (Maxwell, 1990).

Topping (1996) introduced a typology of peer tutoring consisting of ten dimensions that illustrate the diversity and complexity of defining tutoring:

1) The content of peer tutoring can focus on both knowledge and skill development.

2) The makeup of a tutoring interaction can be peer-to-peer or can be one or more tutors with a group of students.
3) The year in school of the tutor and tutee can be the same or different.
4) The tutor may have advanced ability in a subject or equal ability.
5) The tutor/tutee roles can be permanent or may change.
6) The location of tutoring sessions vary.
7) The time of tutoring sessions can occur in or out of class time or both.
8) The characteristics of students in tutoring vary widely.
9) The characteristics of tutors may also differ.
10) The goal of tutoring can vary from content knowledge acquisition to social development to skill improvement to confidence building, among others.

Some approaches to peer tutoring occur more frequently than others in institutions of higher education. These include one-way tutoring, reciprocal tutoring, and group tutoring. One-way tutoring occurs when one student serves as the tutor and the other student receives assistance. A study of tutoring learning disabled students reveals that the students benefitted most from one-way tutoring due to its stability rather than reciprocal tutoring (Eiserman, 1988). Reciprocal tutoring is when the students exchange places as the tutor. For example, one student may tutor the other in math and then they exchange positions so that the other student may tutor in composition.

In order to address the problem of the increased demand for tutoring but not enough tutors to meet the demand, MacDonald (1993) studied the effect of group tutoring. Group tutoring, also known as total-class tutoring, is when one or two tutors lead a larger group of two to approximately thirty students. MacDonald found that group

tutoring was beneficial to students. Eiserman (1988) found this form of tutoring to be effective, as well, although not as effective as peer-to-peer, one-way tutoring.

Tutoring centers also approach these sessions differently. Some centers and academic departments establish appointment-based tutoring where the students set an appointment with a tutor in a specific content area or to focus on a specific skill set (Dvorak, 2009). The walk-in tutoring model allows students to go to a tutoring center where they may immediately meet with a tutor or they may sit in the tutoring center and work on homework, allowing them to meet with a tutor if they encounter problems or have questions. Another trend in tutoring increases the responsibility of the tutor to that of a mentor who also tutors the student being mentored.

Supplemental Instruction

Another type of tutoring, Supplemental Instruction (SI) was developed at the University of Missouri at Kansas City. Built into academic courses, SI does not focus on high-risk students, but rather it addresses high-risk courses—those courses that have higher-than-average D/F/W rates (Congos & Schoeps, 1993). The courses include an SI leader who is a successful student that is trained in SI strategies and leadership. These leaders are peers who attend the class sessions and participate like the other students enrolled in the class. SI leaders then hold SI sessions outside of class time each week for students to attend. Some institutions use models similar to this but refer to their approaches as structured learning assistance, courses with support, or other variations of the name.

Impact of Tutoring on High-Risk Students

Overwhelming evidence from research suggests that tutoring has a positive impact on high-risk students. In a study by Laskey and Hetzel (2011), high-risk students who went to tutoring were significantly more likely to be retained and have a higher grade-point-average than those high-risk students who did not utilize tutoring services. No significant difference in retention based on gender, ethnicity, or personality types was revealed—only their use of tutoring showed a difference in the data. While students who tended to be highly conscientious and agreeable did go to tutoring more often, the results did not lessen the significance of the results. Furthermore, generating conscientiousness in students can be accomplished by teaching time-management and study skills, prompting them to be more likely to ask for tutoring help. Laskey and Hetzel also highlighted the additional benefit of tutoring, relationship development, and creating a greater sense of caring and belonging on campus.

Other studies show similar results. One study emphasized the importance of getting students to use tutoring early in college (Rheinheimer, Grace-Odeleye, Francois, & Kusorgbor, 2010). The use of tutoring by students significantly improved their academic performance and retention. Gallard, Albritton, and Morgan (2010) also concluded that early intervention by a tutoring center increases completion rates for college students, particularly Hispanic students. Engle et al. (2008) also stated that tutoring helps low-income and first-generation students transition to college. In addition to academic support, it fosters campus engagement and a sense of community, increasing retention. Boylan, Bliss, and Bonham (1997) noted that the impact of tutoring is most pronounced when the tutors are well-trained.

Hodges and White (2001) found that Supplemental Instruction (SI) has a statistically significant impact on the grade-point-averages of high-risk students. Most results of Supplemental Instruction show a positive impact on student achievement. Faculty and students in Bronstein's (2008) study indicated that supplemental instruction was helpful. The program in that study did not require SI attendance, but students reported that the resource helped them to manage their anxiety with their course. A study of SI's impact on graduation rates showed a positive correlation between SI attendance and graduation (Bowles, McCoy, & Bates, 2008). Oja (2012), however, found that while GPA correlated with time in SI, the researcher did not find a relationship between that and persistence.

Best, Common, and Suggested Practices in Tutoring Services

The literature does not reveal a standardized list of best practices to evaluate the services of tutoring programs. The Council for the Advancement of Standards in Higher Education (2015) offers standards and guidelines for various student services in colleges and universities, but these standards do not delineate best practices in tutoring services. The guidelines, instead, offer ways that programs can self-assess student learning in order to address their practices. Additionally, none of the literature mentioned here articulates best practices that address concerns regarding the lack of use of tutoring services by high-risk students.

Best Practice: Tutoring Certification

One practice is widely regarded as a best practice, and that practice is tutoring certification. The College Reading and Learning Association (CRLA) offers

International Tutor Training Program Certification. This certification is largely recognized by tutoring professionals as adhering to best practices by tutors (Association for the Tutoring Profession, 2014; College Reading & Learning Association, 2015). The CRLA requirements include specific topics to be covered in tutor training, a minimum number of training hours, and a minimum amount of tutoring experience to reach each of the three levels of certification (College Reading & Learning Association, 2015). This certification is granted to tutoring programs that conduct the training and certify the tutors through the program. Likewise, the Association for the Tutoring Profession (ATP) has similar requirements for tutor certification, but the certification is granted to individuals who seek out the certification, not to the programs themselves (Association for the Tutoring Profession, 2014).

Wilson and Arendale (2011) referred to both the CRLA and ATP in their study of peer educators. In their study, the researchers sought to define best practices for new learning assistance programs, and they explained that peer educators and peer tutors have largely the same responsibilities because of the nature of the programs. The study listed nine best practices that are primarily focused on the peer educators in the programs. These include training of the peer educators; the process skills of the peer educator; content skills; curriculum resources; format of the training; the supervision, session observations, and session notes by the supervisors as well as reflection on those notes by the peer educator; and collaboration by the participants, staff, and faculty in the program. Wilson and Arendale explained that a crucial component to a learning assistance program is the ongoing training of the peer educators. CRLA and ATP both require this for their

certification (Association for the Tutoring Profession, 2014; College Reading & Learning Association, 2015).

Common Practice: Faculty Involvement

Some common practices within tutoring programs involve the engagement of faculty in tutoring programs. The literature identifies a variety of ways that faculty are or can be included in tutoring programs. One way is through faculty promoting the use of tutoring by students. In a study of learning communities in college classrooms, Engstrom (2008) found that faculty efforts to encourage study groups and tutoring paid off because students came to class better prepared than those who did not participate in these experiences outside of class time. In the study, faculty encouragement included students signing up for study groups before leaving class and even offering extra credit for participation. Additionally, faculty invited academic support resources to visit their classrooms to speak about their services.

Fowler and Boylan (2010) studied a program in which faculty reported students who fell below a C in any assessment in their classes to tutoring services. These students were required to go to tutoring, but they did not face any repercussions if they did not go. Another study by Boylan (2009) highlighted the importance of faculty intervention with students in developmental classes, including monitoring student use of services like tutoring. Hodges and White (2001), however, found that verbal prompts from faculty to encourage students to use tutoring did not result in students checking in any more than students in classes without verbal prompts.

Suggested Practice: Mandated Tutoring

One struggle is getting students to use tutoring services. Several researchers have found that high-risk students do not tend to use academic support services like tutoring. Engle et al. (2008) stated that low-income and first-generation college students avoid involvement in campus activities, including services like tutoring. Solórzano, Datnow, Park, and Watford (2013) pointed out that student success is linked to student behaviors like seeking help and support. They found that low-income students are often concerned about the stigma of going to tutoring. Additionally, high-risk students often do not know what services are available or how to go about seeking tutoring. Furthermore, they may fear being judged, do not think they deserve help, or assert a desire to be self-reliant. Hodges and White (2001) found that some high-risk students may have higher beliefs in their own academic skills, giving them unrealistic expectations of their success. Another difficulty is that support services may be organized in such a way that students have difficulties navigating and finding services (Boylan, 2009). Boylan (2009) suggested that programs monitor student use of services and make appointments for students.

Because of the importance of early intervention and because high-risk students lack help-seeking behaviors, a variety of researchers suggest developing a strategy to empower these students to seek academic support (Boylan, 2009; Gallard, Albritton, & Morgan, 2010; Laskey & Hetzel, 2011; Rheinheimer et al., 2010). Sometimes these strategies lean towards programs that mandate use of tutoring services. Hodges and White (2001) found that self-monitoring and verbal prompts did not have a significant impact on student attendance in Supplemental Instruction compared to the control group who did not receive the same reminders. Still the students who did attend had a

significantly higher grade-point-average. Hodges and White wrote, "High-risk students may need stronger influences to facilitate positive changes in their behavior" (p. 9), suggesting that these students may benefit from being required to use tutoring services.

When students are required early in college to use services that are linked to retention, institutions ensure involvement in activities like tutoring (Engle et al., 2008). In a study of for-profit colleges in Texas, Frishberg, Lee, Fletcher, and Webster (2010) researched programs that incorporate tutoring time with scheduled courses. The researchers argued that mandating tutoring hours provides the structures that academically underprepared college students need. The study did not provide, however, quantitative results of the requirement.

The Hodges and White (2001) study investigated the success of students admitted under a success contract. Among the contract elements, students were required to register for at least one Supplemental Instruction (SI) course. The SI courses in the study did not mandate participation in SI sessions. The students were given verbal reminders about the sessions, but those reminders did not increase their participation in the tutoring sessions. While those students who did go to the sessions had higher grade-point-averages, the fact that high-risk students are less likely to seek tutoring assistance was a limit to these results. Both students on contract and standard admits could attend SI sessions, so the study did not focus on the high-risk population and whether requirement of the sessions could have been more motivating.

Tutoring also provides for sustained intervention, which is especially important for first-year college students during key transition points (Kuh & Center for Higher Education Policy Analysis, 2006). Engle et al. (2008) asserted that high-risk students

must be approached and engaged differently than the traditional first-year student. They maintained that the first year experience needs to be "scale[d] down" (p. 29) for high-risk students, and as such, individualized support services assist in this goal. One such service, tutoring, provides sustained support throughout college. By requiring tutoring time, colleges can make the best use of the time that high-risk students are on campus, which is often limited by jobs, commuting, and family obligations. Not only does this provide academic support, but it also enhances the sense of campus community that further engages high-risk students in college, increasing the chances of retention.

Student Support Services (SSS) programs like TRIO, a program that serves first-generation students, have been shown to increase retention for first-generation students (Tinto, 2004). In Hand and Payne's (2008) study of a SSS program in Appalachia, the students showed an internal locus of control, despite circumstances like finances that were often beyond their control. Some of the students in the study reported that they felt academically ill-prepared for college-level work. The researchers recommended mandatory academic services like SI and tutoring not only to help students academically, but also to help them build relationships with others on campus. Of course, mandating services may not be popular.

Fowler and Boylan (2010) studied a program in which students signed a contract agreeing to "mandatory advising, tutoring, and attendance requirements" (p. 6). The results of the study were based on students required to participate in a summer program versus a previous cohort with similar test scores and grade-point-averages who were not required to participate. The treatment group in the study had a significantly higher mean grade-point-average than the non-participants and was also retained at a larger

percentage. The authors noted that while "students will undoubtedly be unhappy about a class schedule or program policy" (p. 9-10), a structured program with requirements such as mandatory tutoring can have a positive impact on student success. This study did not focus solely on the tutoring element of the program, and the program itself required participation in a summer program, continuing to raise questions about the impact of mandatory tutoring.

Gaps in the Literature Regarding Tutoring

The literature regarding tutoring reveals gaps in research. In studies of programs that require tutoring, the service itself is not separated for investigation. In fact, Laskey and Hetzel (2011) and Hodges and White (2001) called for further research about mandatory tutoring. Additionally, Rheinheimer et al. (2010) called for research about why some students continue to go to tutoring to determine the best use of the service. First-year programs have generally not singled out the various elements of their programs such as tutoring, mentoring, advising, etc. Additionally, research has not differentiated those elements that make tutoring most effective with high-risk students. A study of the results of required tutoring for high-risk students may answer questions posed by researchers. Such a study may reveal whether programs for high-risk students should require tutoring. It may also indicate the usefulness of tutoring with first-year students or with students on academic probation.

Conclusions of the Review of Literature

The literature reveals the need for more research in several areas. First, the complexity in defining *tutoring* contributes to the lack of a clear list of best practices in tutoring. While research indicates that first-year, high-risk students benefit from tutoring services, the research is unclear as to what approaches to tutoring work best in helping those students be successful in college classes. Additionally, the literature reveals that some programs for first-year high-risk students require their students to go to tutoring sessions; however, research does not establish whether mandatory tutoring has an impact on the grades or retention of those students. These gaps in the literature have led to this study. This study seeks to delineate best practices in tutoring services for first-year, high-risk students. Furthermore, it seeks to determine whether required tutoring has an impact on the academic success and retention of high-risk students.

CHAPTER THREE

METHODOLOGY

Purpose and Objectives of the Study

The purpose of this study was to a) determine best practices in exemplary tutoring programs at institutions with success in serving high-risk students, b) use the best practices identified in the first phase of the study as guidelines to evaluate the services offered at EKU in order to determine to what extent EKU's services are in keeping with best practices at other institutions, and c) analyze the differences between high-risk college students at EKU who are in a program that mandates tutoring versus students who are not in such a program in order to discover whether required tutoring makes a difference in the academic success of high-risk students.

One objective is to add to the body of knowledge of best practices for tutoring academically at-risk students. Additionally, the study uses the identified best practices and applies those standards to evaluate tutoring at a regional university that admits high-risk students. Lastly, this study analyzes the impact of required tutoring on high-risk students.

The study has three phases. The first phase is highly exploratory and emergent, involving the collection of qualitative and quantitative data in order to understand what two institutions of higher education do in tutoring programs with good records of retaining high-risk students. Three institutions were chosen, and two of those chose to participate. The research focuses on studies of tutoring programs at two regional public universities: Austin Peay State University and the University of Alabama in Huntsville

(UAH). This phase seeks to analyze the common practices in tutoring programs at these institutions in order to identify best practices.

In the second phase, the researcher uses the findings from the first phase to compare them to tutoring services at Eastern Kentucky University (EKU). The goal was to see whether the best practices found in the first phase can serve as guidelines to evaluate EKU's tutoring program.

In the third phase, the researcher drills down further to test whether tutoring has a positive quantitative impact on student success. High-risk students from EKU with mandated tutoring and more tutoring hours were compared to those with voluntary and fewer hours of tutoring.

Three questions guided the research:

1) What are the best practices of exemplary tutoring programs at universities that are showing success in retaining first-year, high-risk students?
2) To what extent do EKU's tutoring services meet the standards of best practices at those institutions?
3) What are the differences in academic achievement among first-year, high-risk EKU college students who a) met the number of tutoring hours required by an academic program, b) did not meet the number of tutoring hours required by an academic program, and c) were not required to participate in the academic program?

Significance of the Study

Research Question One (RQ1) seeks to develop a list of best practices that institutions of higher education use when tutoring high-risk students. If a list of best practices can be developed, this will enable institutions to determine the current practices at their institutions that are worth continued investment. This research may also uncover practices to consider adding to their programs. Additionally, retention programs that are considering mandatory tutoring for high-risk students need to know which practices have a positive impact on student success.

Research Question Two (RQ2) seeks to apply the best practices identified in the initial research and apply them to the tutoring program at EKU. This is crucial to the validity of Research Question Three. Additionally, these results will enable EKU to evaluate existing practices for revision or will uncover strategies that EKU should implement to retain and graduate students. This study may also reveal practices unique to EKU, which may also serve as best practices for EKU's student population. These practices could be presented to similar universities for consideration.

The data in Research Question Three (RQ3) could provide programs that serve high-risk students with valuable information as to how the use of tutoring can help their students be more successful. By examining the extent to which tutoring makes a difference in the achievement of students, coordinators can determine how they can use these services in their programs. For example, if students have more academic success if they are required to check in at tutoring centers, other universities may use these results to justify requiring students to use tutoring services. Because the requirement necessitates a great deal of administrative time and effort, programs may decide that their

efforts are better spent on other strategies if the results show that mandating services has little to no impact.

Methodological Approaches

In this study, a mixed methods approach allows for "weakness minimization" as described by Onwuegbuzie, Johnson, and Collins (2011, p. 1261). The quantitative results of RQ3 are strengthened if RQ2 determines that best practices are in use at EKU. RQ1 will define those best practices through survey and triangulation of data, focusing on two universities individually to determine best practices (Lichtman, 2010). Data will be triangulated, first, by looking for common practices between the two universities through analysis of their websites, surveys, and interviews. This will allow the researcher to find not only those practices that are common, but also to identify those practices consistently mentioned as important by the institutions in order to establish a list of best practices. RQ2 will further triangulate data, focusing on EKU and comparing the list of tutoring practices at EKU to the list of best practices from RQ1.

RQ3 will be answered through descriptive statistics using multivariate analysis of variance. These are explained in more detail in the Research Design section of this chapter.

Research Design

The goal of RQ1 was to identify best practices in tutoring centers that serve high-risk students. This was researched using a mixed-methods design. According to Bretschneider, Marc-Aurele, and Wu (2004), *best practice* indicates an action that better

achieves a goal than any alternative action. Research regarding best practices, however, is challenging because the practices involve human bias, difficulty of making comparisons between practices, the ambiguities of cause and effect, the difficulty of transferring applications to other environments, and the fact that the context of the action often impacts its practicality. As the authors stated, best practice designs are not as inclined to generalization as are standard research designs.

Bretschneider, Marc-Aurele, and Wu (2004) suggested "delimiting the domain of cases in space and time to define a complete and exhaustive set" (p. 312) to reach a more complete study, therefore recommending to choose fewer samples so that the researcher can go more in-depth in their study of the institution. Likewise, Owen (2007) recommended collecting and analyzing practices in selected organizations to identify and develop best practices to be implemented in similar organizations. The qualitative data are from what Lichtman (2010) called the "exemplary or model case" (p. 82). The two programs studied in RQ1 are model programs due to their certifications and their retention rates.

Using mixed-methods research for RQ2 allows for two sets of findings. After developing a list of variables, measurements, and features based on findings from the tutoring programs at Austin Peay and UAH, the tutoring practices at EKU are compared to the best practices in RQ1. First, categorical data are measured using the contingency table. Second, conceptual data describe the characteristics of EKU's tutoring that may not fully meet the best practices as indicated on the contingency table.

RQ3 focuses on three groups of first-year, high-risk EKU college students: (1) a full-treatment group who are in a program that mandates tutoring and regularly

participate in tutoring, b) a partial-treatment group who are in the program that mandates tutoring but who rarely or never participate in tutoring, and c) a null-treatment group who had the same academic background but were not required to participate in the program. The data will be studied using ANOVA, t-tests, and chi-square.

A Comparison of Exemplary Tutoring Programs at Two Institutions: Austin Peay State University and the University of Alabama in Huntsville

This section describes the methodology used for Research Question One (RQ1) in order to find the best practices used at Austin Peay State University and the University of Alabama in Huntsville (UAH).

Description of Sample Cases

To determine the best practices of tutoring services at universities that successfully serve high-risk students, the participants in this study include two tutoring programs at universities similar to EKU that successfully retain high-risk students. The data were collected in the spring and summer of 2016. Two schools participated: Austin Peay State University and the University of Alabama in Huntsville (UAH). The tutoring coordinators at these universities agreed to participate in the study. These universities were selected for the following reasons:

1) Each university is a four-year, public, state university that focuses on undergraduate programs.
2) These universities include references to encouraging diversity in their mission or vision statements.

3) While their admissions standards are slightly higher than EKU's, Austin Peay and UAH have provisions for conditionally-admitted students, and Kennesaw has an admission appeals process.
4) Each university accepts students who do not reach college-readiness benchmarks and has courses in place to bring students up to college-readiness levels.
5) Each university has a higher retention rate than EKU.
6) All of these universities offer tutoring services on campus.

Austin Peay State University is located in Clarksville, Tennessee. To receive standard admission status to the university, students must have a 2.85 or higher high school grade-point-average (GPA) or a 20 ACT composite score. For conditional admission, students must have a 2.75-2.84 GPA or a 19 ACT composite. The university also has an admission appeals process for students who are not admitted. Austin Peay enrolls a higher percentage of minority students than EKU, as shown in Table 3.1. The tutoring supervisor at Austin Peay is Martin Golson, who agreed to participate in the study.

Table 3.1. 2013 Enrollment of Eastern Kentucky University, Austin Peay State University, and the University of Alabama in Huntsville by Race/Ethnicity

Institution	Total Enrollment	African American Students (%)	Hispanic Students (%)	White Students (%)
Eastern Kentucky University	16,111	5.5	1.8	83.3
Austin Peay State University	10,399	18.2	5.4	67.0
University of Alabama in Huntsville	5,696	13.0	3.4	69.5

Sources. Data for Austin Peay from Austin Peay State University, 2016; Data for Eastern Kentucky from Eastern Kentucky University, 2014; Data for University of Alabama in Huntsville from University of Alabama, 2015

The University of Alabama in Huntsville is located in Huntsville, Alabama. To be fully admitted to UAH, students must have a 2.9 GPA and a 20 ACT composite; however, the school has conditional admission based on the academic background of a student and evidence of that student's commitment to furthering his or her education. With similar admissions requirements to EKU, the percentage of under-represented students is also higher than at EKU, represented in Table 3.1 (HEOA, 2015). Valerie Johnson is the tutoring coordinator on campus and agreed to participate in the study.

The overall retention rates at both Austin Peay and UAH are higher than EKU's, as shown in Table 3.2.

Table 3.2. Retention of 2013 Students at EKU, Austin Peay, and UAH, Total and by Race/Ethnicity

Institution	Overall Retention (%)	African American Students Retained (%)	Hispanic Students Retained (%)	White Students Retained (%)
Eastern Kentucky University	68.60	63.30	63.00	69.30
Austin Peay State University	71.79	72.50	74.51	70.78
University of Alabama in Huntsville	77.00	64.00	60.00	80.00

Sources. Data for Austin Peay from Austin Peay State University, 2016; Data for Eastern Kentucky from Eastern Kentucky University, 2014; Data for University of Alabama in Huntsville from University of Alabama, 2015

Data Collection from Two Institutions

By investigating what successful tutoring programs consider best practices, this research seeks commonalities in tutoring practices to answer RQ1. The researcher first reviewed services offered by the tutoring programs by investigating their websites. The researcher printed the contents of their websites and coded them. A survey (Appendix 1) was sent using SurveyMonkey to the representatives from Austin Peay's and UAH's

tutoring programs to be completed and returned. The survey collected both quantitative and qualitative data.

The researcher followed up the surveys with a telephone interview, to ask the representatives to clarify remarks on the survey and to ask them to elaborate on themes in the surveys. The researcher used questions based on the answers the representatives provided on the survey in addition to two common questions: (1) Will you elaborate on your survey answer about your engagement with faculty? (2) Do you have anything you would like to add that the survey did not give you the opportunity to share or address?

Analysis of Collected Data

Both quantitative and qualitative data were collected for RQ1. Qualitative data for the first research question were analyzed through emergent design (Cresswell, 2013). Emergent design allows for the research process to shift according to what the data collection process uncovers. Using these data, the researcher delineated the major characteristics of tutoring at the sample universities, including commonalities and unique practices. The researcher also looked for consistency within the responses of these representatives. These characteristics were used to determine the best practices in those tutoring programs. The information is presented through a contingency table for readability (Yin, 2014).

The quantitative data in the survey were placed in categories and used to find themes to frame the contingency table. Additionally, the survey allowed for a quantitative analysis of ranking with a common language among the participants. The goal of the data analysis for RQ1 was to discover patterns among the three cases in order to determine the common best practices between the institutions.

Limitations of Research Question One

A limitation of RQ1 is the sample size. The size of the study limits the generalizability of the findings. The site choices, however, are based on data from the universities and the existence of retention programs, and the size is based on Owen's (2007) recommendation to select fewer organizations when researching best practices in order to research their practices in more depth. Another limitation is that data were collected from the institution and not from students. Additionally, case study has some limitations relative to research ethics because case studies can support researcher bias (Yin, 2014). Flyvbjerg (2006) argues, however, that case study does not provide greater bias than that of other research. Since this study includes multiple case studies, the possibility exists that different approaches may be found among the universities, allowing for unique characteristics to be highlighted.

An Analysis of the Extent to Which EKU's Tutoring Services Meet Best Practices

This section describes the methodology used for Research Question Two (RQ2) to determine to what extent EKU meets the best practices identified in RQ1.

Description of Sample

The subjects of RQ2 are tutoring centers and services on the campus of EKU. The researcher included data from tutoring centers that used Accudemia for tracking student use of tutoring. Although the supervision of tutoring centers at EKU was decentralized, seven locations on campus used Accudemia for tracking. Each of these locations was included in the EKU Tutoring program, which was coordinated through the Office of Academic Readiness at the time of the study; each location had centralized tutor

training under the program; and each fell under the CRLA certification held by the EKU Tutoring program. Three of these centers tutored in various subjects; two of these centers focused on tutoring specific populations (students in the Education Pays grant program and students with disabilities) in various subjects; and the other centers were content-specific, including chemistry, physics, and mathematics.

Data Collection from EKU

RQ2 was also studied using mixed methods research. The data are 2013-14 archival data at EKU. These data include descriptions of the tutoring services, training practices, supervisory structure, locations, subject offerings, and other practices exercised by the various centers in the EKU Tutoring program.

Variables and Measurements for Research Question Two

The dependent variable for RQ2 is the extent to which EKU's tutoring programs met the best practices determined in the first research question. The researcher developed a list of variables, measurements, and features based on the findings from RQ1. These measurements were not determined until the delineation of best practices from RQ1 was complete. The tutoring practices at EKU are conceptual data that captured the central characteristics of tutoring services. The data compared to the best practices in RQ1 are categorical data.

Analysis of Collected Data

When the contingency table was completed from RQ1, the researcher compared the results of the data collected at EKU with the results on the contingency table to find commonalities or practices that EKU's centers lacked. This revealed two sets of findings. One set was categorical data that were measured using the contingency table.

The second finding was based on conceptual data that described the characteristics of EKU's tutoring that only partially met the best practices as indicated on the contingency table or were practices at EKU not evident at the two participating universities.

Limitations of Research Question Two

One limitation of RQ2 is that best practices are difficult to define. Determining a quantifiable measurement of the best practices of EKU against the best practices at other universities was challenging. A contingency table is a solution to this. Additionally, the researcher uncovered best practices at EKU that were not used at the sample schools. These are explained in the discussion. A final limitation is possible researcher bias. EKU's tutoring was not centralized, but at the time the data were reported, the researcher coordinated tutor training, oversaw CRLA certification standards, and assisted with student outreach for the various centers at EKU. At the time of data analysis, however, the researcher was no longer in this position. This did allow for convenience in the data collection process.

An Analysis of the Differences in Academic Achievement among First-Year, High-Risk Students in a Program that Requires Tutoring at EKU

This section describes the quantitative methods used to determine the differences among first-year, high-risk students who a) met the number of tutoring hours required by an academic program, b) did not meet the number of tutoring hours required by an academic program, and c) were not required to participate in the academic program.

Program Description: Eastern Bridge

The Eastern Bridge program started in 2013 as a retention program for high-risk students. Students with two or more developmental course needs in the Fall 2013 cohort were required to participate in the program. The program requirements included placing students in the Associate in General Studies (AGS) major in order to monitor those students more closely. Being placed in the AGS also required those students to take a GSD 101 Freshman Seminar course for undeclared majors. The Eastern Bridge sections of the course were led by instructors who communicated with Eastern Bridge administrators. Additionally, the students were assigned a supplemental advisor, the Eastern Bridge coordinator, who tracked their progress in classes. Students in this program were required to log in for four hours a week of study time in a lab staffed by trained tutors.

EKU changed the requirements for participation in the Eastern Bridge program for the Fall 2014 cohort. This decision was made because retention of students with a 2.0-2.49 cumulative high school grade-point-average and a 15-19 ACT Composite was consistently low, regardless of developmental course need. In Fall 2014, students who fell in those grade-point-averages and test score ranges were required to participate in the program, regardless of their developmental course needs. This change was meant to increase the retention of these students, while also addressing the retention of students with developmental course needs. The requirements of the program remained the same.

Description of Sample

A total of 212 students are included in this analysis. The subjects of the study for Research Question Three are 102 Eastern Bridge participants who entered EKU in Fall

2013. Students who participated in the program had two or more developmental course needs. The null-treatment group included 110 students who had 15-19 ACT Composite scores and 2.0-2.49 cumulative high school grade-point-averages and were fully admitted to the university and, therefore, not participants in the Eastern Bridge program. The students in the null-treatment group each had fewer than two developmental course needs because they tested out of those courses through the ACT, SAT, Kentucky Online Test, Compass tests, or EKU Placement Tests. These students were broken into three groups:

1) a full-treatment group who were in the Eastern Bridge program and regularly participated in tutoring;
2) a partial-treatment group that were in the Eastern Bridge program but who rarely or never participated in tutoring; and
3) a null-treatment group that had the same academic background but were not required to participate in the Eastern Bridge program.

Data Collection from EKU

Archived data collected by the Eastern Bridge program in 2013-14 are used for RQ3. Data for the comparison groups were accessed through Accudemia, which is a check-in program used to log tutoring hours. The researcher obtained approval from the appropriate staff and administrators to access and use the data. The data was pulled from the 2013-14 academic year and compiled in MS Excel. Student names and University ID numbers were removed from the data and assigned random numbers. Data collected included tutor center check-ins, retention, and grade-point-averages.

Variables and Measurements for Research Question Three

The dependent variables for the third research question are first-semester grade-point-averages and fall-to-spring retention rates. The independent variables are the level of participation in the Eastern Bridge program and the number of check-ins at tutoring centers.

Analysis of Collected Data

Quantitative data were analyzed using ANOVA, chi-square, and t-test. The two dependent variables in these tests were grade-point-average and fall-to-spring retention. The one-way ANOVA determined the difference in academic achievement among the three groups studied. The ANOVA tested the three populations of students compared to grade-point-average. The second test was a chi-square, testing the three populations compared to retention. Third, the researcher ran a Welch's t-test for unequal sample sizes on the two populations of students who participated in the Eastern Bridge program. The t-test determined whether any differences exist between those students who participated fully in tutoring and those who did not based on grade-point-averages. The final test was a chi-square to test the two populations in Eastern Bridge compared to retention.

Limitations of Research Question Three

One limitation of this study is that while Eastern Bridge students were required to check in for four hours a week for tutoring, students sometimes forget to log out. This may not give an accurate account of the hours they spend in tutoring. Because of this, those times that students forget to log out were set at the student's average time in tutoring centers and the total number of check-ins were included in the data set.

Finally, while students in the Eastern Bridge program were required to check in at tutoring centers, they did not face consequences if they did not do so. Students signed a learning agreement, were regularly reminded about the requirement, and received emails if they were not checking in. They were also told that if they ever need to appeal a dismissal or the loss of financial aid due to lack of satisfactory academic progress, the tutoring hours would be pulled for the appeals committee. Nevertheless, once they realized they would not be dismissed, many chose not to go to tutoring. To address this, the samples were broken into three groups: a null-treatment group, a full-treatment group who followed the tutoring requirement, and a partial-treatment group who did not meet the tutoring requirement.

Summary of Methodology

The methodology covers three different research questions that begin with determining best practices in selected tutoring programs, continuing with application to a local institution, and concluding with evaluating the results of mandated tutoring on the academic success of high-risk students. First, this mixed methods study determines the best practices in the tutoring programs at Austin Peay State University and the University of Alabama in Huntsville through qualitative analysis of websites and interviews as well as through a survey (Appendix 1) that included qualitative and quantitative questions. Those institutions were chosen because they accept high-risk students and retain them at a higher rate than Eastern Kentucky University.

Next, the researcher uses the best practices found in the first phase of the research as a guide to assess through qualitative analysis the tutoring practices at Eastern Kentucky University.

Lastly, the researcher uses ANOVA, chi-square, and t-tests to analyze the academic success of three groups of high-risk students: (1) a full-treatment group who are in a program that mandates tutoring and regularly participate in tutoring, (2) a partial-treatment group who are in the program that mandates tutoring but who rarely or never participate in tutoring, and (3) a null-treatment group who had the same academic background but were not required to participate in the program.

CHAPTER FOUR

ANALYSIS OF BEST PRACTICES IN TUTORING SERVICES AND IMPACT OF REQUIRED TUTORING ON HIGH-RISK STUDENTS

Overview

Chapter Four delineates the results of the study regarding best practices in tutoring services and the impact of required tutoring on high-risk students. This chapter divided into sections based on each research goal. The purpose of this study was threefold. First, the researcher wanted to determine the best practices in successful tutoring programs with a reputation of success with high-risk, first-year students. Second, the study sought to discover the extent to which Eastern Kentucky University's (EKU) tutoring programs implement best practices. Last, the study looked at the relationship between required tutoring and the academic success of high-risk students. This chapter is organized based on those findings about exemplary programs, EKU's tutoring standards, and the differences in student achievement based on required tutoring.

Findings about Exemplary Programs

Research Question One (RQ1) discovered the best practices of exemplary tutoring programs at two universities that were showing success in retaining first-year, high-risk students. This question was answered through qualitative methods.

Units of Study

This analysis of exemplary programs is based on the tutoring programs at Austin Peay State University (Austin Peay) and the University of Alabama in Huntsville (UAH).

The representative from Austin Peay was Martin Golson, the Director of the Academic Support Center. Valerie Johnson represented UAH as their Tutoring Coordinator in their Student Success Center. Each representative supervises tutoring in the programs at their institutions, including hiring, training, and evaluation of tutors. Both representatives completed a sixty-question survey (Appendix 1) and participated in a follow-up phone interview. The surveys and interviews were coded, and the researcher also printed and coded information from the websites of both tutoring programs.

Administration of Tutoring Programs

Austin Peay and UAH administered their tutoring programs in similar ways. As shown in Table 4.1, the tutoring programs at both institutions have centralized tutor training at CRLA level-three certification which means that their tutors not only participate in over 20 hours of tutor training but they also develop and lead some of the training for the program. Both programs offer peer-to-peer tutoring using undergraduate and graduate students, and these tutors are evaluated annually.

Table 4.1. Tutor Program Structure and Practices at Austin Peay and UAH

Practice	Austin Peay	UAH
Tutor Training	CRLA Certification Level Three	CRLA Certification Level Three
Training Coordination	Centralized	Centralized
Tutor Center Structure	Decentralized	Centralized
Types of Tutoring	Peer-to-peer	Peer-to-peer
Tutors	Undergrad./Grad. Students	Undergrad./Grad. Students
Tutor Evaluation	Yearly	Yearly
Electronic Tracking	TutorTrac Software	TutorTrac Software

Sources. Data collected from survey (Appendix 1), phone interview, and websites from the tutoring programs at Austin Peay and UAH.

The only difference between the overall administrative organizations of these programs is that Austin Peay has decentralized tutoring centers and UAH has a centralized tutoring center. At UAH, however, the coordinator admitted that keeping all tutoring services centralized is a struggle. She stated that various departments on campus sometimes decide to start their own tutoring services. When this happens, her office speaks to those departments about the importance of proper training. She said that after these conversations, departments discover that UAH's Student Success Center offers what the departments were hoping to establish and decide against offering additional services.

Tutor Training

As stated earlier, both programs indicated that CRLA-certified training is important to the quality of tutoring that they offered. Both schools have level-three certification, which means their tutors receive 20 hours of training and have served in face-to-face tutoring sessions for at least 50 hours. Additionally, tutors must develop and lead tutor training sessions in order to reach level-three certification status with the CRLA. The coordinator from UAH's program stated, "Training is the foundation of our program. It sets the tone for our culture." The tutor training program at UAH is provided as an online, not-for-credit course with semester and monthly training sessions in person. The online course is used to track training hours and provide feedback to the tutors. The training they provide, stated the representative, "makes the biggest difference." Austin Peay holds training before the beginning of the semester, and the structure of its program allows for regular feedback to provide on-the-job training as the semester progresses.

Both Austin Peay and UAH have centralized tutor training on their campuses. Both supervisors stated that keeping the training centralized is for CRLA certification purposes. Although Austin Peay has decentralized tutoring centers, the Academic Support Center coordinates training for all centers on campus. According to Austin Peay's director, "If you are a director of a learning center, you are interested in all of the learning on campus. We try to bring in all areas that tutor." For example, the Academic Support Center at Austin Peay hires and trains all TRIO tutors, even though the TRIO tutors are scheduled and paid by another entity on campus and do not work in the center that Austin Peay's director supervises.

Part of this training includes helping tutors understand one of the missions of tutoring: creating independent learners. An element of this goal is to train tutors to assist their tutees in developing soft skills such as study strategies and time management. In order to assist students in this way, however, tutors must be able to communicate well with their tutees. According to the coordinator from UAH:

> Part of training discusses the importance of building rapport with students and encouraging them to come back. This is one way we help students feel connected with the university. Our main mission as a program is to create independent learners and one way we do that is through discussing study skills and strategies in sessions. This is a tool that students can use not only for the course they are receiving tutoring in but also in additional courses.

Additionally, the director at Austin Peay stated that tutor training begins with teaching tutors the general procedures of their center and tutoring sessions with some soft skills

instruction. He continued by explaining, "As we move on, we show how we guide students…into becoming a more effective, self-regulated learner."

The Austin Peay program also includes master tutors in the evaluation of other tutors as part of their training. The representative explained that he gives the master tutors (those who are level-three tutors) more authority in the center with training and evaluation. This enables them to serve as trainers and mentors to newer tutors and allows him, as the director, to serve as a mentor to the master tutors. Austin Peay's director pointed out, "The greatest risk we have is someone not wanting to come back." He further stressed that providing students with a location on campus where they feel safe requires effort, and seeking client feedback is important to keep students engaged in learning centers.

Tutor Selection and Evaluation

Both institutions select their tutors based on similar requirements, have regular training requirements, and have formal evaluations in place, as indicated on Table 4.2.

Table 4.2. Tutor Selection, Training, and Evaluation at Austin Peay and UAH

Practice	Austin Peay	UAH
Tutor Candidate Application	Online application	Online application
Tutor Requirements	3.0 GPA, faculty recommendation and earn at least B in the class covered, currently enrolled student	3.0 GPA, good standing, faculty recommendation and earn at least B in the classes covered, full time student
On-going Training	Regularly required	Regularly required
Tutor Evaluation	Supervisor observations and client feedback considered for supervisor's evaluation	Session notes, self-reflective session reviews, and supervisor observation considered for supervisor's evaluation and one-on-one meeting

Sources. Data collected from survey (Appendix 1), phone interview, and websites from the tutoring programs at Austin Peay and UAH.

The supervisors of the tutoring programs at both Austin Peay and UAH, however, emphasized that tutor evaluation was critical to their impact on students. The evaluation process of both programs include session observations and meetings between supervisors and tutors. The difference between the two evaluation procedures is that Austin Peay includes feedback from clients, whereas UAH employs the use of tutor self-reflection notes after sessions in evaluations.

As stated earlier, the Student Success Center at UAH has tutors enroll in an online, not-for-credit course that is used for training, session notes, and evaluation. Once a month, tutors write session reviews, which are submitted through the "course." This "course" is part of their job, however, and not for a grade. Evaluations are rubric-based and take into consideration a supervisor's observation, a master tutor's evaluation, and the self-evaluations, which the representative explained were reflective in nature. The tutors also write session logs after tutoring sessions which they can use for their monthly self-evaluations.

Austin Peay's tutor evaluation is structured to complement the CRLA tutor training certification levels. In a follow-up phone interview, Austin Peay's director stated, "We are very proud of our evaluation process." Part of that process focuses on how to "grow them as tutoring professionals." The representative asserted that their evaluation practices are "designed to help them improve every step of the way." The level-three tutors, called "master tutors" at their center, serve as subject area supervisors. These subject area supervisors have a rubric that they uses to perform unannounced session observations. At the end of the session, the subject-area supervisor guides the level-one or level-two tutors through a reflection of the session. At the end of the

evaluation, the tutor commits to one observable improvement on which to focus in future tutoring sessions.

At the Academic Support Center at Austin Peay, either the tutoring coordinator or the director also observe at least one of the feedback sessions that each subject-area supervisor leads. This is how the master tutors receive evaluation and feedback. After the subject-area supervisors complete their evaluations of the tutors that report to them and also refer to the feedback from tutees, the supervisors fill out an evaluation report and make an employment status recommendation of continuing employment, probation, or termination. The subject-area supervisors are required to get prior approval from the director before recommending termination. Austin Peay's director admits that this puts more responsibility on the master tutors, but he stated, "I want them to leave here and be able to lead people."

Faculty Input

Faculty input is a vital component of both tutoring programs at Austin Peay and UAH. In both programs, the tutoring programs solicit recommendations from faculty as to which students to recruit as tutors, as shown in Table 4.3. Also at each institution, faculty have input into which tutors are permitted to cover the subjects taught in their academic departments.

Austin Peay's tutors are required to have a faculty recommendation letter for each course tutored, while at UAH, tutors have to have two faculty recommendation letters to tutor classes within their major. In the follow-up phone interview, the director at Austin Peay pointed out that this requirement also lets faculty know who is tutoring so they will be confident when they recommend the center to a student. He stated that athletic

coaches will even compromise time in their practice and workout schedules if an athlete needs to meet with a specific tutor who is only available during those times, also showing their confidence in the tutors and commitment to work with the Academic Support Center.

Table 4.3. Faculty Input into Tutoring Practices at Austin Peay and UAH

Practice	Austin Peay	UAH
Tutor Recruitment	Faculty are asked to recommend potential tutors	Faculty are asked to recommend potential tutors
Tutor Selection	Tutors must have faculty recommendation for each course tutored	Tutors must have faculty recommendation within their major
Required Tutoring	Some faculty require their students to attend tutor session(s)	Some faculty require their students to attend tutor session(s)
Referrals to Tutoring	Faculty use early-alert to refer students to tutoring center.	Faculty use early-alert and directly contact the center to make referrals.

Sources. Data collected from survey (Appendix 1), phone interview, and websites from the tutoring programs at Austin Peay and UAH.

Relationships with faculty. Relationships with faculty in both programs are similar. The coordinator at UAH explained that faculty tend to fall into one of three categories in their regard to the tutoring program there: they value the service, they are indifferent to it, or they have a problem with the service for one reason or another. Both she and the representative from Austin Peay stated that reasons for these responses can vary. Sometimes faculty do not recommend use of the tutoring center because they believe that students should come to faculty for assistance or they had a bad report in the past and have not approached the center to remedy the situation.

When asked about their best marketing strategies, the UAH coordinator admitted that they do not do as much marketing at UAH as she would like, but faculty are the primary source for bringing students to tutoring. Often, when they have a large jump in check-ins, she notices that they are students from one specific class or instructor. She pointed out, "Anytime we have a faculty backer, I can tell." Additionally, once a faculty member requires a student to use tutoring, some continue to come back because, as the representative stated, "When they see it's helpful, they come back again."

The director at Austin Peay affirmed a similar relationship with faculty. The relationship between the program and faculty "ranges between departments depending on the level of engagement they want to have." For example, the Biology Department chooses the tutor-leaders in their Structured Learning Assistance classes, and one department has a faculty liaison with the center, giving that faculty member reassigned time to coordinate with the staff and tutors. Some departments give recommendations for tutors to hire and provide references for tutors.

Some faculty, however, do not agree with some of the philosophies of the program at UAH. For example, the representative described one faculty member who "instructs students not to see us. She sees a different path for what we should be doing." Because of this range of relationships, the director works to build these collaborations. He has conversations with faculty to determine what they can do to serve students better. For the most part, the relationships are positive, however. He stated, "When you say, 'Faculty,' it's a single term that implies they have a singular opinion, and that is not the case." One of the center's most important rules for tutors is that they must never undercut faculty. This includes instructions that they should not even appear to support

something negative said about a faculty member in a tutoring session in order to keep a healthy relationship with faculty.

Tutoring referral systems for faculty use. Both programs rely on an early-alert system to direct students to tutoring support. Early-alert systems enable instructors to flag students at any time during the semester so that students know they are being referred for tutoring and so that the tutoring program can reach out to the students to offer support. According to Austin Peay's website, "Academic alert is a proven tool in helping students get the assistance they need to be successful in their classes" ("How does academic alert work?"). In the follow-up phone interview, the director from Austin Peay indicated that within minutes of sending an email to students who were referred to tutoring through the academic alert system, the center receives phone calls from students seeking tutoring appointments. Their tutoring numbers spike after these alerts. UAH's academic alert system also provides faculty with verification when the student they referred attends a tutoring session.

Required Tutoring

Neither Austin Peay nor UAH have required tutoring for high-risk students. Both institutions have required tutoring for athletes, but only UAH has any other tutoring requirement, and that is not part of any university policy. Some of UAH's faculty sometimes require students to attend tutoring sessions. The representatives of both institutions responded to the idea of mandatory tutoring differently in their phone interviews.

The coordinator at UAH had some positive experiences with mandatory tutoring. She described one example of this from the previous academic semester when the

Calculus I faculty gave students a diagnostic test at the beginning of the semester. Students who scored below a certain benchmark were required to attend a tutoring session at the Student Success Center. This caused a huge influx of students into the center. As a result, the program's administration is improving communication with faculty so that the center will know in advance whether tutoring will be required.

Another result of this situation is that the Student Success Center at UAH included a faculty member and associate dean in interviews with potential calculus tutors. The coordinator said that they wanted this to give faculty a sense of investment in the tutors. This trial was so successful that they planned to include faculty when interviewing writing tutors to prepare for the new writing major implemented at the university. They were also looking at doing the same for the College of Engineering. The coordinator stated this is a good way to create buy-in from faculty.

Austin Peay did not have faculty who required tutoring services at the time of the study. The director of Austin Peay's tutoring program stated that the institution had previously required tutoring of certain student populations, but abandoned the practice because the policy had "no teeth in it." The only population that has any requirements are athletes, but as their director asserted, athletes have an "or else." On the rare occasions that requiring tutoring services are discussed, the director stated that he asks, "What's the 'or else'?" to ensure the department or program that is trying to mandate tutoring knows they need to have some way to follow through with the requirement. He stated that programs need an "if…then" statement for such a mandate because without "a carrot or a stick"—without consequences—students do not take the requirement

seriously. He emphasized that when students "willingly come and engage, then we can do something."

Other Tutoring Practices

Although these two exemplary programs are more similar than different from each other, both Austin Peay and UAH reported other tutoring practices in their programs. One difference is with their structured learning assistance courses, which are classes that provide support in developmental courses so that the courses can be taught on an accelerated pace and offered for college credit. Austin Peay uses their tutors to provide structured learning assistance to students in classes that have high failure rates. A similar program is coordinated through the Student Success Center at UAH, but they do not use their tutors to provide this assistance.

As indicated in Table 4.4, the programs have other differences, as well.

Table 4.4. Other Tutoring Program Practices at Austin Peay and UAH

Practice	Austin Peay	UAH
Assessment of Program	Impact is assessed through comparative data	Currently looking for an assessment to use
Mentoring Students	Available but not part of tutoring program	Available but not part of tutoring program
Required Tutoring	Only athletes are required to attend tutoring sessions	Some departments require visits to centers based on test scores
Structured Learning Assistance	Included in tutoring program	Available, but not part of tutoring program
Tracking of Student Success	Sample of students used	All students who check in

Sources. Data collected from survey (Appendix 1), phone interview, and websites from the tutoring programs at Austin Peay and UAH.

Each institution takes different approaches as to how they track their tutoring program's impact on students. Mentoring is also available at both institutions but is used outside of the realm of tutoring and neither supervisor pointed to it as critical to student success within their programs. As stated previously, tutoring is not required of high-risk students at either institution.

Best Practices of Exemplary Programs

After analyzing the data provided by the qualitative and quantitative data from the survey, websites, and phone interviews, the researcher has delineated the following best practices in tutoring programs for retaining high-risk students:

1) Centralizing tutor training to correspond with College Reading and Learning Association (CRLA) guidelines. Centralized tutor training ensures that all tutors across a university campus have received quality training. This also provides consistency in tutoring services no matter what tutoring center a student may choose to use on a campus.
2) Training tutors to help students become independent learners. Tutors who are trained to assist students in developing soft skills empower students to improve their study skills, enabling them to learn outside of the classroom as well as outside of the tutoring center.
3) Utilizing a clear tutor evaluation process. A formal and thorough tutor evaluation process provides tutoring centers with quality assurance, encourages tutors to improve their skills, and establishes a culture of professional development.

4) Collaborating with faculty. Not only do faculty provide tutoring centers with recommendations for tutors, but faculty also are a key resource for encouraging students to seek tutoring services. Positive relationships with faculty provide students with a stronger support system within tutoring centers.
5) Utilizing early-alert systems in which faculty or staff can refer students for tutoring. Early-alert systems provide faculty, staff, and tutoring centers with a structured system to use in order to provide intentional outreach to students who are having academic difficulty. Such a system enhances communication among faculty, staff, and students, making tutoring services seem more responsive and accessible.

Findings about EKU Tutoring Standards

Research Question Two (RQ2) identified the extent to which Eastern Kentucky University's (EKU) tutoring services meet the standards of best practices at the institutions studied in RQ1.

Overview of Results

EKU's tutoring program somewhat met the best practices found at Austin Peay and UAH. Each of the five practices were at least partially evident in the practices of EKU's tutoring program, as indicated in Table 4.5 and found through archival data at EKU. The tutoring program at EKU fell short of full implementation of the best practices found regarding tutor training and evaluation, but the program did include faculty input at

the level of the other institutions. In this section of the chapter, each of these practices will be more fully detailed.

Table 4.5. Extent to Which EKU Met Best Practices Found at Austin Peay and UAH

Practice	Austin Peay	UAH	EKU
Centralized tutor training that corresponds with CRLA guidelines	3	3	2
Training tutors to help students become independent learners	3	3	2
Clear tutor evaluation process	3	3	2
Collaboration with faculty	3	3	3
Utilization of early-alert systems in which faculty or staff can refer students for tutoring	3	3	3

Note. The degree is on a scale of 1 to 3: *1 - not evident*, *2 - practice is somewhat evident*, *3 - evident in all centers campus-wide.*

Tutor Training

As a CRLA level-two certified program, EKU did not have the CRLA level-three certification of Austin Peay or UAH at the time of this study. CRLA level-three certification requires all of the elements of level-two certification, plus experienced tutors must develop and present training to the new and level-two tutors. EKU had level-two certification, which requires 20 hours of training and 50 hours of face-to-face time with students in tutoring sessions.

In addition to the difference in the level of tutor certification, one issue at EKU was that some tutoring centers on campus did not participate in the tutor training requirements that was tracked by the EKU Tutoring program; thus, some departments

had tutoring with untrained or only partially trained tutors. Similar to UAH, EKU saw some departments from time to time that decided to implement their own tutoring programs, and the Office of Academic Readiness, which contained the EKU Tutoring program, had to reach out to those departments to explain the training requirements for inclusion in CRLA certification. Some of these areas reported that they did not find it financially feasible to pay to train their tutors and thus would not participate.

The majority of centers on campus, however, did have trained tutors, including the largest programs that had the most student check-ins for tutoring: the Mathematics and Statistics Tutoring Center, Noel Studio, EKU Gurus, the Chemistry Tutoring Lab, and the Physics Tutoring Lab. These programs all participated in semester training or provided their training outlines to the EKU Tutoring program for tracking. Furthermore, these programs provided the names of all tutors to EKU Tutoring so that the program could publically recognize those tutors who reach each training level.

Tutor Training for Independent Learning

One element of tutor training at Austin Peay and UAH involved equipping tutors to help students develop into independent learners, but these topics were only offered as electives in tutor training at EKU. These electives were generally taken after tutors attended training that covered foundational topics of tutoring such as the structure of a tutoring session, ethics, and questioning skills. As long as tutors attended semester training and covered the required topics, they were not required by every department to reach certification levels. Tutors who attended these semester training events would, by default, reach level-one training, but only some areas required them to attend training regularly. Noel Studio and EKU Gurus were required to attend pre-semester training and

weekly sessions. EKU Gurus were encouraged and paid to attend electives offered by EKU Tutoring, the Counseling Center, the Center for Career and Co-op, as well as other opportunities that would enrich their tutoring practices.

Tutor Evaluation

The tutor evaluation process at EKU varied across departments, causing it only to partially meet the best practice of the two exemplary programs. Previously, any supervisors at EKU were expected to fill out a standardized form to evaluate student workers. The campus transitioned to an online evaluation process of employees, but this had not yet been extended to student workers, including tutors.

Some tutoring centers on campus did have a process to evaluate tutors, but this practice was not common to all of the tutoring centers at EKU. Noel Studio had a clear evaluation process for each of its tutors. Students filled out evaluations at the end of sessions, as well as received a follow-up request for evaluation towards the end of the semester. These evaluations were used in a formal evaluation process with the tutors. The other centers that fell under EKU Tutoring's training guidelines provided students with surveys when they logged out of centers that asked for feedback about their session. These surveys asked about their experience with the tutor. The coordinators at these centers used these to provide feedback to the tutors, but no formal evaluation process took place. The EKU Gurus were implementing a process similar to Austin Peay's, but the evaluation process had not yet been completed.

Collaboration with Faculty

EKU's tutoring program met the best practices regarding faculty collaboration found at Austin Peay and UAH. With the exception of the EKU Gurus, the Bratzke

Center for athletes, and the housing office's Student Academic Success (SAS) Team, all of the tutoring centers on campus that meet CRLA guidelines were coordinated by EKU faculty. These centers were either supervised by a department chair or a faculty member named by the department chair. Having faculty-led tutoring centers assisted in how the supervisors collaborated with faculty. The tutors hired, therefore, were faculty-approved. Noel Studio was also administered by faculty. Their tutors were often embedded in first-year writing courses to provide classroom support, so even the tutors were working side-by-side with faculty.

Both coordinators for EKU Gurus and SAS taught a freshman seminar course, providing them some insight to the classroom experience. The supervisor of the EKU Gurus went to department chairs and other faculty to ask for applicant recommendations; additionally, no tutor could tutor for a course without a faculty's recommendation letter for each course covered. The coordinator for SAS also coordinated living-learning communities, affording her regular contact with faculty, as well.

Early-Alert Systems

Like Austin Peay and UAH, EKU had an alert system in place that enabled further input from faculty. After the fourth week of classes, faculty completed out a progress report in which they indicated whether a student was doing satisfactorily or unsatisfactorily in each course. Faculty who had 090/095-, 100-, and 200-level classes were required by the provost and the registrar to fill these out, and faculty who taught courses at other levels also may participate. The faculty could also indicate issues on the progress report through check-boxes on the form or by written comments.

The progress reports allowed for faculty referrals to tutoring centers. One box that faculty could check on the progress reports was "tutoring recommended." Tutoring centers on campus received the reports appropriate to their academic areas so that the centers could reach out to the students referred. As was the case with Austin Peay, tutoring centers at EKU saw a spike in traffic after the progress reports were released to students. Faculty could also use Accudemia, learning center tracking software, to refer students, but this was rare. Typically, faculty relied on the progress reports or by simply directly referring students to tutoring centers on campus.

Required Tutoring

One practice that EKU followed that was not indicated as a common practice at Austin Peay nor UAH was the use of required tutoring. Like UAH, some EKU faculty did require the use of tutoring for their classes. For example, some English faculty required students to meet with a writing consultant (tutor) in Noel Studio for full credit on written assignments. Additionally, as with the other institutions, athletes were required to go to tutoring regularly at EKU. EKU's Bratzke Center required that freshmen athletes spend eight hours of study time a week in the Bratzke Center or another tutoring center on campus.

In addition to these areas, however, EKU students who were admitted to the university through the Eastern Bridge program were required to check in at a tutoring center on campus for four hours a week during their first year of college. These students were considered at risk of dropping out of college because they lacked the college readiness skills that data show are key to retaining students. Bridge students were admitted through the program because they did not reach a high school grade-point-

average (GPA) of 2.5 and they did not reach benchmark scores on the ACT. This tutoring requirement is tracked by the Office of Academic Readiness and Testing. As the representative from Austin Peay pointed out, however, the Eastern Bridge program lacked an "or if" repercussion, and many students did not meet the required time but did not face consequences.

Findings of the Impact of Required Tutoring on Student Achievement

An analysis of Research Question Three (RQ3) showed the differences in academic achievement among first-year, high-risk EKU college students who a) met the requirements of an academic program that mandates tutoring, b) did not meet the requirements of an academic program that mandates tutoring, and c) were not required to participate in an academic program that mandates tutoring..

Participation in Tutoring

A total of 212 students were included in this analysis and were divided into three groups for the study. A total of 21 students were classified as members of the full participation group specifically because they met the program requirement of checking in four hours a week at a tutoring center on campus, according to archival data at EKU. For the purpose of this study, full participation included those students who reached 35 total hours of tutoring. While this equates to slightly fewer than four hours a week, holidays and other events prevented students from logging in for four hours some weeks. Additionally, students had the option to attend different workshops and other academic events that were not included in Accudemia's check-in totals, and Noel Studio uses a different tracking tool than Accudemia, so consulting hours with students are not

included in the data. The researcher, therefore, used the natural break found in check-in times at the 35 hour mark.

A second group represented a total of 81 students in the partial participation group. These students were enrolled through the Eastern Bridge program, as well. These students fell below 35 tutoring hours.

The null participation group included 110 students who had the same high school grade-point-average and test score range as the Eastern Bridge students but were not required to participate in the program because they had no more than one developmental course need. Additionally, these students showed academic proficiency by meeting testing benchmarks through the ACT entrance exam, EKU placement tests, or another testing medium authorized through the State of Kentucky. While some of these students utilized tutoring centers, none were recorded to have checked in for 35 or more tutoring hours. Those students in the null participation group who did check in, did so less often.

Some students within the grade-point-average and ACT score range were not included in any of the three groups. Athletes were not included because they are registered through an advising center on campus that requires them to check-in at their study center for eight hours a week. These students may also face repercussions with their coaches if they do not meet requirements. Students who participated in the Summer Bridge program were also not included in the data because they were required to attend tutoring during the summer session and may have already generated a habit of going to tutoring that was not yet formed in the first-time freshmen in the Eastern Bridge program. Also not included in the numbers are part-time and online students as well as students who attend regional campuses. The regional campuses only have access to online

tutoring; the tutoring requirements for part-time students are worked out on a case-by-case basis; and online students may check in for online tutoring, but they are not tracked through Accudemia.

Results of Required Tutoring

As indicated by a one-way ANOVA, a significant difference exists in grade-point-averages among the three groups according to their level of participation: full participation (2.62), partial participation (2.16), and null participation (1.73), seen in Table 4.6.

Table 4.6. ANOVA of Variance in GPA Based on Full, Partial, or Null Participation in Required Tutoring

Groups	*Participant Count*	*Sum of GPA*	*Average of GPA*	*Variance*
Full Participation GPA	21	55.10	2.62	1.55
Partial Participation GPA	81	174.68	2.16	1.34
Null Participation GPA	110	190.75	1.70	1.41

An analysis of variance showed that the effect of participation in tutoring on GPA was significant, $F(2,209) = 6.41$, $p = 0.002$, indicated in Table 4.7. There does appear to be a significant difference in GPA between the full participation (2.62) and null participation (1.73) groups. A difference is also noticeable between full participation (2.62) and partial participation (2.16).

Table 4.7. Source of Variation and Significance Between and Within Groups Based on Participation in Required Tutoring

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	17.88	2.00	8.94	6.41	0.002	3.04
Within Groups	291.49	209.00	1.39			
Total	309.37	211.00				

A second test conducted to determine the difference in retention among the three groups revealed no significant different among the three groups. Table 4.8 shows the differences in retention based on a chi-square goodness of fit test. The chi-square found a P-value of 0.66, thus no significant difference in retention was found among the three groups.

Table 4.8. Difference in Retention among Three Groups Based on Participation in Required Tutoring

Expected	Retained	Not Retained	Number of Observations
Full	16.64	4.36	21
Partial	64.19	16.81	81
Null	87.17	22.83	110
Total	168.00	44.00	212

A third test found that students fully participating in tutoring services, despite entering EKU with academic deficiencies, on average maintained a significantly higher GPA (2.62) compared to students who entered EKU with fewer academic deficiencies and without requirements to participate in tutoring (average of 1.73). This two-sample t-test assuming unequal variances was conducted to compare the grade-point-averages in full and null participation, as shown in Table 4.9. The results show a significant

difference in the grade-point-averages for full participation (M=2.62, SD=1.55) and null participation (M = 1.73, SD = 1.40); t(27) = 3.02, *p = 0.003*.

Table 4.9. T-Test: Two-Sample Assuming Unequal Variances Between Full and Null Participation in Required Tutoring

	Full GPA	*Null GPA*
Mean	2.62	1.73
Variance	1.55	1.41
Observations	21.00	110.00
Hypothesized Mean Difference	0	
Df	27.00	
t Stat	3.02	
P(T<=t) one-tail	0.003	
t Critical one-tail	1.70	
P(T<=t) two-tail	0.005	
t Critical two-tail	2.05	

While students who did not meet the tutoring requirements of the program had a lower GPA (2.16), it was not statistically lower than those who met the program requirements (GPA 2.62), as indicated in a Welch's t-test for unequal sample sizes and shown on Table 4.10.

Table 4.10. Difference in GPA Between Full and Partial Participation in Required Tutoring

	Full GPA	*Partial GPA*
Mean	2.62	2.16
Variance	1.55	1.34
Observations	21.00	81.00
Hypothesized Mean Difference	0	
Df	30.00	
t Stat	1.55	
P(T<=t) one-tail	0.07	
t Critical one-tail	1.70	
P(T<=t) two-tail	0.13	
t Critical two-tail	2.04	

While the two populations who participated in the Bridge program had a GPA difference between the two participant groups, there was not a significant difference in

the grade-point-averages for full participation (M = 2.62, SD = 1.55) and partial participation (M = 2.16, SD = 1.34); t(30) = 1.55, $p = 0.07$.

A final test was conducted test to determine the difference in retention between the full and partial participants, revealing no significant difference. As indicated in Table 4.11, the chi-square found a P-value of 0.57, thus no significant difference in retention was found between the two groups.

Table 4.11. Difference in Retention Between Full and Partial Participation in Required Tutoring

Expected	Retained	Not Retained	Number of Observations
Full	17.09	3.91	21
Partial	65.91	15.09	81
Total	83	19	102

Summary of Research Findings

The findings suggest that best practices in tutoring high-risk, first-year students focus on programs that have thorough tutor training and evaluation programs and collaboration and input from faculty. The findings also suggest that EKU's tutoring practices somewhat meet those best practices at the other institutions, while also including an extra practice, required tutoring for high-risk students. The findings of the analyses of groups of students with differing participation in tutoring indicate that the number of tutoring hours makes a difference and requiring tutoring helps those students in the most need of assistance. These findings are based on responses from Austin Peay State University and the University of Alabama in Huntsville (UAH) and archived data from Eastern Kentucky University (EKU).

The responses of administrators at Austin Peay and UAH revealed their best practices for tutoring programs as determined through a detailed survey, phone interview, and analyses of their websites. The data indicated five best practices:

1) Centralizing tutor training to correspond with College Reading and Learning Association (CRLA) guidelines;
2) Training tutors to help students become independent learners;
3) Utilizing a clear tutor evaluation process;
4) Collaborating with faculty; and
5) Utilizing early-alert systems in which faculty or staff can refer students for tutoring.

The data from Austin Peay and UAH compared to EKU's archival data show that EKU follows the best practices found at those institutions but not to a full extent. Additionally, EKU includes a tutoring requirement for high-risk students.

The extra practice found in RQ2 was analyzed in RQ3 to determine whether a tutoring requirement for high-risk, first-year students made a difference in the Fall 2013 freshman cohort at EKU. The quantitative data indicates that students who participate in the Eastern Bridge program's tutoring requirements fared better than those who did not participate in the program at all. The difference between those in the program who met the tutoring requirements and those who participated and did not meet the requirements, however, is not statistically significant. While not significant, the performance indicators do favor the group that meets tutoring requirements.

Quantitative analyses compared three populations of students: full participation in the tutoring requirement in the Eastern Bridge program, partial participation, and null

participation, which was comprised of those students who were not enrolled in the Eastern Bridge program. Results showed a significant difference among the three groups based on their fall grade-point-average (GPA) with the full group earning the highest GPA (M=2.62), the partial group having the second highest (M=2.16), and the null group earning the lowest (M=1.73). A chi-square goodness of fit test, however, did not reveal a difference in retention among the three groups (p=0.66). Data revealed a significant difference between full (M=2.62) and null (M=1.73) participation (p=0.002), but no significant difference between full (M=2.62) and partial (M=2.16) participation (p=0.07).

Chapter Five will examine these outcomes and discuss their implications for future practices, policies, and research.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND FUTURE RESEARCH

This chapter provides a discussion of the results of this study regarding tutoring services and the impact of required tutoring on high-risk students. This chapter also recommends applications of the results in light of recent developments in higher education and lists suggestions for future research regarding tutoring practices. Current literature indicates several barriers to tutoring for academic success. First, high-risk students are less likely than their college-ready peers to use tutoring services. If they do go to tutoring, tutoring center supervisors often lack a clear list of best practices to serve these students. The literature also calls for further study into the impact of mandatory tutoring on high-risk students. This study addresses these gaps in current research by delineating best practices in tutoring programs that serve high-risk students and identifying the impact of required tutoring on the academic success of a group of high-risk students.

Best Practices of Exemplary Tutoring Programs

One purpose of this study was to investigate the best practices for tutoring high-risk, first-year students. This purpose was accomplished by a) determining best practices in tutoring programs at institutions with success in serving high-risk students, b) using the best practices found in the first phase of the study as guidelines to evaluate the services offered at EKU in order to determine to what extent EKU's services are in keeping with best practices at other institutions, and c) analyzing the differences between high-risk

college students at EKU who are in a program that mandates tutoring versus students who are not in such a program in order to discover whether required tutoring makes a difference in the academic success of high-risk students. The findings were then used to determine whether programs that serve high-risk students should consider mandated tutoring services as a best practice.

This mixed-methods study found Austin Peay State University and the University of Alabama in Huntsville (UAH) have five best practices in common. The study also revealed that EKU partially aligns with these practices.

To increase the likelihood of retaining students, these best practices for tutoring have been identified. The exemplary tutoring programs:

1) Centralize tutor training to correspond with College Reading and Learning Association (CRLA) guidelines;
2) Train tutors to help students become independent learners;
3) Utilize a clear tutor evaluation process;
4) Collaborate with faculty; and
5) Utilize early-alert systems in which faculty or staff can refer students for tutoring.

Tutor Training

One best practice found from the tutoring programs in this study is centralized tutor training that aligns with CRLA guidelines. Proper training of tutors is crucial to providing students with quality service. While the literature focused on the importance of well-trained tutors and provided guidance from the College Reading and Learning Association (CRLA) and the Association for the Tutoring Profession (ATP), it did not

delineate the areas for training focus nor the approaches for delivering and monitoring training. Centralized tutor training enables universities to ensure that all tutors on campus are focused on the success of students, understand proper tutoring techniques, and stay current with approaches in their field.

Practices at Austin Peay and UAH indicate the importance of training tutors to help students develop the skills necessary to become independent learners. Since high-risk students often lack the soft skills needed to be successful in college, such as study habits and time management, one goal of services for first-year students is to shape their habits and abilities through early intervention. The literature reviewed in this study did not specify content of tutor training, although CRLA guidelines do permit study skills as an elective in tutor training. This study shows the importance of requiring tutor training content related to soft skills development.

Tutor Evaluation

This study indicates that a thorough tutor evaluation process is important to the success of tutoring programs. Both supervisors at Austin Peay and UAH asserted that their evaluation process is key to providing quality tutoring services. The literature mentioned session observations, session notes, and reflection by a peer educator but only implied an evaluation process through these suggestions. Furthermore, the CRLA requires tutor evaluation, but the organization does not detail the depth expected. The literature, therefore, revealed a gap in understanding the importance of the tutor evaluation process. This study fills that gap by specifying the need for a clear and thorough evaluation process.

Tutoring programs at both institutions use tutor reflections, observations, and formal meetings in evaluations with tutors. These evaluations are then used to retain, remediate, or release their tutors. Such a thorough evaluation process would be particularly important at schools that serve high-risk students as the quality of tutoring can provide further incentive to attend sessions as well as enhance independent learning. Tutors who are not evaluated may not be effective and may not empathize with high-risk students, leading to negative experiences, giving high-risk students another reason not to use the service. Quality service, however, could ensure that students return for more assistance because they are receiving the help that they need to be successful in their college courses.

Faculty Collaboration

The findings of this study emphasize the importance of faculty involvement with tutoring programs. Austin Peay and UAH involve faculty with tutoring services by requesting referrals from faculty as to which students they should hire, which tutors could cover certain courses, and even included them on the hiring process in those cases where the faculty were willing to participate. Both institutions indicated the importance of regularly involving faculty in their tutoring programs to create buy-in to their missions and operations. Although the literature reported the importance of faculty involvement in promoting tutoring at institutions, detail is limited as to the depth of that involvement, focusing primarily on how faculty prompt students to use tutoring. This study shows the depth to which faculty should be involved in tutoring programs.

The tutoring centers at Austin Peay and UAH make concerted efforts to engage faculty. These efforts help develop a sense of trust and support between faculty and staff.

Having a sense of investment in support services like tutoring increases the engagement of faculty, building their confidence in the services offered. This also improves the likelihood that faculty will refer students to the tutoring centers, which increases the chances that students will work with a tutor.

Early-Alert Systems

Another way faculty engage in tutoring efforts on campuses is through early-alert systems. The tutoring supervisors at Austin Peay and UAH rely on formal academic alert systems used by faculty to pull students into their centers. This approach provides faculty input, as well as facilitating the centers in engaging those students most at risk of failing a course. These systems bring students into their centers—often the most difficult step in providing high-risk students with tutoring services. Systems like these also provide faculty with more opportunities for engagement with tutoring centers. While this practice is common procedure at many colleges and universities, the supervisors at Austin Peay and UAH stressed its importance to their programs as a best practice.

Early-alert systems provide early intervention opportunities with students so that faculty and tutoring centers can make personal contact with students to get them the help they need. While some institutions post midterm grade reports, that is often not timely enough for students to get the assistance they require to rebound from a challenging start. Early referrals and personal intervention reach students where they are and soon enough to make a difference.

The Extent to Which EKU's Tutoring Program Meets Best Practices

This study found that EKU is somewhat, but not fully, in alignment with the best practices found in the tutoring programs at Austin Peay and UAH. While EKU has room for improvement in areas involving tutor training and tutor evaluation, the tutoring program reflects best practices when engaging faculty.

Tutor Training

Centralized tutor training is somewhat evident at EKU since the tutoring program at the institution has CRLA level-two tutor training certification. Most of the tutoring centers on campus participate in the EKU Tutoring program's training events; however, that does not apply to all of the centers. Some centers on campus, therefore, do not train their tutors according to CRLA guidelines. While these centers are very few in number and are not covered by CRLA certification, students visit tutoring centers to see a tutor—they may not realize that the tutor with whom they are working is not a trained tutor. This creates an inconsistency in quality services across campus.

Furthermore, on-going training for tutors is only required by a limited number of tutoring centers. As the findings suggest, on-going training allows tutoring programs to train tutors in helping students with soft skills development. Those centers at EKU that do not require tutors to move up in CRLA training levels with on-going training are likely not helping tutors to focus on developing independent learners.

Tutor Evaluation

Although a formal evaluation process is identified as a best practice for tutoring centers, a formal evaluation process is not standard for all of the tutoring centers at EKU. Those centers that fall under CRLA certification do request feedback from students

through surveys, at minimum, and two of the centers have more detailed evaluations of their tutors. Overall, however, tutoring programs develop their own evaluation process and may simply limit this to surveys. Those programs that do not participate in CRLA certification may not even use surveys for evaluation of tutors.

Faculty Engagement

Among the best practices identified in this study, one of EKU's strongest tutoring practices is the engagement of faculty and the use of an early-alert system. EKU's tutoring centers engage faculty in a variety of ways. Those centers coordinated by academic departments are supervised by an EKU faculty member. The other tutoring supervisors request tutor candidate recommendations from faculty and require letters from faculty for tutors to cover a subject. One center within an academic department at EKU encourages faculty to hold their office hours within the tutoring center.

EKU also has an early-alert system, called Fourth Week Progress Reports, that enables instructors to refer students to tutoring, communicates this referral to students, and provides tutoring centers with information for outreach. This system is successful as faculty actively engage in submitting reports, especially those instructors who have first-year students. Tutoring centers contact students from the reports following their release to students, and this outreach is effective. In fact, tutoring centers see a marked increase in the number of students who check in for tutoring after students receive their progress reports. This combined effort of faculty and staff through the use of an early-alert system reflects the best practice identified in this study.

The Impact of Required Tutoring on High-Risk Students

The results of this study show that students who participated fully in the tutoring requirement had a significantly higher grade-point-average than those who were not required to participate. Although the results were not statistically significant, retention was higher for students who had required tutoring as well. Previous research showed that tutoring positively impacts the success of high-risk students in that high-risk students who utilize tutoring services have a higher grade-point-average (GPA) compared to those high-risk students who do not use tutoring. Studies also determined that high-risk students who use tutoring are more likely to be retained. The literature did not indicate if high-risk students who are required to go to tutoring are more successful than similar students who do not have such a requirement. This study, however, addresses that question by showing that high-risk students who are required to go to tutoring are academically more successful than high-risk students who do not have such a requirement.

A concern required tutoring elicits, however, is how to motivate students to follow the policy put into place. Many students in this study did not meet the tutoring requirement and did not perform as well academically as those students who met their required tutoring obligations. The fact that students did not face repercussions for non-compliance could have caused students to ignore the requirement. The literature did not suggest solutions to that issue, nor does EKU have policies in place to address the concern.

Recommendations

Based upon analysis of the findings of this study, the following recommendations are offered for Eastern Kentucky University as well as other universities that desire to have a successful tutoring program to serve high-risk students:

1. EKU should provide centralized tutor training campus-wide to ensure students are receiving quality service from trained tutors.
2. EKU tutoring administrators should require all tutors to participate in on-going training and to work up to CRLA level-two certification topics. This would maximize the number of students who receive assistance with soft skills development through tutoring services.
3. EKU should implement a formal evaluation process for tutors at all centers on campus in order to maintain quality services.
4. EKU should encourage further collaboration with faculty by involving faculty in interviewing tutor applicants. Additionally, faculty could be invited to hold office hours in tutoring centers in order to build collaborative networks between student services and academic programs.
5. Universities should monitor tutoring programs to ensure that all tutoring centers are complying with CRLA certification standards.
6. As colleges and universities enroll underprepared students, universities should put programs and policies into place that provide impetus for high-risk students to use tutoring centers. One solution is implementing a policy that provides conditional admission to high-risk students with the requirement that they use tutoring services regularly.

Future Research

This study indicates that required tutoring has an impact on the academic success of high-risk students. The data from one comprehensive, regional, four-year university in Eastern Kentucky focused on fall-to-spring retention rates. Future studies could be expanded to analyze fall-to-fall retention, multi-year enrollment, and graduation rates of students. Data could also be studied to analyze the long-term use of tutoring centers by students in order to determine whether they developed habits of using student support services as suggested in the literature. This research could also be expanded to other colleges and universities in the United States.

As found in this and other studies, high-risk students do not tend to use support services. Further study of mandatory tutoring is needed to determine what motivates students to use these services, whether or not they are mandated to do so. Additional studies could help to determine what incentives or repercussions prompt students to seek assistance.

Additionally, this study analyzed the practices in tutoring programs at two four-year universities with strong retention of high-risk students. Another study could use these practices to gauge the practices at similar universities to see if they are consistent. The practices could then be used as a tool to measure the quality of services at other institutions.

Implications

Universities like Eastern Kentucky University work hard to keep opportunities open to all students, including those who may not be college-ready. If a university invests in services to ensure student success, it must not only ensure that the services follow research-based best practices, it must also ensure that students use the services. Research shows that tutoring helps students perform successfully in their college courses, but by making tutoring as necessary as textbooks and as expected as class attendance, universities create a culture of support that helps students earn a college degree and form the transferrable skills vital to a successful future.

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APPENDIX 1

Tutoring Center Survey

Section 1. General Information

Best Practices in Tutoring Services and the Impact of Required Tutoring on High-Risk Students

Thank you for considering participation in a research study about tutoring high-risk university students. If you are over 18 years of age and hold a position that involves oversight of tutoring services, you are asked to respond to this survey about tutoring at your institution.

Your institution has been selected because of its reputation for best practices when working with high-risk university students. This survey is designed to find out how tutoring and other support services are conducted at your institution, and how student participation in tutoring is tracked.

No identifiable information about individual students will be included. Completion of this survey is voluntary. You will receive no compensation, and you may stop at any time. In addition to completing this survey, you will be asked to participate in a follow-up phone interview with the researcher, Lara Vance, who is undertaking this survey as part of dissertation research.

If you have questions, you may contact Lara Vance at lara.vance@eku.edu, or Tara Shepperson committee co-chair at tara.shepperson@eku.edu. If you have other concerns you may also contact Eastern Kentucky University Sponsored Programs at 859-622-3636.

This survey may take up to 45 minutes to complete. You may leave and return to the survey at any time. By continuing with this survey, you indicate consent to participate in the study.

Thank You

1. University Name: _____
2. Your Name: _____
3. Your Title: _____
4. Tutoring Center Name: _____
5. Email Address:_____
6. Best Contact Phone: _____
7. Do you agree to conduct a phone or in-person interview with the research to clarify responses on this survey? Yes No

Section 2. Supervision and Management of Tutoring

8. How is your tutoring program organized? Please select the one response that best describes how your university tutoring program works:

   ____ Centralized (One location)

   ____ Centralized (Multiple locations)

   ____ Decentralized (Some departments or colleges have their own tutoring,

training is handled by one coordinator)

____ Decentralized (Some departments or colleges have their own tutoring and tutor training)

____ Decentralized (All departments or colleges run their own tutoring)

____ Other (Please explain: _____)

9. What is the structure for supervision of your tutoring program?

____ One supervisor over all tutoring on campus

____ Each location has a supervisor

____ Supervised by selected faculty or department heads

____ Other (Please describe: _____)

10. How many tutoring locations do you have on your primary campus?

11. How many locations do you have at extension campuses (if any)?

12. How are the tutoring locations determined (by subject matter, convenience, etc.)?

Section 3. Types of Tutoring

13. What types of tutoring are available? (Please indicate below.)

_____ Peer-to-peer

_____ Graduate student led

_____ Group sessions (like Supplemental Instruction or other)

_____ Faculty/staff led

_____ Mentoring

_____ Other (Please explain: _____)

You may explain your answers here: _____

14. If your campus has mentoring programs that include tutoring, please provide the types of mentoring available.

    _____ Peer-to-peer mentoring/tutoring

    _____ Graduate student mentors/tutors

    _____ Faculty mentors/tutors

    _____ Staff mentors/tutors

    You may explain your answers here: _____

Section 4. Tutors and Training

15. Is your tutoring program CRLA certified? If so, at what level?
16. How are tutors on campus trained?

    _____ Centralized training that is supervised by one program.

    _____ Training is held in the department or program locations but is reported to one coordinator.

    _____ Training is held in the department or program locations.

    _____ Other (please specify) _____

17. If tutor training is supervised or coordinated centrally, who determines the training topics?
18. If tutor training is held in various departments or programs, how is the quality of tutor training ensured?
19. Who are your tutors

    _____ Undergraduate students

    _____ Graduate students

    _____ Staff members

_____ Faculty

20. How are tutors selected in your program?

21. How are tutors in your program evaluated?

Section 5. Outcomes of Tutoring

22. On average, how many students check in for tutoring each semester?

23. How do you track tutoring in your center/program?

24. What are the positive elements of this tracking system?

25. What are the negative elements of this tracking system?

26. Do you track the success of ALL students who check in for tutoring in your center? You may comment here:

27. If you track the success of certain populations of students who check in at your center, please indicate which populations you track.

    _____ Freshmen

    _____ Under-represented students (such as African-American or Latino)

    _____ First generation

    _____ Students in specific programs

    _____ Other (please specify) _____

28. How do you know how students who receive tutoring are doing in classes?

29. How do you measure student outcomes?

30. Are you tracking whether tutoring makes a difference for students?

31. If you track whether tutoring makes a difference for students, how do you monitor this?

32. If you are tracking the difference that tutoring makes, what are the outcomes?

Section 6. Identification of High-Risk Students:

33. Define high-risk students at your institution:

34. What demographics often fall into the high-risk definition at your institution?

35. What are academic signs of a first-year student who is high-risk?

    _____ Standardized test scores are below benchmark

    _____ The students needs developmental courses or courses with support.

    _____The students have a low high school GPA.

    _____ The students place below benchmark on university placement tests.

    _____ Other (please specify) _____

36. In academic year 2014-15, what percentage of all freshmen students participated in at least one tutoring session during the year? (If you do not have access to this data, please indicate.)

37. In academic year 2014-15, what percentage (or how many) high-risk freshmen students participated in at least one tutoring session during the year? Explain how you measure or estimate this. (If you do not have access to this data, please indicate.)

38. Are high-risk student required to participate in tutoring services?

    _____ Yes, always

    _____ Yes, often

    _____ Sometimes, it depends

    _____ No, generally not

    _____ No, never

39. If your answer to Question 38 is Always, Often, or Sometimes, please provide additional information about the characteristics of students who are required to participate--this may include specifics about the programs that require tutoring, including the program names.
40. If your answer to Question 38 is Always, Often, or Sometimes, please provide information about how the requirement is enforced.
41. If your answer to Question 38 is Always, Often, Sometimes, or Generally Not what percentage or how many freshmen students in tutoring were required to participate during the 2014-15 academic year? (If you do not have access to this data, please indicate.)
42. If your answer to Question 38 is Generally Not, please provide additional information about how often or under what circumstances that students are required to participate in tutoring.
43. Are there other groups of students who are required to participate in tutoring (for example, athletes, students in special programs, etc.)?
44. If you answered Yes or Sometimes to Question 43, indicate how tutoring is determined.
45. If you answered Yes or Sometimes to Question 43, please provide information about how the requirement is enforced.

Section 7. Relationships with Mentoring and Other Programs

46. Does your tutoring program also include mentoring?
47. If your answer to Question 46 is Yes or Sometimes, please indicate how mentoring is integrated with tutoring.

48. Does your tutoring program also include Supplemental Instruction or other types of structured classroom learning assistance?
49. If your answer is Yes to Question 48, please indicate how SI and similar programs are integrated in your tutoring program

Section 8. Faculty

50. Do your tutoring services have methods for faculty or staff referrals?
51. If your answer to Question 50 is Yes or Sometimes, please describe the methods of referrals, even if they are informal ones.
52. To your knowledge, do any faculty members require students to attend tutoring for their classes?
53. If your answer to Question 52 is Yes or Sometimes, please provide information about the courses and/or faculty that require tutoring.
54. If your answer to Question 52 is Yes or Sometimes, please describe how the requirement is enforced.
55. Please describe your center's relationship and/or collaboration with faculty.

Section 9. Open Response Questions

56. What is the most important practice in your center that makes tutoring successful?
57. Please describe two more practices in your center that make tutoring successful.
58. What are the practices in your center that you believe best help to retain high risk students? They may be the same or different from questions 56 and 57.
59. What are other practices at the university that you believe support students and contributes to their success? You may address any programs or practices or the general culture of the university.

60. Please add any additional comments to this survey that you believe are important to analyzing best practices in tutoring centers.

VITA

Lara Kristin Vance was born in 1970 in Pennsylvania. After graduating high school in Eastern Kentucky, she earned her Bachelor of Arts in Secondary Education with emphasis in Language Arts and Social Studies in 1994 from Marshall University in Huntington, West Virginia. As she continued her teaching career, she earned her Master of Arts in Secondary Education in 2002 from Marshall University. Currently, she serves as the Associate Director of the Student Success Center at Eastern Kentucky University.