Kansas higher education policies and the impact on college access: A critical policy analysis

by

Justin David Pfeifer

A.A., Colby Community College, 2000
B.S., Kansas State University, 2002
M.S., Kansas State University, 2006

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Special Education, Counseling, and Student Affairs
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

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Abstract

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Dedication

To my children, Cecilia, Evelyn, and Opal. Let my doctoral journey be a reminder to develop a passion for learning and challenging yourself. If you do, you will never stop growing.

Chapter 1 - Introduction

Higher education has long been a driving force in an individual's pursuit of the American dream. Over the last hundred years, higher education has shifted from a luxury accessible only by select groups to a system that is increasingly accessible by all and a foundational factor in upward economic mobility. The passage of the G.I. Bill, the establishment of the Pell Grant, the passage of the Civil Rights Act of 1965, and the establishment and growth of the open access, community and technical college sector have all played significant roles in expanding access to higher education in America. Despite the considerable progress, work remains. There is still a significant percentage of the population that face barriers that prevent them from easily accessing higher education.

This introductory chapter will describe the current issues related to the college access discussion and review the literature surrounding the topic. The chapter will describe the problems associated with access to higher education, specifically regarding access to public community and technical colleges in Kansas. The purpose of the study will be described, and the research questions will be presented. The chapter will lay out the significance of the study to the college access discussion and to the stakeholders in Kansas, including the individuals impacted, the broader economy, and the higher education institutions themselves. The chapter will conclude with a discussion of the limitations of the study and definitions of key terms used in the study.

Introduction of the Issue

The public higher education landscape in Kansas, like in many states, provides students with multiple options to access higher education. The four-year sector includes six state

universities and one municipal university. The two-year sector features 19 community colleges and seven technical colleges that provide opportunities for students to either get started on the first two years of a bachelor's degree or to gain skills that lead directly to a career. Like many states, the Kansas two-year sector promotes accessibility through low tuition costs and an open access mission where any student with a high school diploma is admitted. Ideally, the combination of two- and four-year higher education options supports an environment where anyone who wishes to access higher education after high school can do so, regardless of their academic or financial standing. However, the policies and legislation currently in place in Kansas may limit access to higher education, especially to an open-access community or technical college, based on geography. The Kansas Board of Regents (KBOR) serves as the governing body for the six state universities and each of the two-year colleges are governed by a local board of trustees. While the two-sector is locally governed, KBOR and the state of Kansas serve a central role in their operation through policy. These policies also play a role in determining who has access to a particular type of college in their home area. This study sought to explore how policy shapes geographic access higher education in Kansas, including the identification of educational access and match deserts across the state. The following section provides a brief literature review, a discussion of the frameworks proposed in this study, and an overview of the policies related to college access in Kansas.

College Access

The college going process is often framed as a choice that students and families make about where to attend and what major to select. Research in the college access literature views students as having free choice and making rational decisions based on their own future desires, best interests, and market demands (Rhoades, 2014; Tierney & Venegas, 2009). There is an

assumption in this line of research that decisions about where to attend college are made in a linear and rational manner that culminates in a college decision sometime during the senior year of high school. However, for many students the decision is not this straightforward. The college choice process for many students, especially low-income and underrepresented populations, includes many important choices beginning with whether to attend college at all. Following that are decisions about where to go to college, what to study, and whether to go full-time (St. John et al, 2005). The circumstances that influence the college decision process for these students vary widely but are important to understand to gain a more nuanced understanding of the college going process.

While the rational choice model is commonly used in college choice research, alternative models like the nexus model and cultural/ecological models attempt to consider the wide variety of factors influencing the college choice process. The nexus model considers the financial aspect of the college choice process and represents the nexus between the cost to attend and the amount of aid available to students (St. John et al., 2005). Low-income students and students from under-represented populations are often more sensitive to grant aid levels and rising tuition costs (Paulsen & St. John, 2002; St. John et al., 2005). In addition to affordability concerns, the complexity of the federal financial aid process can be daunting for many potential college students and can prove to be a significant barrier to college access (Dynarksi & Scott-Clayton, 2008a). Factors like the financial aid system are also at the center of cultural and ecological models of college access. These models recognize that many students experience the college choice process in a non-linear fashion and are influenced by many factors and people in their social sphere, including family, friends, teachers, and counselors (Tierney & Venegas, 2009). Familial pressures, socioeconomic status, first-generation status, lack of support structure, and

other social circumstances can heavily influence the decision-making process for a student and family, sometimes restricting the choices available to them. Another factor that can influence the college decision process is the proximity of higher education institutions to a student's local area.

Impact of Geography

The impact of geography and the local ecology of higher education institutions can also play a significant role in the college access process and is a central aspect of this study. There is a growing body of research in the field of spatial inequality that explores the impact of geography on college access. In a similar fashion as research on food deserts, where proximity to affordable and healthy food options has an impact on a population's health and well-being; lacking proximity to higher education options can limit opportunity and negatively impact the economic and social benefits associated with higher education. In their study on factors that influence college application, Griffith and Rothstein (2009) found that the greater the distance between a student's home and a selective college, the less likely they were to apply. Hillman (2016) studied the relationship between college attainment rates and the number of four-year colleges within a specific commuting zone. The research found that areas with higher numbers of colleges had higher attainment rates and found the inverse to be true as well. In addition to the myriad of factors that factor into the college decision process geography and proximity to higher education have significant influences on college going behaviors.

Policy

When geography and proximity to higher education are included in the college access discussion, it highlights structural inequalities that may contribute to equity gaps across populations and geographic regions. Public policy contributes to these inequalities through decisions about investment in infrastructure such as public transportation, investment in higher

education, financial incentives such as investment in the Pell grant program or other federal and state student aid programs. Additionally, public policy is central to decisions on where to locate public higher education institutions, where they are legally able to offer courses, and what types of programs and degrees they are allowed to offer. In a case study of the establishment of the University of Texas at San Antonio (UTSA), De Oliver (1998) illustrated the politics inherent to the development of public policy and the decision about where to locate the university upon its establishment in the late 1960s. While the inception of the university was motivated by a desire to expand higher education access to Latino and other underserved populations, the eventual location on the periphery of the city was influenced by politics. The site selection resulted in a longer commute and increased costs for the underserved populations it was designed to benefit.

De Oliver's (1998) study also highlighted how policy decisions can contribute to inequalities within communities. While the effects of these inequalities may be observed on a broad scale (e.g., between cities, states, or regions), they may also explain differences within these areas down to a neighborhood level. Dache-Gerbino (2018) studied this in the Rochester, New York area. Using Geographic Information Systems (GIS) technology, Dache-Gerbino (2018) was able to show areas within Rochester that were either a college desert, lacking college options, or a college oasis, which is an area with higher numbers of higher education institutions. Additionally, the study revealed that there were inequalities along racial lines. Specifically, the college oasis areas were largely located in the suburban areas with a higher White population. Conversely, the college desert areas were located Black and Latino neighborhoods (Dache-Gerbino, 2018).

Dache-Gerbino's (2018) study focused primarily on the presence of four-year universities within a geographic area to determine the presence of a college desert. While this work is

critical, it omits the important role that two-year colleges play in college access and affordability. Two-year community and technical colleges enroll students who may not be academically, culturally, or financially ready to enroll at a four-year college or university right out of high school. Furthermore, many two-year colleges do an excellent job of catering to the non-traditional student and provide an appealing environment for someone entering college later in life with other work and family responsibilities. Additionally, not all potential college students need or want a bachelor's degree. The two-year college sector offers a wide variety of workforce driven programs that are designed to train or upskill individuals looking to enter the workforce quickly. The discussion around college accessibility and college deserts also needs to include the importance of having the right college match for the student within a geographic area. While there may a higher education institution nearby, it still may not be accessible if the institution does not match their academic and career interests and needs. Klasik et al. (2018) defined a match desert as an area lacking one public, four-year non-selective college and two public two-year colleges. The present study further defines a match desert to consider the type of two-year college and the types of degrees and programs offered. This is a critical distinction that helps provide a more nuanced understanding of the access to higher education in each geographic area.

Kansas Legislation and Policies

State and local policy typically establishes the academic scope, and the geographic boundaries where public college and universities are allowed to operate. Kansas has separate definitions for two-year community colleges and two-year technical colleges. Specifically, Kansas law limits the types of degrees that can be offered by Kansas technical colleges. Kansas community colleges can offer the Associate of Arts (A.A.), Associate of Science (A.S.), and the Associate of Applied Studies (A.A.S.), whereas the technical colleges can only offer the A.A.S.

degree, which is designed to be a terminal degree leading directly to the workforce. Furthermore, state statute prohibits a community college from operating in the same county as one of the six state universities. The effects of these legislative and policy decisions may contribute to access and match deserts within the state of Kansas.

Statement of the Problem

An established goal of the Kansas Board of Regents (KBOR) is to increase the number of Kansans who choose to attend a college or university in the state post high school. Furthermore, KBOR wishes to increase access to higher education across the state and close enrollment equity gaps for traditionally underrepresented student populations as well as between rural and non-rural populations. KBOR's previous strategic plan, Foresight 2020, set a goal of 60% for educational attainment for the state (Kansas Board of Regents, 2017). While the state made progress over the five-year period ending in 2020, the state fell well short of the goal with 54.8% of the adult population holding a postsecondary credential (Kansas Board of Regents, 2020a). The public higher education system in Kansas has taken the first step in identifying the importance of an educated populace and the importance of expanding higher education access to a broader population within the state. However, it is important to review the legislation and policies that guide the public higher education system in Kansas to determine how those laws may contribute to the conditions limiting college access across the state.

Two main policy issues are at the center of this study: first, the legislation and KBOR policies that dictate service area assignments, including exclusions where colleges and universities are not allowed to offer programming; and second, the laws that establish the types of degrees allowed to be offered within the two-year sector, specifically, the limitation imposed upon the technical colleges from offering the Associate of Arts and the Associate of Science

degrees. A main hypothesis of this study is that this legislation and policy statements actively work against the stated goals of the Kansas Board of Regents by limiting college access and creating access deserts and match deserts in certain geographic areas within the state.

Continuing with the current policies potentially leaves many students without access to an appropriately matched institution of higher education within their local geographic area. Developing a baseline understanding of the overall Kansas public higher education system and determining geographic areas within the state that lack access to options within each sector can inform the Regents on how the system can be evaluated and adjusted to improve access to higher education. This research sought to explore the policy language, political influences, and the impact of these policies on access to higher education in Kansas and uses the analysis to propose changes to policy and legislation that aligns with increasing college access.

Purpose of the Study and Research Questions

The purpose of this mixed-methods study is to examine the power differentials that manifest within Kansas public higher education because of policies surrounding territory assignments and degree offerings for Kansas two-year community and technical colleges. The study provided insight into the differential effects of these policies among different populations on access to higher education, based on their geography. Using critical policy analysis, the study explored the policy language, the political forces at work, and the impact the policy has on access to higher education in the state of Kansas. Specifically, the study included analysis of legislation, policy documents, documentation of funding structures, and federal financial aid policies and guidance. The analysis utilized spatial inequality as a theoretical framework to compare college attainment rates across geographical areas. Geographic comparison is especially relevant in this study due to policies that impact populations differently based on the county

where they reside. In this study, attention is given to the influence these policies have on college going behaviors, particularly for traditionally underserved populations such as low income, minority, and first-generation students. The study was guided by the following research questions:

Research Question 1: What language, values, and goals are used in Kansas higher education policy that impact the location and academic scope of community and technical colleges?

Research Question 2: In what ways and to what extent do Kansas' policies regulating community and technical college territories and degree offerings produce differential effects, related to geography, in access to higher education?

Research Question 3: What spatial disparities exist in the location of Kansas community and technical colleges, measured by the percentage of the Kansas population with geographic access to each of the public sectors of higher education in Kansas: university, community college, technical college?

Overview of the Study

This mixed-method study relied on two theoretical frameworks as a lens with which to conduct the study and view the results. First, critical theory provided a broad theoretical framework for the study and a foundation for the study's focus on confronting social and political influences that may limit college access and limit upward mobility for certain populations (Kincheloe & McLaren, 1994). Spatial inequality provided a framework for the study to explore how the effects of legislation and policy may differ geographically (Lobao & Saenz, 2002). The methodological framework for this study was critical policy analysis, which builds on the foundation of critical theory to examine policy not just to determine effectiveness, but to examine the history of the policy, the values behind it, the influences at play when the

policy was established, and the influences that maintain the status quo (Edmondson, 2004). Critical policy analysis studies are born out a spirit of advocacy for support or change of polices that impact our communities and provide an opportunity to evaluate the policy while educating stakeholders on the issue. A key distinction between a critical policy analysis and more traditional policy analysis is the political nature of the analysis. Traditional policy study typically seeks to determine the effectiveness of the policy within the current political and social structure (Edmondson, 2004). In contrast, critical policy analysis seeks to understand the political, social, and economic forces that influence the policy. Critical policy researchers seek to understand the imbalance of power that exists between the policymakers and those that are impacted by the policy, who typically lack power and influence (Young & Diem, 2018).

The mixed method approach allowed the researcher to use a qualitative approach to examine the historical, economic, and political influences that have shaped the structures currently in place. A quantitative approach provided a method to quantify the impact of the policies from a geographic perspective. The qualitative phase of the study relied on data from policy documents including Kansas state legislation, Kansas Board of Regents polices and documents, and federal student aid policies and regulations. The data was collected and organized into digital files for analysis. A combination of analytic memo writing, and coding was used to identify themes within the policies and draw out language within the documents relevant to answering the research questions. Finally, the data was analyzed with a goal of exploring gaps or inconsistencies between the stated goals of policymakers and stakeholders and the language present in the legislation and policies.

The quantitative phase of the study sought to measure the impact of the policies on geographic access to public higher education in Kansas. The study drew data from the U.S.

census tract datasets and locations of Kansas public postsecondary colleges and universities from the Integrated Postsecondary Education Data System (IPEDS). Geographical Information Systems (GIS) software was used to measure the distance between a localized geographic area and the nearest public university, community college, or technical college. The analysis provided calculations of straight-line and driving distance from each geographic area to the location of each college or university. Additionally, population data from the U.S. Census dataset was used to calculate the percentage of the state's population that is within proximity to the different types of public colleges within the state.

Significance of the Study

The results of this study proved to be significant on multiple levels and for different stakeholders. Connecting more citizens to higher education can have positive impacts that permeate across communities and for several populations. Certainly, the benefits to the individual are clear. Higher levels of educational attainment correlate with increased economic, social, health, lifespan, and other benefits (Keller, 2021; McMahon, 2018; Perna, 2005). There are benefits for neighborhoods, cities, and states to increase the number of educated people within those communities. Working to close equity gaps among different populations and different neighborhoods helps increase the economic vitality of a community while simultaneously reducing the strain on social services, community supports, and other social safety net organizations.

An educated population can be a significant economic driver. Currently, in the fall of 2023, labor shortages are prevalent with more open jobs than qualified candidates to fill them (Cebula & Foley, 2022). Addressing the labor shortage and closing the skills gap relies on reaching populations that are not currently served by higher education. The state of Kansas fell

well short of the 60% goal for college attainment outlined in the KBOR Strategic Plan, Foresight 2020, where just 54.8% of adults in Kansas have some form of postsecondary credential (Kansas Board of Regents, 2020a). Developing an understanding of how the current legislation and policies surrounding degree offerings and territory assignments impacts the attainment rates can inform legislators and higher education officials in Kansas of barriers to college access. The results of the study provide insight into geographic areas that may be negatively impacted by the current policies and provide avenues to address the barriers with the benefit of building a stronger labor force.

Colleges and universities within the state of Kansas may also find significance in the results of this study. The fall 2022 preliminary enrollment numbers for the Kansas Board of Regents system showed a continued decline in overall enrollment that has been persistent for several years (Kansas Board of Regents, 2022) This decline was present even before the COVID-19 pandemic and has only worsened as the system felt the effects of the pandemic. The overall system, which includes the state universities, community colleges, and technical colleges has declined 9.2% over the last five years. The well documented drop in birth rates during the Great Recession will likely exacerbate the enrollment declines as the number of high school seniors dwindles over the next several years (Grawe, 2018). These trends are not likely to reverse by continuing to market to and recruit the same populations of students within the existing structures. The results of this study show how the existing laws and policies contribute to equity gaps and how removing structural barriers to college access can provide access to new populations of previously underserved students.

Limitations of the Study

This study had potential limitations to consider. First, the study focused on laws and policies specific to the state of Kansas which limits the generalization to other states. The results from Kansas would likely not give insight into another state's situation as the laws and higher education ecosystem varies greatly from state to state. However, the methodology and frameworks could be used to examine the higher education ecosystem in other states. An interesting research tract could explore states with low college attainment rates and examine the policies and legislation of those states using this study's framework. Conversely, states with high college attainment rates could also be examined to identify policies that promote college access.

A second limitation of this study is that the method used to measure proximity falls short of measuring the impact on actual college attendance. This study sought to measure the distance between the population and the nearest college or university. Other studies have utilized longitudinal datasets that analyze the impact of geography on college admission and enrollment behaviors. Griffith and Rothstein (2009) used a national longitudinal dataset to explore the role of proximity on the likelihood of applying to a selective college. Similarly, Alm and Winters (2009) used IPEDS data and information from the University of Georgia system to analyze college attainment rates among different commuting zones. The lack of reliable data sources with individual student data specific to Kansas precluded this study from taking a similar tract as those two studies. Future research tracts building on this study could include a focus on assessing the impact of distance on college going behavior for individual students. A particular focus on the populations that are not currently served, and therefore do not show up in state and federal datasets, would be an interesting angle to explore.

Definition of Key Terms

Technical College: A two-year college in the state of Kansas that primarily offers career and technical education and is authorized by state statute to award the Associate of Applied Science (A.A.S.) degree.

Community College: A two-year college in the state of Kansas the offers both a general education curriculum designed for transfer to a four-year college or university and career and technical education. Authorized by state statute to award the Associate of Arts (A.A.), Associate of Science (A.S.), Associate of Applied Science (A.A.S.) degrees.

College Attainment Rate: The percentage of the adult (>18 years of age) population in Kansas that have earned some form of postsecondary credential. Credentials include short-term certificates, technical certificates, associate degrees, bachelor's degrees, master's degrees, and doctoral degrees.

College Access: The ability for an individual or a specific population to be admitted to an institution of higher education but also to overcome barriers to completion such as affordability, academic compatibility, and proximity to education and services.

Chapter Summary

The college access movement, while having made significant strides, has work remaining to close equity gaps and expand access to populations currently underserved by higher education. The literature on college access highlighted the presence of many factors that influence decisions on what college to attend and where, but more importantly, when and if to attend college. Financial pressures, family dynamics, socioeconomic factors, first-generation status, and other social circumstances can affect an individual's future college decision. Geography and proximity to higher education is another significant factor that the research has shown contributes to

college access. The location and establishment of public higher education institutions is driven largely by public policy and legislation at the state level. More research is needed to understand how the public policy regarding territory assignments for public higher education institutions and degree offerings impacts the geographic access to higher education.

This study proposed to examine the policies and legislation currently in place in the state of Kansas that influence college access as it relates specifically to geography. This study fills a current gap in the literature that explores the impact of policy decisions on proximity to higher education. The following chapter will outline a review of the literature pertaining to college access, including college choice models, financial and other influences, and the local higher education ecology. The impact of geography as it relates to college accessibility will be discussed followed by a review of the specific policies in Kansas that influence territory assignments and degree offerings.

Chapter 2 - Literature Review

This chapter focuses on a review of the literature surrounding the topics of college access and the impact of geography on college opportunity. The chapter includes an overview of college choice frameworks, financial influences and other factors affecting college attendance, and the impact of local higher education options on a student's likelihood of attending college. The literature review explores geography as a key factor in the college choice process, specifically the proximity of college and universities to a potential student's home. Finally, the chapter concludes with research on the role of policy in perpetuating structural inequities, including college access deserts and college match deserts, that limit opportunities for students to attend postsecondary education.

College Access

College Choice Models

A research tract in the literature on college access focuses on the choices that students make about whether to attend college and where they attend college. Much of this literature looks at students as consumers using a rational choice framework where the assumption is that they make an informed, logical decision on their future education based on market demands (Rhoades, 2014; Tierney & Venegas, 2009). There is an assumption in this research that students have free choice in this matter, that an "individual makes a subjective assumption about what happens and has logical incentives to fulfill those actions" (Tierney & Venegas, 2009, p. 368). Regarding choosing a college or choosing to attend college, the rational choice approach suggests that the decision is approached in a similar manner to any other consumer transaction, such as choosing one restaurant over another or purchasing a television. College choice research often focuses on college selection as opposed to college access and much of the research focuses

on “undermatching” where qualified but low-income students choose a college below their academic profile (Rhoades, 2014, p. 918). Rhoades (2014) argued that the goal in this research is “facilitating more applications more than transforming college practices” (p. 918). The ever-present desire and need for colleges to meet enrollment goals either by increasing the overall size of their enrollment, enrolling a more diverse student body, or enrolling students that raise the academic profile of their student body creates a dynamic where colleges are competing for the students who are already likely to go to college instead of working to expand the overall college-going population.

Research that looks beyond the rational choice model recognizes that decisions about whether and where to attend college are not made in a linear, logical manner; researchers have sought alternative models to the rational choice framework. These models, including the nexus and cultural ecological models, consider the myriad of factors at play in the decision to attend college and understand that “the pathway to college choice may be filled with a variety of inputs and outcomes that may be unique to the individual and cannot be explained by a rationally based cost-benefit analysis” (Tierney & Venegas, 2009, p. 370). It is important to consider factors like the family dynamic, financial factors including financial aid, academic standing, career expectations, and the local ecology of education systems in research on college access and choice. Furthermore, demographic factors such as socioeconomic status, age, race, gender, and first-generation status are all critical factors that have significant influence on a student’s college decision process (Rhoades, 2014; St. John et al., 2005; Tierney & Venegas, 2009). Additionally, the decision is not always as simple as whether to attend or not, especially for low-income and underrepresented populations (Berger, 2000). St. John et al. (2005) recognized that several important choices are part of the overall decision to attend postsecondary: “whether or not to

attend college, which college to attend, whether to go full-time or part-time, what to study, whether to drop out, stop out, transfer, or complete their studies" (p. 547). The college choice is much more nuanced on an individual level, and alternative decision models are important for researchers to understand the decision-making process for all types of students.

The nexus approach to the college choice process recognizes the importance of cost and the nexus between the actual cost to attend and the amount of aid available to students (St. John et al., 2005). The response to the financial aspect of the college choice process is different for each student and is largely influenced by factors like their socioeconomic status, race, and social circumstances (St. John et al., 2005). Logically, students from lower socioeconomic situations experience the cost of education differently than those from the middle class and upper class, and that experience can influence their college choice. Paulsen and St. John (2002) found lack of grant aid impacted lower income students more than other groups, whereas middle class students were influenced more by lack of access to loan and work-study aid. St. John et al. (2005) found a similar pattern when applying the nexus model to college choice and persistence based on race. The researchers found that African Americans were more sensitive to grant aid levels and the cost of tuition than White students, who were more reliant on loan availability to make college and persistence decisions (St. John et al., 2005). This finding is significant in that rising tuition levels and reduction in grant investment at the federal, state, and local levels disproportionally affect African Americans, further exacerbating the achievement gap (St. John et al., 2005). A student's response to the financial aspect of college attendance is not the same across all groups. Looking at college choice and access through the lens of the nexus approach gives researchers, practitioners, and policymakers a more nuanced view of how the interplay between the cost of attendance and available grant and loan options can vary between demographic groups.

In addition to the nexus approach, other research on college choice and access has approached the issue from a cultural or ecological framework. These models diverge from the rational choice model in two significant ways. First, as discussed above, the rational choice framework assumes students make college decisions in a linear fashion and make a college decision once they gather the right information to make a rational decision (Tierney & Venegas, 2009). Cultural and ecological models recognize that college choice decisions are influenced by a variety of sources and are typically not linear, meaning the decision is not always made within a rigid structure and timeline (Tierney & Venegas, 2009). For example, in a rigid, rational model, it is assumed that a student begins college and career exploration early in their high school career, learning about possible pathways. Throughout high school, they gain further information about careers, college destinations, and how to pay for college. As they approach graduation, they check off the important boxes like taking the ACT/SAT, taking college visits, filing the FAFSA, and submitting college applications before finally deciding. The cultural and ecological models recognize that students likely do not make their decision in this manner, but rather are more fluid and influenced by factors outside the rigid structure. Tierney and Venegas (2009) stressed that "decisions are reached and implemented in dialogue with a multitude of social actors—families, teachers, peers, and counselors, among others" (p. 382). The framework assumes that the student does have a choice on whether to attend college or not, however the choice is made with influence from multiple sources and influences (Perna, 2006; Rhoades, 2014; Tierney & Venegas, 2009).

Financial Influences

There is a growing body of research surrounding the influence that finances can have on going to college or not. The cost of attendance, the family's financial situation, the process of

applying for federal financial aid, and even the perception of college affordability can all factor into the decision to attend college. In many cases, these influences continue even after the decision to attend college has been made and have considerable influence on the college experience and decisions to persist or drop out of college (Goldrick-Rab et al., 2016; St. John et al., 2005). The role of the family in the college decision process is well documented (Rhoades, 2014; St. John et al., 2005; Tierney & Venegas, 2009). This influence certainly extends to the financial aspect of going to college. Rhoades (2014) pointed out how rising tuition levels impact the decision-making process, especially for middle- and lower-income families. In these cases, the decision on whether to attend college and which college to attend can become a family decision based on its ability to afford the cost. Rhoades (2014) explained that "parents facing high tuition bills likely make college choice more a 'we' than 'I' decision" (p. 920). The family also plays a significant role in the process of applying for federal financial aid. The complexity of the process and the impact financial aid has on college access and persistence is well documented in the literature and can be a significant barrier for many students. (Rhoades, 2014; St. John et al., 2005; Tierney & Venegas, 2009). The completion of the Free Application for Federal Student Aid (FAFSA) is one of the best predictors of future college attendance, yet many students struggle to navigate the bureaucracy (Bettinger et al., 2012; Dynarski, 2003; Dynarski & Scott-Clayton, 2008a). The complexity of the aid system can also have a disproportionate effect on those who are least equipped to navigate the system. Avery and Kane (2004) found "considerable evidence of low-income youths with high aspirations and high implicit valuations of college failing to clear seemingly minor hurdles in the process of applying for college and applying for financial aid" (p. 390). The FAFSA and the resulting process to complete the financial aid process poses additional requirements for low-income students and for families with

complicated financial situations. Families with complicated tax situations (e.g., Government assistance, unemployment benefits, child support, alimony payments) are faced with providing additional documentation to complete the financial aid process (Dynarski & Scott-Clayton, 2008b). The financial aid verification process, essentially an audit, requires the submission of additional documentation to verify the information submitted on the FAFSA. This burden can be a deterrent for students who lack social capital or knowledge of how to navigate the system. This may disproportionally affect low-income and first-generation students, derailing potential college plans simply due to the complexity of the financial aid process (Bettinger et al., 2012; Dynarski, 2003; Dynarski & Scott-Clayton, 2008b). Castleman and Page (2014) found that "when faced with a multitude of pressing requirements but without sufficient support or know-how to meet them, low-income students who have overcome many hurdles on the path to college may still falter in their college ambition" (p. 203).

Factors such as the financial process are important to understand as part of a cultural/ecological framework for college access. Examining factors like the financial aid system further supports the notion that the college choice decision is not a rational choice in which a student and family make the best decision from a variety of options. Circumstances surrounding the college decision and process, some outside the student's control, may have significant influence on the decision. Those circumstances may force the decision for the student and the family, taking the "choice" out of their hands. Further research to understand the structures and processes that are tangential to the college choice process is needed. Additionally, applying a cultural or ecological framework to the research is needed to change structures, like the financial aid process, that damper college-going. Tierney and Venegas (2009) argued, "Rational choice is more an explanation of the status quo rather than an examination of organizational or societal

power, structures, and functions" (p. 369). It is important for researchers and practitioners to understand that the decision-making process for a great number of students is shaped by many people, influences, beliefs, and structures is important to gain a full picture of why students choose to go or not go to college, and why they choose to go to the colleges they do.

Factors Influencing College Attendance

Within the literature on college access and attendance, significant attention is given to the college choice process. A common assumption in this research is that individuals make their college choices using a rational model where expected benefits are weighed against costs (Perna, 2006; Rhoades, 2014). The literature on college attendance and access takes a more nuanced approach to the college choice process, recognizing that many factors, including race, age, gender, socioeconomic status, geography, availability of colleges, and familial and community pressures all factor into an individual's decision to attend college (Chen & Zerquera, 2018; Hillman, 2016; Jepsen & Montgomery, 2009; Long, 2004; Perna, 2006). In many cases, where traditional college choice research focuses on the decision of which college to attend and where, many students are faced with a decision on whether to attend college at all (Long, 2004; Perna, 2006). Shaw et al. (2009) attempted to further define different types of potential college students in their research on college bound seniors. The researchers conducted a cluster analysis using multiple categories as variables including academic achievement, extracurriculars, demographics, parents' income and education, and high school characteristics. Their cluster analysis found several unique clusters including "Privileged High Achievers/Athletes, Disadvantaged Students, Average Students Needing More Guidance, Mostly Female Academics, and Privileged Low Achievers" (Shaw et al., 2009, p. 686). These clusters helped to further dissect the types of potential college bound students; however, the research only looked at the

college aspirations of the students in the population and did not include data on actual college attendance. Furthermore, the population sample included students who took the SAT and indicated that they were college bound, omitting other students who had not taken the SAT and whose college plans were unclear. The assumption that a clear distinction exists between those who plan to attend college and those that do not ignore the students on the margins who may be pushed in one direction or another by several factors (Alm & Winters, 2009; Perna, 2006). The reality for many students is that college options may be limited by the circumstances in their lives. Barriers may exist in the form of economic, cultural, academic, and/or geographical obstacles. The remainder of this section will focus on the different factors that can impact these college attendance decisions.

Recognizing the importance of college attendance to the individual and to the broader society, Perna (2006) proposed a conceptual model for studying the differences in how students make choices about whether and where to attend college. Building on research that looked at the impact of financial aid literacy, academic preparation, and cost on college choices, Perna (2006) suggested a conceptual model that did not rely on a single approach applied across the spectrum of individuals but rather a model that recognizes the variation within different demographic groups. Additionally, Perna's (2006) model drew from multiple disciplines, including economics and sociology, to better understand how college choice decisions are made. A key strength of this model is in the assumption that "there is not one set course leading to college enrollment, but multiple routes are possible" (Perna, 2006, p. 116). Perna's (2006) model incorporated four layers that influence an individual's college choice. The outer layer considers the social, political, and economic aspects of the college decision. The cost of college is at the heart of this layer and presents a scenario where the burden of paying for higher education has shifted from

the state to the student, making it more difficult for students and families to access higher education. At the same time, Perna (2006) suggested that the media's portrayal of the rising cost of tuition omits the availability of financial aid and presents the perception that college is simply unattainable. However, Perna (2006) acknowledged the need for more research on the influence of media on the perception of college affordability. Policy surrounding the cost of higher education is also included in this layer as a factor influencing the college choice process. Regulations guiding the federal financial aid system, the shift from grant-based aid to student loans, and state level financial aid policy are factors identified by Perna (2006) as important in the college choice process.

The higher education institution itself plays a role in the college choice process and is the next layer in Perna's (2006) model. How colleges communicate with prospective students regarding the cost of attendance and the financial aid process is central to this layer. Perna (2006) acknowledged that the geographic proximity of a college to a student may have some impact on the level of knowledge about the college going process for the student and family. However, Perna (2006) pointed out the reactive nature of information from the college to the student. In most cases, the college is prompted to send information to the student only after the student has initiated contact. This contact can be through activities like applying, listing the college on the FAFSA, or taking a college visit. Perna (2006) asserted that student groups who are less likely to apply to college, such as low-income groups, may be impacted more by the reactive nature of the college-to-student communication, further contributing to variances among groups in knowledge about paying for college.

The third layer of the model considered the school and community influence on the college access process. Perna (2006) suggested that the secondary schools, and their varying

level of resources available to support students contribute to vast differences in students understanding and knowledge of the college going process and financial aid processes. These differences often fall along socioeconomic lines (Perna, 2006). The level of support a school can provide to students regarding postsecondary options is positively associated with the level of income of the students attending the school (Perna, 2006). Differences can be found between high schools as well as within schools as high achieving and high-income students often have access to a greater amount of college resources and often have relationships, in and out of school to assist with the college going process (Perna, 2006). Students who are from first-generation or low-income backgrounds, and under-represented minorities may face economic, social, language, and other barriers that influence their college going process.

The innermost or foundational layer is what Perna (2006) described as the individual's "habitus," which includes demographics like race, gender, and age, along with social and cultural capital. The inclusion of social and cultural capital into the model is key in college access work as researchers seek to better understand equity gaps in college access and attendance. Developing a deeper understanding of the cultural and community influences can guide researchers and practitioners in their work. Chen and Zerquera's (2018) study on the impact of proximity on the college choice process furthered this understanding by exploring the impact of family values and obligations on the college-going process. The researchers analyzed data from a cohort of ninth grade students in a large Midwest region. They compiled data from several sources including a statewide survey on future college plans, high school level data, geographic information, and data on enrollment from the National Student Clearinghouse (Chen & Zerquera, 2018). The analysis was targeted on postsecondary enrollment with options of no enrollment, enrollment within the region, enrollment outside the region, and enrollment out of state (Chen & Zerquera,

2018). Additionally, the researchers included multiple independent variables including student demographics, school level characteristics, and information from the statewide survey. Their study found that Latina/o students rely heavily on their family and community connections as both a source of information and as a key source of support during the college choice process (Chen & Zerquera, 2018). Additionally, the researchers found that the Latina/o culture, which values family and community relationships, can have obligations that can impact an individual's college decision process, including increased pressure to stay close to home, especially for females (Chen & Zerquera, 2018).

Age can also be a factor in the college choice process and is often overlooked in the literature (Jepsen & Montgomery, 2009). In nearly all the research on college choice, the individuals studied are traditional aged students who are in high school or have recently graduated. Understanding that students often must make a choice out of high school to directly enter the workforce, the literature overlooks those students who decide to enter college later in life or who enter college, drop out and return later. Additionally, much of the literature, as well as federal reports such as the Integrated Postsecondary Educational Data System (IPEDS), focuses on a unit of measurement of First-Time, Full-Time Freshmen. This measurement ignores a significant population of students attending part-time or who have completed some college but have not finished a degree and wish to return to school. In Fall 2019, 2.8 million undergraduates at four-year institutions attended part-time and 3.5 million two-year college students attended part-time (National Center for Education Statistics, 2021b). This federal definition of first-time, full-time freshmen ignores this significant population of students.

Local Higher Education Ecology

The local ecology of higher education institutions is another important factor in the college access dynamic. The types of colleges that are available and how far the colleges are from the student's home are important factors for many students. This is especially true for lower income students who tend to remain closer to home to attend community colleges or lower cost four-year colleges due to financial constraints (St. John et al., 2005). In an era where the building and opening of new colleges is rare, the availability of certain types of college in a student's local area is largely set (Rhoades, 2014). It is important to consider this in college access research and understand how the nearby presence, or lack of presence, of different types of colleges can impact college-going rates for different groups. Since the college decision process is different for every student, it is important to approach research in this area with an understanding of the various types of colleges and how they might align with a student's educational and career goals. In addition to proximity, the size and scope of a college or university, the types of academic programs, and the level of exclusivity should be considered. The open-access mission of community and technical colleges is especially important in this regard as they enroll students from a wide range of academic preparedness. Many community and technical college students do not have the required high school grades or test scores to be accepted into a more selective university or even a state university with qualified admissions (Kisker, et al., 2023).

It is also important to consider the level of diversity and support for low-income, first-generation, and under-represented populations. Rhoades (2014) pointed out the variation in available college choices across multiple metro areas and the effect on Latino college going rates. Boston, for example, has a robust higher education ecosystem with two- and four-year colleges, private and public, open access and exclusive. Despite the depth and breadth of higher

education options in Boston, there is no four-year Hispanic Serving Institution (HSI) (Rhoades, 2014). Miami, on the other hand, has a smaller number yet a similar variety of higher education options. However, Miami has several colleges with the HSI distinction (Rhoades, 2014). It is important for researchers to consider the local ecosystem and the higher education options when studying college access, choice, and persistence. Do the available options have students and faculty that look like the prospective students? Are there available supports for low-income, first-generation, and underrepresented populations? Additionally, it is important to look at college-going rates on a local level to understand variations between communities. For example, a nationwide figure on Latino college going rates may provide some insight to researchers. However, comparing Latino college going rates in Boston and Miami may glean more valuable data for each locale. Exploring other cities that lack both a robust higher education system and Hispanic Serving Institutions can provide even deeper analysis of college-going decisions, which are highly individual and influenced by a multitude of factors. This also highlights the importance of approaching college access research with a cultural and ecological lens.

Impact of Geography

In addition to the factors already discussed, including race, age, culture, socioeconomic status, and the composition of the local region's educational opportunities, there is a growing body of literature in the field of spatial inequality focused on the impact of geography on the college choice process and how geography intersects with other factors influencing college access and enrollment. This area of research, growing out of rural sociology, studies the role of space or geography in perpetuating inequalities between geographic areas (Lobao, 2004). The research in this area recognizes that many students' college options are limited by the circumstances in their own families and communities and that traditional college choice research

largely ignores the importance of location and geography in the process (Hillman, 2016; Turley, 2009). Hillman (2016) emphasized that traditional college choice theory focuses on "the process of opportunity instead of the geography of opportunity" (p. 990). These process-oriented theories often argue that failure to attend college can be attributed to issues with the college search process such as a lack of information on the process or financial options (Hillman, 2016). This perspective ignores structural inequalities that may exist in certain geographic regions that limit educational options for students, especially low income, first-generation, and minority populations (Hillman, 2016). These structural inequalities include local, state, and federal policies that limit both the number of colleges and the types of colleges in certain geographic areas, as well as the types of academic programs and degrees available to students (Hillman, 2016; Turley, 2009). The following sections will review the literature surrounding spatial inequality and college access and enrollment.

Proximity to Home and College

The role of geography, specifically the proximity of higher education options near an individual's home, can play a significant role in the college choice process and ultimately the decision to attend, or not attend, college. Multiple studies have documented the impact proximity to a college has on college attendance and completion. Griffith and Rothstein (2009) studied factors that influence college application, specifically looking at selective four-year college applications and the impact of geography on those decisions, especially for low-income students. The researchers used data from the National Longitudinal Survey of Youth 1997, IPEDS and College Board data on colleges, and student zip code data measure proximity (Griffith & Rothstein, 2009) The researchers found that the greater the distance between a student's home and a selective college, the less likely they were to apply. Similarly, Hillman (2016) explored the

role of geography in college access by measuring the number of colleges, the sector (two-year, four-year, public, private), and the selectivity of colleges in each commuting zone in the United States. Hillman (2016) found that educational attainment rates within a specific commuting zone correlated with the number of four-year colleges in the area. Conversely, areas with fewer four-year universities tend to have lower levels of educational attainment within the local population (Hillman, 2016). Hillman's (2016) research also found relationships between the racial/ethnic makeup of commuting zones and the number and types of colleges in that zone. Areas that have larger White populations tend to have more colleges overall with a higher level of selectivity. Areas with larger Black or Hispanic populations were more likely to have public two-year colleges nearby and Hispanic populated areas were much less likely to have a public four-year college in the area (Hillman, 2016). Hillman's (2016) findings support the argument that geography plays a significant factor in the long-term educational and economic future of individuals. Research on upward mobility shows that opportunities vary greatly across racial and geographic lines and where one grows up can significantly limit or enhance one's lifetime earnings (Chetty et al., 2014; Rothwell & Massey, 2015). Researchers and policymakers seeking to increase college attainment rates should first look at the local level to examine the number of colleges within the geographic zone as well as the types of colleges that serve the communities.

Alm and Winters (2009) researched the impact of distance on intrastate migration to attend college in Georgia. The researchers compiled data from the University of Georgia system and several federal databases, including IPEDS and the National Center for Education Statistics (NCES), to study the college going patterns of Georgia high school graduates from 2002. The study's key variable was distance, which was measured using Geographic Information Systems (GIS) and Census data (Alm & Winters, 2009). The researchers found a negative impact on

college enrollment as the distance to a University System of Georgia institution increases. Additionally, the authors found that proximity has an impact on the type of institution an individual attends meaning students that live near a college are more likely to attend colleges and students who live near a university are more likely to attend a university (Alm & Winters, 2009). This finding is important as it may contribute to undermatching, where students choose to attend a college that is less selective than institutions that closer match their academic qualifications (Klasik et al., 2018, Rhoades, 2014).

A similar study in Arkansas studied how proximity to a public university in Arkansas influences adult participation in public universities and how the growth of online education affected that relationship. (Roessger et al., 2023). The study used data from the U.S. Census Bureau and the Arkansas Department of Higher Education and grouped the students together at the county level. The researchers found that for each kilometer of distance the county is from the closest public university, adult participation decreased by 1.1%. Furthermore, the researchers found that the growth in online learning from 2005 to 2010 increased public college attendance for counties farther away from a public university. However, overall growth during that same timeframe grew as well and had minimal impact on closing the gap between counties close to a public university versus those farther away (Roessger, et al., 2023).

Hirschl and Smith (2020) used student level data from the Wisconsin K-12 system, National Student Clearinghouse, and American Community Survey data to explore the impact of geographic context on the effectiveness of Wisconsin high schools, including outcomes like college attendance. They found that proximity to a University of Wisconsin (UW) campus correlated with attendance at a four-year college. The researchers found that going to high school three miles from a UW campus increased the probability of attending a four-year college by five

percentage points compared to students who attended high school 40 miles away. (Hirschl & Smith, 2020). Similarly, the researchers found that students who went to high school closer to a two-year college were more likely to attend a 2-year college opposed to a four-year college, suggesting that proximity is a factor (Hirschl & Smith, 2020).

Structural Inequities

The inclusion of geography and college proximity into the college access discussion helps to further illustrate the structural inequalities that shape college decisions. These structural inequities contribute to the broader socioeconomic inequities that persist across geographic regions. Higher education, especially admission to and graduation from a selective college, can have a significant impact on the long-term economic status of an individual (Roman et al., 2021). Unfortunately, students from lower socioeconomic demographics are much less likely to attend a selective four-year college compared to peers in the highest socioeconomic demographics (Griffith & Rothstein, 2009). The structural forces that both create and perpetuate these inequities ultimately stem from the decisions of policy makers in matters such as investment in education, location of colleges, transportation infrastructure, decisions to invest in one neighborhood or another, and other policy decisions that often favor the people and neighborhoods that are already in power (Hillman, 2016).

The role of public policy in the college access discussion plays a significant and overarching role in the college choices available to students. Policy can contribute directly to college choice through programming, financial support, and admissions requirements (Dache-Gerbino, 2017). Federal programs like the Pell Grant directly support the ability of students to take advantage of higher education through financial support. Similarly, state and local policymakers directly support college access through college access programs, scholarship

support, and initiatives designed to increase college going among their citizens. Programs like the Tennessee Promise and other "Promise" types of programs attempt to lower the financial barrier to accessing higher education through the promise of free community college (Littlepage et al., 2018). Additionally, in 2021 Kansas launched the "Kansas Promise" scholarship which promotes debt-free education at the state's community and technical colleges for certain high skill, high wage programs (Kan. Stat. Ann § 74-32,271, 2021/2022). While these types of programs are seen as positive developments in the college access mission, federal, state, and local authorities can also play an indirect role in college access through policy decisions on the location of colleges, state appropriation levels, the types of degrees and certificates colleges are allowed to offer, and other factors.

The public higher education landscape in Kansas, like many states, provides students with multiple options to access higher education. The four-year sector includes six state universities and one municipal university. The two-year sector features nineteen community colleges and seven technical colleges that provide opportunities for students to either get started on the first two years of a bachelor's degree or to gain skills that lead directly to a career. Like many states, the Kansas two-year sector promotes accessibility through low tuition costs and an open access mission where any student with a high school diploma can be admitted. Ideally, the combination of two- and four-year higher education options supports an environment where anyone who wishes to access higher education after high school can do so, regardless of their academic or financial standing. The Kansas Board of Regents (KBOR) serves as the governing body for the six state universities where each of the two-year colleges are governed by a local board of trustees. While locally controlled, KBOR and the state of Kansas serve a central role in

the operation of the two-year sector through policy. These policies also play a role in determining who has access to a particular type of college in their home area.

Community and technical colleges provide an open admission, low-cost option for students to access higher education. Nationwide, the two-year sector enrolls over five million students each year, accounting for nearly 30% of all students in postsecondary education in the United States (National Student Clearinghouse Research Center, 2019). Community and technical colleges provide an avenue for access to higher education, especially for underserved populations (Chen & Hossler, 2017; Fike & Fike, 2008). Despite the large numbers of students enrolled in the two-year sector, there remains a significant need for more research and understanding of the different types of two-year colleges, the variance in their missions, and how local, state, and federal policy affects their operations and the type of student they enroll. Much of the literature on community colleges does not account for the nuanced differences in community and technical colleges, often driven by state policy. For the purposes of this study, the two-year sector is defined as both comprehensive community colleges and technical colleges. These two types of colleges are primarily distinguished by the types of academic programming they offer and the degrees they are authorized to award (Wilkinson, 1992). Technical colleges primarily offer training in specific areas that leads directly to a career upon completion (Wilkinson, 1992). While offering many types of certificates, the terminal degree in a technical college is typically an Associate of Applied Science (A.A.S) (Koltai, 1984). The A.A.S. is designed to recognize mastery of a specific skill or trade and can include a maximum number of general education credits (Technical College System, 2019).

A comprehensive community college typically offers the same type of technical education but also offers a general education transfer curriculum designed to transfer to a four-

year university (Wilkinson, 1992). This curriculum typically results in an Associate of Arts (A.A.) or Associate of Science (A.S.), although there are other less common variations (Cohen et al., 2014). The lines between these two types of two-year colleges can blur depending on the state. For example, state statute in Wisconsin limits transfer degrees to only a few technical colleges, including Madison Area Technical College and Milwaukee Area Technical College, where other technical colleges are limited by state statute to only the A.A.S. (University of Wisconsin System, 2019). Similarly, the state of Kansas limits technical colleges to only the A.A.S degree while the community college sector may offer all three-degree types (Kan. Stat. Ann § 74-32,452, 2003/2017). Furthermore, state statute limits the presence of a community college in the same county as one of the six state universities (Kan. Stat. Ann § 71-609, 1973/2011). The enforcement mechanism is the loss of state funding for any course that is offered outside one's service area without permission, effectively rendering the course or program financially unfeasible to operate. On the surface, this may not seem important, however the policies that shape the structure of higher education and subtle nuances in the different types of degrees offered may contribute to barriers in accessing higher education for populations in certain geographic areas.

In the context of this study, the geographic location of colleges plays a pivotal role in the college access discussion and, in the case of public higher education, often relies on state and local policymakers to regulate the geographic locations of new colleges and setting boundaries of existing colleges. Additionally, policymakers at the state, local, and board levels have significant authority over the missions of colleges either directly or indirectly through state appropriations (Okunade, 2004; Weerts & Ronca, 2012). While much of college access research focuses on the choices of individual students, Rhoades (2014) argued that "policy makers and colleges choose

communities/students, not just vice versa" (p. 919). The decision, or not, to locate a college in a specific neighborhood or other geographic area can have ramifications on the potential for upward mobility for the people in that area. Soja (2010) added that uneven development across geographic regions is both inevitable and clearly a key contributor to social inequities. The individual and collective decisions that are made every day in our society (e.g., where to live, where to build, where to invest in development) will contribute to some degree of differentiation based on geography (Soja, 2010). A key point is to understand that "difference between inconsequential and consequential forms of spatial injustice is vital to any collective efforts to achieve greater justice and to any workable concept of democracy" (Soja, 2010, p. 73). Applying this practice to the college access discussion requires stakeholders to examine the decisions being made regarding college access as well as examining established policy to determine what decisions have had a lasting consequential impact on spatial inequalities.

A clear example of a decision that has contributed to spatial inequality is the establishment of the University of Texas at San Antonio (UTSA). De Oliver (1998) conducted a case study on the establishment of the university, the political underpinnings of the eventual location, and the impact of the location on different demographics. The study also illustrated the importance of considering spatial inequalities at different geographic levels, including regional, city, and neighborhood levels. The establishment of UTSA stemmed from a desire to bring a four-year university to south Texas, an area of the state that is predominantly Latino and underserved in higher education access (De Oliver, 1998). Despite available locations in the core of the city, closer to the demographics it was established to serve, the ultimate location selected for the university was on the periphery of the city, closer to the more affluent, White neighborhoods in San Antonio (De Oliver, 1998). De Oliver (1998) detailed the political

influences at play in the site selection process arguing that "the interests of large landholders on the urban periphery quickly challenged proximity to lower-income and non-Anglo urban populations as the pivotal factor in site selection" (p. 278). De Oliver's (1998) analysis showed the disproportionate impact of the decision to locate the university on the perimeter of the city. Non-White and lower-income students must travel further, pay more in transportation costs, and experience more complex logistical barriers in order to access the university compared to their fellow students from more affluent, predominantly White neighborhoods (De Oliver, 1998). This case study illustrated the multiple factors at play and how a decision to establish a university under positive pretenses (increasing access for underserved populations) can be derailed through the influence of political and economic powers. The study also reinforced the need to consider spatial inequalities as both a factor and a consequence of decision-making. Similarly, Dache-Gerbino (2018) studied the impact of geography on college access in Rochester, New York. Using Geographic Information Systems (GIS) and IPEDS data, Dache-Gerbino (2018) conducted a spatial and proximity analysis of the Rochester metro area. This study was unique in that it used "hot spot analysis" (Dache-Gerbino, 2018, p. 104) to show how race is distributed geographically in the city. Additionally, the data provided a way for the researcher to analyze the relationship between neighborhoods that are predominantly White, Black, or Latino, and the presence of a college. Dache-Gerbino (2018) found that "urban areas are shaped by spatial mismatches between low-income residential areas and educational and economic resources located outside city limits" (p. 97). Furthermore, the hot spot analysis revealed that White residents of Rochester largely lived in areas with a high concentration of colleges and Black and Latino neighborhoods were in areas with few college options (Dache-Gerbino, 2018). Dache-Gerbino (2018) described these areas as a college desert and a college oasis noting that "the

college desert comprises the City of Rochester's limited number of colleges and high concentration of need" (p. 98). Conversely, the college oasis existed in the predominantly White suburbs where there were "higher numbers of colleges and high concentrations of education and economic attainment" (p. 98). The factors that determine the physical locations of higher education institutions, often driven by policymakers, tend to favor groups that are more affluent and often White (Dache-Gerbino, 2018; De Oliver, 1998). These decisions can have long lasting impacts on communities, both positive and negative, that can contribute to inequities between demographics driven by access to higher education. Exploring the factors that shape these decisions is critical for understanding how policy and geography contribute to inequality.

Predisposition Factor

Living near a college or university can also impact a student's potential to attend college through what Turley (2009) described as a "predisposition mechanism" (p. 130). This theory suggests that the visibility and influence a local college has on a community can positively influence an individual's potential to attend college. Research has found that living close to a local college, especially a selective four-year college, can expose students to opportunities that they may not have access to otherwise through programs offered by the university or simply due to familiarity due to the proximity of the college. Griffith and Rothstein (2009) and Do (2004) describe this as the "spillover effect" and acknowledged that it can be significant for low-income populations. Do (2004) studied the effect that living in proximity to a college had on the quality of college a student would eventually enroll in. The study looked at over 9,000 students from the High School and Beyond Survey for the sophomore class of 1980. The survey data was combined with data from the Bureau of Labor and the Bureau of Economic Analysis to analyze each student's location and college choice (Do, 2004). Proximity to a local college was defined

as having a college in the same county as the student's high school (Do, 2004). The research found that proximity to a top tier public university increased the quality of college attended for students in low socioeconomic demographics but did not have an impact on higher socioeconomic populations. The presence of the local university may offer programming directed at the local population and may provide opportunities for secondary students to participate in activities on campus that set students on the path towards higher education. Turley (2009) argued that students can be influenced to attend college through the local college's programming, advertisements, cultural events, and sporting events. Do's (2004) research supported this finding and suggested that the university can have a positive impact on the tone of the community, establishing a culture that has an impact on future college attendance, further cementing the role that proximity plays in college attendance.

Returning to Perna's (2006) conceptual model of college choice, the two outermost layers of the model form the center of focus for this study. The third layer of the model considers the higher education context, including type of college and location, in the college choice process. The fourth, or outermost layer, of the model considers the social, economic, and policy context of the college choice process. The types of colleges in each geographic region play a role in the college choice process and can shape how the region views higher education. Further research into this phenomenon could explore the size of the community in relation to the size of the effect on the student. Does a selective college situated in a smaller community have a bigger impact than a selective college in a larger metropolitan area? Do multiple colleges within a community weaken the effect? Similarly, does the effect only occur with top four-year universities? Does the same phenomenon apply to a community college or small university situated in a small, rural community?

Convenience Factor

The sheer convenience and lower costs of attending a local college appeal to many students. Lower costs, connections to family and community, and local employment options can all factor into a student's decision to attend college locally, leave their town to go to college, or not attend college at all, and likely factor significantly into college decisions for low-income students (Griffith & Rothstein, 2009; Hillman, 2016; Jepsen & Montgomery, 2009; Klasik et al., 2018; Turley, 2009). Turley (2009) indicated that the impact of college proximity on college attendance manifests in one of two mechanisms, a convenience mechanism and a predisposition mechanism. The convenience mechanism holds that living close to a college "may increase a student's chances of going to college simply because it makes the transition to college easier – logistically, financially, and emotionally" (p. 129). Beginning with the college search process, the convenience of attending a local college is apparent in activities like campus visits, completing applications, meeting with financial aid, and enrolling (Hillman, 2016; Turley, 2009). The costs, including time and travel make the local college an appealing and convenient option. Students may also have a level of familiarity with the local college if there are collaborations with the local school district or other activities. The increase of dual or concurrent credit offerings by colleges and universities in high schools may increase the awareness and familiarity of a college to students if the college already offers courses in their high school. In 2017-2018, 82% of public high schools in the United States offered college level dual or concurrent enrollment opportunities for their students (National Center for Education Statistics, 2020). Additionally, colleges may offer programming designed to encourage college going in local high schools and community, further enhancing the convenience factor.

Financially, the decision to attend a college close to home comes with the potential of significant savings for students. In-state tuition is one factor as well as the tuition savings that would come with attending a local community college for the first two years towards a bachelor's degree. The ability to live at home and save on housing and meals is a significant cost savings for students who choose to attend college locally (Griffith & Rothstein, 2009; Hillman, 2016; Klasik et al., 2018; Turley, 2009). The average cost of room and board across all higher education institutions in 2019-2020 was $11,920 (National Center for Education Statistics, 2021a), representing both a significant barrier to college attendance and a strong influence to live at home and attend a nearby college (Hillman, 2016; Klasik et al., 2018). Transportation costs can be a detractor for students who travel to attend college and for students who remain at home, depending on the distance from their house to the college (De Oliver, 1998; Hillman, 2016). Jepsen and Montgomery (2009) conducted a study of workers aged 25-49 in the Baltimore area to study the impact of distance on the decision to enroll and what type of school in which to enroll. The researchers found that an additional mile of commute to school could reduce college enrollment by almost 5% (Jepsen & Montgomery, 2009). This finding further supports the proximity argument and indicates that it is not limited to college choices between staying at home and moving away. The decision to attend college at all, or remain enrolled, can be impacted by proximity to the nearest college. Jepsen and Montgomery's (2009) study also provides a look at how distance may impact college enrollment for non-traditional students as it focuses on older, established workers.

De Oliver's (1998) case study on the establishment of the University of Texas at San Antonio found a disproportionate impact in transportation costs for low-income and minority students due to the location of the university in relation to those communities. The research

found that students from these areas had to travel, on average, 11.4 miles farther than students from more White and more affluent neighborhoods (De Oliver, 1998). De Oliver (1998) estimated that students from minority neighborhoods pay 159% of the costs for travel than those paid by White neighborhoods. De Oliver's (1998) research highlighted the financial impact of long commutes for students enrolling in college. The impact is like the burden on individuals who must commute long distances or take lower paying jobs closer to home due to the mismatch between their neighborhood and jobs available (Boschmann, 2008). Shay et al. (2016) also highlighted the challenges that come with commuting long distances via public transportation, including mismatched schedules, long waits, and all-day trips to access services. Dache (2022) explored the experience of students commuting by public busses from their neighborhood in Rochester, New York to college campuses in the surrounding areas. The author found that neighborhoods that were predominantly white, wealthier, and closer in proximity to private universities and colleges had shorter wait times and distances, more comfortable busses, and more advertising with college-going messaging than predominantly Black and Latinx neighborhoods with lower income populations (Dache, 2022). In the higher education context, enrollment for students with long commutes or who use public transportation can create barriers to enrolling in certain classes or programs if those classes do not align with transportation schedules. Additionally, a missed transfer or late bus, for example, can disrupt a commute and cause a student to be late or miss class, potentially impacting their completion. The research shows that transportation costs, both in real dollars and in opportunity cost, factor into a student's decision on whether and where to attend college and support the overall argument that proximity to higher education is a significant factor in the college access equation. Further research also needs to account for rural areas and urban areas that either lack completely or do

not have a robust public transportation system. Proximity can play an even more important role for these students and a lack of their own personal transportation can mean higher education options are limited completely.

Non-Traditional Students

Most research on college choice and college access focuses on the traditional 18- to 24-year-old student who graduates high school and enrolls the following fall semester in postsecondary education. This approach omits students who do not fit the traditional mold, and for whom proximity plays a significant factor in the college choice process (Hillman, 2016; Klasik et al., 2018; Turley, 2009). Choosing to attend college close to home can also be influenced by other factors such as child or dependent care, proximity to a full-time job, and connection to their family and community (Hillman, 2016). Non-traditional students, students who are parents, and students who work full-time may be limited to the colleges in their commuting zone simply due to the circumstances in their lives at the time they choose to attend college. In their study focused on the greater Baltimore area, Jepsen and Montgomery (2009) explored the impact of distance to a college on the enrollment patterns of non-traditional students aged 25-49. The researchers found that women were more likely to base their college choice on distance, likely due to the limitations on their time due to childcare, employment, and potentially working around a spouse's work schedule (Jepsen & Montgomery, 2009). The literature is limited, however, in exploring the factors that non-traditional students face when making college decisions and the role that the proximity to any college as well as the types of colleges may play in that decision.

Access and Match Deserts

The cumulative effect of decisions to locate institutions of higher education, many of which were made decades ago, has created geographic areas where populations lack access to a college or university or lack access to one that matches their academic needs and abilities. Researchers have named these areas "access deserts" and "match deserts," borrowing from terminology used in research on access to grocery stores, which has a similar disproportionate impact on low-income and minority populations (Hillman, 2016; Klasik et al., 2018). Klasik et al. (2018) studied the phenomenon of access and match deserts in their study on college application and enrollment trends for students residing in an access or match desert. Their study used data from the Educational Longitudinal Study, which looked at 10th and 12th grade students in the early 2000s. The researchers combined the data with commuting zone data from the Department of Agriculture and IPEDS data on colleges within each zone (Klasik et al., 2018). The study used descriptive statistics and regression analysis to determine if a student applied or enrolled in a college outside their commuting zone if they lived in an access desert. Additionally, they sought to determine if a student enrolled in an academically matched college if they lived in a match desert (Klasik et al., 2018). The researchers found that 12% of the U.S. high school students live in an access desert and 15% live in match deserts. Of relevance to this study is research on match deserts. Klasik et al. (2018) defined a match desert as "any commuting zone that does not contain at least one public, four-year college that admits over 75 percent of its applicants, or two public two-year colleges" (p. 170). The inclusion of match deserts is an important step in the study of college access, recognizing that not all students have the desire or the academic credentials to attend a four-year university directly out of high school. The concept of the match desert recognizes that having a university located in one's community

does not provide access if a student cannot be admitted, afford to attend, or it simply does not align with their college and career goals.

One area, however, where Klasik et al.'s (2018) definition can be improved is to further define the types of two-year colleges, specifically the types of degrees and programs offered. Policy at the state and local level can dictate the establishment and academic scope of public colleges and universities. For example, Kansas law limits the types of degrees that can be offered in public two-year technical colleges. This means that these types of colleges in Kansas are primarily focused on career and technical education designed to lead directly to the workforce. Using Klasik et al.'s (2018) broader definition of access and match deserts, students in commuting zones such as Sedgwick County, KS may not be living in a match desert due to the presence of a state university, a public two-year technical college, and access to a two-year community college in a neighboring county. This definition, however, ignored the limited scope of academic pathways offered at the technical college.

Further research is needed to consider the specific educational offerings within a geographic area. A gap in the literature exists exploring the nuances of different college levels and degree options. For example, Sedgwick County, Kansas, home to the state's largest city, Wichita, has several higher education options. Wichita State University provides a four-year public research university option. Newman University and Friends University are both smaller, private liberal arts universities. WSU Tech provides a two-year open admission option for career and technical education that leads directly to careers in areas like manufacturing, aviation, or healthcare. The county, however, lacks a true comprehensive community college where a student can access an open admission, inexpensive option to make progress toward a bachelor's degree. WSU Tech, by state statute, cannot offer the A.A. or A.S. degrees which are designed for

transfer. In many cases, students that have a desire to earn a bachelor's degree but do not meet the admissions requirements to enter directly into the state university (Goldrick-Rab, 2010; Nielsen, 2015). The lack of a true, comprehensive community college within the city and county leaves these students without a convenient education option that matches their interest and skill level.

Arguments for the status quo may point to the proximity of several community colleges in bordering counties. What these arguments fail to account for is the ability for some students to travel outside the county to access in-person higher education. Lack of reliable transportation is a significant barrier for many community college students (Kolodinsky et al., 2013; Troester-Trate, 2020; Wilkinson, 1992). Wilkinson (1992) argued that proximity to campus is a critical, need-based characteristic of community and technical colleges, along with the commonly accepted characteristics of low tuition costs and open admissions. Students who have jobs and family obligations must also consider the opportunity cost of the time needed to commute to a campus outside of their locale (Wilkinson, 1992). A similar argument is that online education is available from several community colleges and accessible from nearly anywhere. However, research shows that access to the technology and internet needed to access online learning remains a challenge for many students, especially lower income populations (Cejda, 2007; Mayfield-Johnson et al., 2014, Skinner et al., 2023). Furthermore, the use of commuting zones as the measurement to determine geographic proximity to higher education lacks the nuance to accurately describe the level of access to higher education. Specifically, it does not consider the proximity and transportation infrastructure differences between commuting zones. It is important to factor in the size of the commuting zone in terms of square miles as well as the presence and scope of public transportation within the zone. While the commuting zone metric provides a

useful method to group geographic areas in ways other than cities, counties, and states, researchers should understand the limitations of using this metric. Instead commuting zones should be used as a starting point to analyze college access and future research should consider the individual nuances of each zone to further understand the challenges that people in that zone face in accessing higher education.

In many geographic zones, transportation to and from college presents a significant barrier to many potential students. People from areas that lack robust public transportation systems and/or sprawl across large physical distances face disadvantages not only in accessing education but also in employment, health care, access to food, and other important services (Boschmann, 2008; Troester-Trate, 2020). Even for students who are initially able to overcome the transportation barrier to enroll, the challenges persist during their time at the college and can present challenges that lead to higher attrition rates (Hillman, 2016; Troester-Trate, 2020). Student may lack a back-up option for transportation or have to rely on informal options like family and friends to commute to and from campus (Shay et al., 2016). The added costs of long commutes are also a factor. The College Board's 2020-2021 living expense budgets list transportation as 17% of the overall cost to attend college (The College Board, 2020). Additionally, De Oliver's (1998) study of UTSA showed the additional cost in both time and money for students that must travel further to attend college, further adding to the disadvantages. These studies further support the argument that proximity to a college or university is a significant factor in the college access discussion.

Transportation challenges may disproportionately impact under-represented populations. A recent mixed-method study exploring barriers to Latino college completion found that Latinos experience transportation problems as a barrier to completing college at a 19% higher rate than

non-Latinos (Sablosky Ellengold et al., 2021). The researchers conducted in-depth qualitative interviews with 24 former students that identified as Spanish, Hispanic, or LatinX. The interviews revealed that transportation barriers add challenges to the college experience. The challenges include financial costs, erratic and unreliable schedules, the added time burden, and simply the cumulative stress of all the factors (Sablosky Ellengold et al., 2021). The quantitative phase of the study modeled over 20 different barriers to college completion for Latino students. The cost of attendance and transportation were the two most significant factors in explaining the gap between Latinos and non-Latinos in college completion (Sablosky Ellengold et al., 2021).

Driven by Policy

Research has shown that intergenerational mobility and future earnings are significantly impacted by the area one grows up in (Hillman, 2016; Rothwell & Massey, 2015). The "neighborhood advantage" as described by Rothwell and Massey (2015) can account for an estimated half a million dollars in lifetime earnings for people growing up in the top neighborhoods of a metropolitan area versus those growing up in the bottom neighborhoods (p. 11). Upward mobility is influenced heavily by where one grows up and lives (Hillman, 2016; McDonough, 1997; Rothwell & Massey, 2015). The cumulative effect of the decisions that influence the establishment, location, and governance of higher education institutions can have a lasting impact on individuals, communities, and cities. At the center of these inequities are policies that establish and perpetuate the stratification among geographic areas. The needs of the citizens are considered only in a complex interplay that also includes the needs and wants of other stakeholders including industry and the government. Lobao et al. (2007) described this interplay as the "relationships established between social actors via customary social practices, laws, and organizations regulating economic growth and distribution of social benefits" (p. 47).

Policy decisions to invest, or not, in the K-12 system, higher education, or infrastructure such as a robust public transportation system contribute to the overall ecosystem that influences the opportunities available for citizens in each geographic area. Inequities are created and sustained when the institutional arrangements favor stakeholders such as capital, industry, and the state over citizens (Lobao, 2004; Lobao et al., 2007; Soja, 2010). A key first step in developing equitable laws and policies is research that examines the impact of policy on a neighborhood level. The importance of considering geography in analyzing these policies helps researchers to better understand how the impact of policies varies spatially.

Differences between neighborhoods, even those close in proximity, can be stark. Bronfenbrenner's (1999) work in human development described how an individual's development is shaped by complex and intertwined systems within their environment. Miller (2012) expanded on Bronfenbrenner's (1999) work in a study on two neighborhoods, one more affluent than the other, in urban Pittsburgh where the Pittsburgh Public Schools had invested in a series of reform efforts designed to improve achievement within the district. Miller's (2012) study focused on the layers of systems outside schools to compare the two neighborhoods using geospatial analysis. Miller (2012) found that students living in the less affluent neighborhoods experienced more crime, poverty, and unemployment in their neighborhood. They were more likely to live in single parent homes, came from homes with lower educational levels, and were more reliant on public transportation (Miller, 2012). Miller (2012) found that significant variability between, and even within, the two neighborhoods is important for policymakers to consider when implementing initiatives to improve educational outcomes. Miller (2012) expressed, "The places, spaces, and periods (i.e., 'zones') that influence children's in and out of school learning are much more than the schools themselves; children are significantly affected

by their home, neighborhood, and community surroundings as well" (p. 211). These findings highlighted the importance of considering the structures inside and outside of the educational system that have a tremendous impact on the chances of success for students in some neighborhoods. College access is often framed as a choice. However, many people have choices that have been significantly narrowed due to their circumstances including their socioeconomic status, family life, quality of school, and geographic access to higher education, among others (McDonough, 1997). An important step in expanding the educational opportunities available to people is understanding the role of geography in the policies and laws that shape higher education access.

Theoretical Framework

This study was conducted using critical policy analysis to examine the laws, regulations, and policies that have shaped the public higher education landscape in Kansas. Specifically, the study explored policies that limit the presence of comprehensive community colleges to operate within the same county as a Kansas Board of Regents (KBOR) university. The study focused on the disproportionate impact these policies have on access to higher education for some Kansans and explored the disproportionate impact on underserved populations. The study relied on a combination of critical theory and spatial inequality as a foundation and theoretical lens through which the policy and resulting impacts were investigated. Critical theory is a natural fit for this study due to its focus on challenging social, cultural, and political structures that limit upward mobility (Kincheloe & McLaren, 1994). Spatial inequality provides a conceptual lens to examine policy geographically to disclose and quantify the presence of differential impacts if they exist. Spatial inequality recognizes the role of place in creating or perpetuating inequalities across

geographic regions (Lobao & Saenz, 2002). The following sections will give an overview of the history, key tenets, and notable scholars for each theoretical framework.

Critical theory and the broader methodology for this study, critical policy analysis, challenge systems that may remain hidden and shines a spotlight on power dynamics that can influence policy decisions in favor of groups holding the power (Crotty, 1998). In contrast with other theoretical frameworks, critical theory espouses a spirit of advocacy and a decided political focus. A focus on action is central to critical theory and critical policy analysis. Crotty (1998) wrote that critical theory

> is a contrast between a research that seeks merely to understand and a research that challenges . . . between a research that reads the situation in terms of interaction and community and a research that reads it in terms of conflict and oppression . . . between a research that accepts the status quo and a research that seeks to bring about change. (p. 113)

The political focus of critical theory and critical policy analysis fit this study as the focus of the study is rife with political tensions and power dynamics. The dynamics between the Kansas Board of Regent's (KBOR) universities, who hold most of the political clout in the Kansas higher education landscape, and the two-year community and technical colleges can be contentious. There are also power differentials within each of the sectors as there are varying sizes of institutions and power differentials between the communities they reside in and serve. Critical theory provides a theoretical framework through which these dynamics can be explored and scrutinized. Furthermore, the purpose of the study was not simply to understand the situation better but rather to expose the inequitable effects of the policies and ultimately provide evidence to affect change.

Critical theory's origins can be found in the Frankfort School's Institute for Social Research. Key Frankfort School scholars such as Max Horkheimer, Theodo Adorno, Herbert Marcuse, Erich Fromm, and Friedrick Pollock established critical theory as a school of thought in opposition to traditional theory. Where traditional theory "remains bogged down in the mire of aimlessly accumulated facts and does no more than mirror the fragmentation characteristic of contemporary society" (Crotty, 1998, p. 130), critical theory seeks to drive change, to challenge the current conditions through critique and action (Crotty, 1998). The work of Karl Marx, exploring the class struggles of capitalistic society, provided influence for critical theory. However, the Frankfort School developed a more modern interpretation of Marxist thought drawing influence from other areas (Crotty, 1998). As the founding members of the Frankfort school gave way to the second generation, scholars such as Habermas challenged the original founders of critical theory and the Marxist underpinnings of the early theory. Habermas, instead, sought to establish communication and reason as key components in critical theory and the drivers of social change (Crotty, 1998).

Critical theory calls into question the social, political, and cultural powers surrounding the issue they are exploring. Often, these issues are longstanding conventions or values that are mainstays in the current culture. Critical theory aims to challenge these conventions and seeks to initiate social change for the betterment of society. The key elements of critical research are laid out by Kincheloe and McLaren (1994):

a) all thought is fundamentally mediated by power relations that are socially and historically constituted;

b) facts can never be isolated from the domain of value or removed from some form of ideological inscription;
c) language is central to the formation of subjectivity;
d) certain groups in society are privileged over others;
e) oppression has many faces and that focusing on one at the expense of others often elides the interconnections among them;
f) mainstream research practices are generally implicated in the reproduction of systems of class, race, and gender oppression. (p.139-140)

At its core, critical theory questions the political, social, and cultural ideologies that form the basis of society. Furthermore, critical theory focuses on acting in support of social justice. The critical theory lens provides the researcher a framework to question current policy and practice, to focus on the social barriers and unequal power distributions that led to the current policy situation and examine the social and political structures that keep the policy intact. The flexibility of critical theory and critical policy analysis provide the researcher with a wide variety of data sources and data collection strategies to help detail the values that were at play when the policy was developed and adopted and the impact the policy may have had on educational and economic statuses for some groups.

Spatial inequality is an emerging research field that examines the influence of geography on stratification and studies how where one lives can influence social mobility, in addition to other indicators like economic class, race, or gender (Lobao & Saenz, 2002). The field has primarily grown out of sociology, especially rural sociology; however, other disciplines such as geography, political science, and economics have used the framework to study inequality based on geography (Lobao et al., 2007). Anthony Giddens' insertion of time and space into the

sociological discussion of stratification (Lobao & Saenz, 2002) opened the door for spatial inequality scholars like Lobao, Tickamyer, Hooks, and Saenz (Lobao, 2004; Lobao et al., 2007; Lobao & Saenz, 2002). These authors have advanced the field, incorporating new techniques and cross discipline methods using geography, economics, and Geographic Information Systems (GIS) technology to conduct research on spatial inequalities (Lobao & Saenz, 2002). Lobao et al. (2007) described the primary focus of Spatial Inequality as a revision of sociology's core question, "who gets what and why" to instead ask "who gets what and where" (pp. 1-2). Spatial inequality research has also been used extensively to study college access. Turley (2009) examined the impact of geographical proximity to colleges on a student's likelihood of applying to college. The study found that the likelihood of applying and enrolling in college increases with the number of colleges in geographic proximity of a potential student. Similarly, Dache-Gerbino (2018) utilized GIS technology to study college access in New York. The study found a lack of college opportunities in the urban core, an area heavily populated by people of color, in comparison to suburban areas with more abundant college options (Dache-Gerbino, 2018). Hillman (2016) investigated the intersection of race, class, and geography on college proximity, finding significant college deserts for certain populations. In the context of this study, spatial mismatch is a key factor as opposed to access. Spatial mismatch is the idea that opportunities, in this case educational opportunities, are not located in the same area as the students and therefore limit access to an institution that is appropriately matched to their academic, financial, and cultural needs (Dache-Gerbino, 2018). Like these studies, spatial inequality provided this researcher a valuable framework to examine the differences in college accessibility between different regions within the state of Kansas based on the type of institution allowed in that area by Kansas laws.

Spatial inequality research can be conducted on a city, state, or national scale, or can be used to compare differences between scales such as between neighborhoods within a city or geographic regions within a state (Lobao, 2004; Lobao et al., 2007). For example, Hillman (2016) used commuting zones defined by the U.S. Department of Agriculture to study how college choices can be limited by ones proximity to certain kinds of colleges. The field has largely taken on a comparative approach, examining differences between urban and rural areas, for example. This comparative aspect of spatial inequality allows the researcher to examine differences between geographic regions that lead to inequalities and seeks to understand the characteristics that may contribute to these differences (Lobao, 2004). Spatial inequality research examines the structures and situational factors within each region to gain a deeper understanding of the causes of stratification (Lobao, 2004). Characteristics such as access to natural resources, infrastructure development, population, history, and connectedness to the state, regional, and national economies are all factors considered in spatial inequality research (Lobao, 2004); however the impact of social relations, including political factors, the role of power and influence in policymaking, and the resulting inequities are key components of spatial inequality research (Lobao & Saenz, 2002), and a key focus of this study.

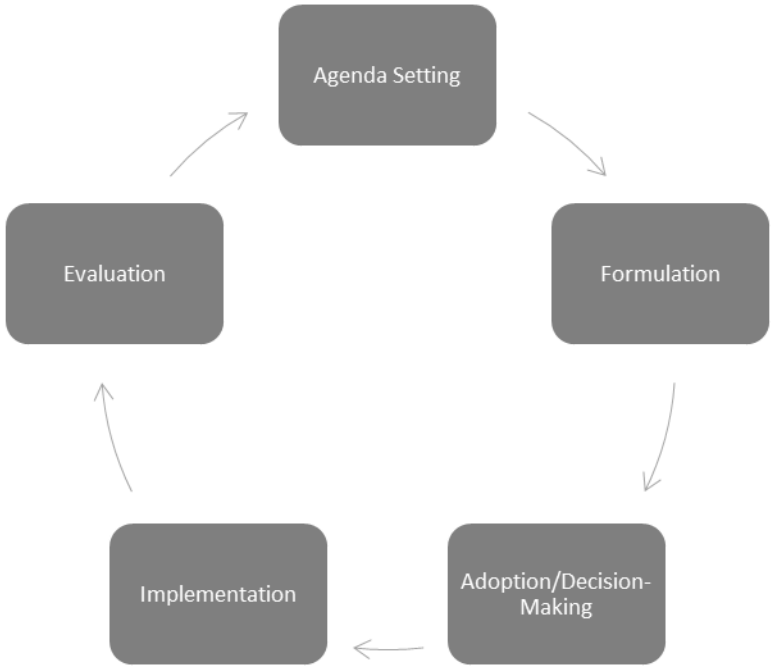
The customs, laws, and policies of a geographic region can contribute to inequalities in the region or between groups of people within the regions. This understanding that inequalities can stem from relationships between the actors within the region and the resulting policy provided the basis for the framework's inclusion in this study. Furthermore, spatial inequality provided a framework to analyze the long-term impact of these policies on inequalities. Lobao (2004) described the impact of these factors as path dependency, meaning that "regions that fall behind in one era are likely to do so in the next" (p. 18). Spatial inequality research is used to

question these persistent inequalities that define regions or groups within regions and examine the forces that drive the inequality. While the focus of this study is primarily concerned with college access and college-going rates, spatial inequality provided a framework to study those impacts as well as the downstream effects on the economic and well-being impact of these persistent inequalities.

Content Level Theories

Critical policy analysis provides the methodological framework for exploring the historical, political, and social factors of a policy. It is important to consider these factors in the context of the entire policy development and implementation process. The stages model of policy development provides a framework for analyzing policy at each of the policy development stages (see Figure 2.1). Howlett and Ramesh (1995) offered a five stage model that begins with agenda setting, followed by policy formation, adoption/decision-making, implementation, and finally evaluation. While policy formation, development, and implementation rarely occur in a linear process, the stages model provides a useful framework for examining policy at each stage. The combination of stages model and critical policy analysis provides the researcher a framework to organize the various actors, influences, and events that occurred through each stage of the policy development process.

Figure 2.1 Stages Model of Policy Development



Note. Adapted from Wu et al. (2012).

Understanding the actors involved, the influences, and the events that occur throughout the policy development process is important for the critical policy analyst. Perhaps more importantly, understanding who does and does not have influence over the policymaking process at different stages in the process helped identify whose voices are not being heard. Howlett and Cashore (2014) described the total population of people or groups that have influence over the policymaking process as the policy universe. Howlett and Cashore (2014) also identified subsystems of the policy universe that typically have more influence at certain stages of the process. The authors described an hourglass configuration where nearly everyone in the policy universe can be involved at the agenda setting stage. The numbers of actors narrow through the policy formation stage and reaches the smallest group in the decision-making process where only government decision makers are involved. The actors involved then begins to broaden to include

wider populations through the implementation and evaluation stages (Howlett & Cashore, 2014). Exploring the policy formation process through the lens of the stages model and the critical policy analysis lens provided an opportunity to break down the various actors and subsystems involved and work to deeply understand the values and motivations at play in each stage.

Chapter Summary

In summary, this chapter reviewed several key topics central to the college access discussion. The review of the literature explored theoretical models that help explain the decision-making process students and families go through when making their college choice decisions. The analysis revealed that these decisions are often not made in a rational manner, instead a multitude of factors influence the decision to attend college or not, and where and what type of college to attend, including the rising cost of tuition, the federal financial aid process, and the local higher education ecology affect the college choice process. Additionally, the review of the literature illustrated the impact of geography on the college choice process.

Proximity to higher education institutions can play a significant role in a student's decision to attend college, either through exposure to opportunities or through the convenience and affordability afforded by close access to higher education institutions. However, an important nuance in this discussion is that proximity to any higher education institution is not the sole factor, rather the type of institution is important. The makeup of the local higher education ecology is often governed by local and state policy, especially for public institutions. The emphasis on public policy and the role it potentially plays in perpetuating socioeconomic inequities by limiting opportunities for underrepresented populations is central to this study. The policies in Kansas, specifically, present a gap in the literature by exploring the nuances of Kansas laws and policy surrounding geographic service areas for Kansas colleges and the types

of degrees colleges and universities are allowed to offer. The next chapter outlines the methodology for the study, research questions, and an explanation of the data sources needed to carry out the study.

Chapter 3 - Methodology

This mixed methods research study was conducted to examine the laws, regulations, and policies that have shaped the public higher education landscape in Kansas. Specifically, the study explored policies that limit the presence of comprehensive community colleges to operate within the same county as a Kansas Board of Regents (KBOR) university and investigated the impacts of those policies. A mixed-methods approach using critical policy analysis was used for the study's analysis as is described in this chapter. The chapter begins with a restatement of the research purpose and questions followed by an overview of the theoretical and methodological frameworks. Next, the research design is described, including a description of the data sources, data collection process, and the methods used to analyze the data.

Research Purpose and Questions

Using critical policy analysis, the study explored the policy language, the political forces at work, and the impact the policy has on access to higher education in the state. Specifically, the study included analysis of legislation, policy documents, documentation of funding structures, and federal financial aid policies and guidance. The analysis utilized spatial inequality as a theoretical framework to compare college attainment rates across geographical areas. Geographic comparison is especially relevant in this study due to policies that impact populations differently based on the county where they reside. The study provided insight into the differential effects of these policies among different populations, based on their geography. The purpose of this study was to examine the power differentials that manifest within Kansas higher education because of policies surrounding territory assignments and degree offerings for Kansas two-year community and technical colleges. In this study, attention is given to the extent these policies influence college going behaviors, particularly for traditionally underserved populations such as low

income, minority, and first-generation students. The study was guided by the following research questions:

Research Question 1: What language, values, and goals are used in Kansas higher education policy that impact the location and academic scope of community and technical colleges?

Research Question 2: In what ways and to what extent do Kansas' policies regulating community and technical college territories and degree offerings produce differential effects, related to geography, in access to higher education?

Research Question 3: What spatial disparities exist in the location of Kansas community and technical colleges, measured by the percentage of the Kansas population with geographic access to each of the public sectors of higher education in Kansas: university, community college, technical college?

Purpose and Standards of Quality

The focus of this study was to explore the language and values behind the set of policies and to analyze the impact the policies have on access to higher education in Kansas. A mixed-method approach to this study provided a set of tools that allowed the researcher to adequately address these questions. A mixed-method study incorporates as least one qualitative method and one qualitative method within the research design (Creswell, 1999). Conducting a deep inquiry into the discourse surrounding policy lends itself to a qualitative approach and helps to understand why the policies were enacted, what values they are built on, and the political forces at work. Using critical policy analysis as a framework, systematically analyzing legislation, policy, and other documents helped to uncover meaningful insights about the values and motivations of policymaking and implementation process. This qualitative approach is critical to address this study's first research question. The second and third research questions, however,

required a mix of quantitative and qualitative data to fully answer the questions. The addition of quantitative data provided the researcher a way to analyze the impact of these policies through numbers, geographic analysis, and statistical analysis. The two methods provided a powerful combination that allowed the researcher to fully address the research questions in a way that a single methodology can (Creswell, 2007).

A mixed method research design is appropriate for policy research and can help the researcher provide a fuller understanding of the policy and the policy's impact (Creswell, 1999; Weaver-Hightower, 2014). Neither quantitative nor qualitative methods are without limitation in policy research and a mixed methods approach provides a way to mitigate each method's limitations while improving the overall study (Creswell, 1999; Weaver-Hightower, 2014). Fully integrating both methods into a single study can strengthen each individual method and produce results that are greater than each individual method could produce alone (Woolley, 2009). The theoretical and methodological underpinnings of this research, critical theory and critical policy analysis are rooted in the desire for change (Crotty, 1998; Edmondson, 2004). Influencing policymakers and other stakeholders requires a strategic approach. In the current political environment, there is a typically a call for evidence-based research, with a bias toward quantitative data. A purely qualitative study may not resonate with some policymakers. Thus, integrating quantitative methods with qualitative allowed the researcher to strategically address the intended audience to position the findings for maximum impact (Tracy, 2010; Weaver-Hightower, 2014).

Methodological Frameworks

Critical policy analysis follows the foundational aspects of critical theory and provided an appealing and diverse framework with which to conduct this research. Critical policy analysis is

a methodological approach that "involves a recognition that policy is historically and socially situated, and imbued with the values of its authors" (Edmondson, 2004, p. 8). Critical policy analysis serves as an alternative to traditional, or functionalist, policy analysis where the purpose is to "assess the policy within the current structures of schools and society and determine the goodness of fit" (Edmondson, 2004, p. 18). Using critical theory as a theoretical framework, critical policy analysis provides a contrast to traditional policy analysis in that it seeks to explore the historical aspects of the policy and the policymaking process, the social and political factors that influence the policy, and the impact that the policy has on different groups, especially traditionally marginalized groups (Edmondson, 2004). The application of critical policy analysis, as illustrated in Edmondson's (2004) work, provided a deep dive with rich descriptions of the complexities of the policy and the people, schools, organizations, and power players that influence the policy.

The core ideas, concepts, and tenets of critical policy analysis center around the exploration of policy through the lens of critical theory. A key assumption in critical policy analysis is an "understanding that educational policy is historical and political and that it always involves values and power relations" (Edmondson, 2004, p. 18). In other words, policy is made, enacted, and enforced through complex social, economic, and political dynamics that likely favor some people or groups over others. This favor extends to influence in the policymaking process and likely more favorable benefits and outcomes from the policy. Edmondson (2004) argued that critical policy analysts should "ask questions of policy that illuminate inequalities and injustices, particularly because these questions lead them to expose contradictions" (p. 18). Edmondson (2004) provided a framework of questions with which researchers can guide their study. These questions probe the policy's origins; policymakers, their values, and their reasons for initiating

the policy; the consequences of the policy; and finally examines who benefits from the policy and who does not (Edmondson, 2004).

Exploring the origins of the policy is a foundational step in critical policy analysis. Edmondson (2004) advised researchers to consider the history of the policy, where it came from, political and social factors at play, and finally, how key characteristics of the policy are defined. Edmondson (2004) provided an in-depth examination of the Elementary and Secondary Education Act (ESEA) guided by these questions. Edmondson (2004) detailed the social, economic, cultural, and political of each era and major player of each iteration of the policy. For example, the ESEA was enacted during the Civil Rights Era, shortly after *Brown vs. the Board of Education.* Edmondson (2004) explained in great detail how the social and political impacts of the Civil Rights movement affected the origins of the ESEA. Further into the chapter, Edmondson (2004) explained the numerous iterations over the next forty years and several administrations, with particular attention to the political and social values held by each administration and the resulting effect on changes to the policy. Edmondson (2004) advised critical policy researchers to "recognize the values inherent in any given policy" arguing that "the most important lesson is that policy is always influenced by someone's values" (p. 38). The detailed account of the policy's history with the social and political aspects weaved throughout the narrative provides a solid foundation and understanding of the origins of the policy and ultimately the values and assumptions that drove each iteration.

A second key focus of critical policy analysis is critically examining the policymakers themselves, their values and, their reasons for initiating the policy. Building on the origins of the policy, understanding and questioning the values of policymakers is a central concept in critical policy analysis (Edmondson, 2004). A key aspect of critical policy analysis is the assertion that

policy is a representation of the policymakers' values and their view for how society should ideally be. Edmondson (2004) wrote, "Policies are the articulation of someone's hope for the way something should be, and they are revealed through various texts, practices, and discourses that define and deliver these values" (p. 13). This is a key tenet of critical policy analysis and provides the researcher a lens with which they can view policy to better understand why a particular policy was enacted. Edmondson (2004) illustrated this concept by exploring the values of the National Reading Panel, a group with significant influence on literacy education policy. A thorough review of the panel members was provided including details on each member's background and areas of expertise. Edmondson (2004) was able to show that the majority of the panel shared a preference for experimental reading research over other forms of research thus exposing the values espoused by the panel and how that can impact their decision-making process.

Examining the consequences of the policy, who it benefits, and who it leaves out is another key idea in critical policy analysis. Edmondson (2004) used the charter school movement beginning in the 1990s and the example of a Detroit charter school to illustrate the consequences of changes to the ESEA and broader cultural and political shifts on the students and teachers in the school. The power of language was highlighted by the author as important in critical policy analysis. Specifically, researchers should closely scrutinize "language and its subtleties as the critical policy study works toward a new and different understanding of social conditions, economics, politics, and education" (Edmondson, 2004, p. 71). The example focused on the increasing use of business practices and the resulting language in school systems. Edmondson (2004) detailed the impact that this language had locally in the school and the impact the shift in language had on a more macro level within education. Edmondson (2004) shared a critical policy

study conducted by a teacher in the school that emphasized the impact locally and the importance of critical policy analysis in questioning policy and advocating for change. Edmondson (2004) argued that policies should never be accepted at face value, rather "they must be disrupted by questioning the assumptions, definitions, and visions for society that are embedded in them" (p. 72).

A critical policy "study often begins with a hunch that something is not quite right" (Edmondson, 2004, p. 88). Educators at every level of the educational system face this experience when attempting to work within the confines of policy thrust on them by an external body. Policies emerge from the many levels of government including the federal government, state legislatures, state boards of education, counties/municipalities, and local school districts. Many educators simply abide by these policies without questioning them because they lack the framework and understanding on how to critique the policy. Critical policy study serves as that framework and provides a methodology for working with and reacting to policy (Edmondson, 2004). Advocacy for change lies at the heart of the purpose of critical policy analysis. Edmondson (2004) wrote that "policies can bring changes that are beneficial, or they can bring changes that we expect will do harm. It is up to us as educators to influence policy in directions that are constructive, rather than closing our doors and hoping policy will go away" (p. 39). Critical policy analysis provides an avenue to support or oppose policies, educate our communities, and engage with our colleagues in advocacy for support or change (Edmondson, 2004).

This spirit of advocacy is one of the key need-to-know factors of critical policy analysis. Edmondson (2004) embraced the political nature of policy analysis and encourages researchers and teachers to engage in the political process to "increase the political consciousness and

awareness of those involved" (p. 94). Other critical policy analysis scholars offer even stronger language regarding the political nature of critical policy analysis. Prunty (1985) argued that the inherent inequities in the educational system preclude critical policy researchers from taking an objective stance but rather should anchor their study from a moral and ethical stance of social justice. Further, he wrote, "A critical analysis would be overtly political. The personal values and political commitment of the critical policy analyst would be anchored in the vision of a moral order in which justice, equality, and individual freedom are uncompromised by the avarice of a few" (Prunty, 1985, p. 136). The political nature of critical policy analysis stands out as a key tenet, especially in contrast to other methodologies where an objective, rational analysis is the aim.

Exploring the historical origins and evolution of critical policy analysis helps to better understand the overt political nature of critical policy analysis. Traditionally, policy study has taken a functionalist approach where the aim is to determine what works within the current structure and the social/economic dynamics of the situation (Edmondson, 2004). Traditional policy study often begins under the assumption that policymaking is a deliberate, rational process that relies on research and data to produce the optimal policy (Young & Diem, 2018). Noticeably absent from traditional policy research are social, economic, and political factors, the role of power and influence in policymaking, and the impact on those who lack that power and influence (Young & Diem, 2018). Edmondson (2004) argued that critical policy analysis arises "when questions about who benefits toward what end are raised" (p. 18). The lack of this focus with traditional policy research led early critical policy scholars to use critical frameworks to examine policy within a different framework more attuned to the elements of power and influence that shape policy (Young & Diem, 2018). While critical policy analysis can still scrutinize the

effectiveness of a policy, it also includes “an investigation of the values embedded within it; of the images used to make the policy seem necessary and compelling; and of the real, expected, and unanticipated consequences of the policy” (Edmondson, 2004, p. 19). The emergence of critical policy analysis begins with a different set of assumptions than traditional policy analysis and provides a broad methodological framework for the researcher to examine policy issues using a variety of data collection and analysis strategies.

Critical policy analysis presents a diverse and flexible methodology which provided the researcher with a variety of research designs and data sources. A review of recent research using critical policy analysis revealed a wide range of methodological approaches. The methodology is flexible enough to pair with other methodologies. For example, Soulsby (2020) and Saunders (2000) both used critical policy analysis within the broader framework of case study. Torregano (2010) intertwined critical policy methods with interview studies and discourse analysis in a study on policies and planning documents used in the rebuilding of New Orleans after hurricane Katrina. Hernbloom (2013) conducted an autoethnographic study using critical policy analysis to examine “Race to the Top” reforms enacted during the Obama administration. Critical policy analysis can also take a purely quantitative form as Brochet (2020) did using Quantcrit in a study on the impact of local, state, and federal policies surrounding Satisfactory Academic Progress in federal financial aid.

A mixed method approach is a natural fit for critical policy analysis allowing the researcher to combine quantitative analysis of the effectiveness and impact of the policy with qualitative analysis to explore the historical, economic, and political factors surrounding the policy. Rivera (2016) took this approach in a study exploring California education finance policies and the impact of local school districts’ debt financing. The diversity in research designs

naturally opens the methodology to a wide variety of data courses and data analysis methods including interviews, observation, analysis of media reports, document analysis, statistical analysis of government datasets, archival research, review of relevant government documents and reports, and other data sources.

Edmondson's (2004) guiding questions for critical policy analysis provide a framework from which the study can be positioned and organized. Edmondson's (2004) questions for conducting critical policy analysis are:

- Where has the policy come from? What are the social, political, and historical aspects of the policies?
- Who are the policymakers? What are the values of the policymakers? Why was the policy initiated?
- What are the consequences of the policy?
- Who benefits from the policy? Who is left out? (p. 5)

This research project aimed to conduct an inquiry into the laws, regulations, and policies that have shaped the public higher education landscape in Kansas. The study explored the origins of the policies, the political forces at work, and the impact the policy has on access to higher education in the state. A mixed-method approach using critical policy analysis as the methodological framework provided a diverse set of tools to conduct the inquiry. Data sources included legislation, policy documents, archival documents such as minutes from KBOR meetings, documentation of funding structures, federal financial aid policies and guidance, state and federal databases such as the Integrated Postsecondary Education Data System (IPEDS), and economic data.

Research Design

Data Collection

Approval from the Institutional Review Board (IRB) was granted prior to collecting data. The data sources were accessible via the internet. This study involved two phases of analysis. The first phase, aligned with research question one, included a qualitative analysis of policies developed, enacted, and enforced by several groups of policymakers: 1) the Kansas state legislature, including members of the House of Representatives and the Senate; 2) the Kansas Board of Regents (KBOR); and 3) federal policymakers representing the United States Department of Education. The data sample included primary documents including state legislation, KBOR policies and related documents, the 2021-2022 Federal Student Aid Handbook, and related federal policies and regulations surrounding the federal Title IV aid program.

The Kansas Office of Revisor of Statutes website served as a primary source for state legislation regulating higher education in Kansas. Specifically, policies regarding the governance and operation of state universities, community colleges, and technical colleges will be analyzed. The following chapters and Articles in the State Statutes Annotated were analyzed: 1) Chapter 71 – Schools – Community Colleges; 2) Chapter 74 – State Boards, Commissions, and Authorities, Article 32 – State Board of Regents.

The Kansas Board of Regents website served as the primary source for KBOR documents included in the analysis. The following documents were analyzed: 1) the Kansas Board of Regents Policy Manual; 2) the current KBOR Strategic Plan and related annual reports; 2) past KBOR Strategic Plans and related annual reports; 3) Technical Education Authority goals and related documents; 4) meeting minutes from selected councils and committees of the Kansas

Board of Regents, including the Board Academic Affairs Standing Committee, the Council of Presidents & System Council of Presidents, and the System Council of Chief Academic Officers; 5) meeting minutes from the Board of Regents meetings; and 6) meeting minutes from the Technical Education Authority meetings.

The Federal Student Aid and the United States Department of Education websites served as the primary source for documents related to federal student aid policies and regulations. The following documents were included in the analysis: 1) 2021-2022 Federal Student Aid Handbook, Volume 1 – Student Eligibility; and 2) 2021-2022 Federal Student Aid Handbook, Volume 2 – School Eligibility and Operations.

The second phase of analysis, aligned with research question two, utilized data from the National Center for Education Statistics (NCES) and United States Census data to analyze the variations in access to the multiple types of public higher education in Kansas, measured by geographic distance. Locations of postsecondary colleges and universities in Kansas were obtained from the 2021-2022 Integrated Postsecondary Education Data System (IPEDS) created by the NCES Education Demographic and Geographic Estimates (EDGE) program. The dataset was obtained as an ArcGIS Feature Layer for upload into Geographic Information Systems (GIS) mapping software. United States Census data was used to measure a local geographic area. Census tract boundary data from the 2020 Census was obtained from the ArcGIS data database. The dataset was sourced from the US Census Bureau 2020 Topologically Integrated Geographic Encoding and Referencing (TIGER) System for use with GIS software. Attribute fields within the dataset included 2020 population data from the U.S. Census Bureau. Datasets including educational attainment variables from the United States Census Bureau's American Community

Survey were sourced from the ArcGIS database. The datasets included five-year estimates (2016-2020) of education levels for adults 25 and older by census tract, county, and state.

Data Management and Analysis

This section describes how the data sources were analyzed to address the stated research questions. The phases of this mixed-method study were designed to use the appropriate method to answer each research question. Qualitative inquiry was used to answer research question one and a quantitative approach was used to address research question two. Research question three required a combination of both approaches to fully understand and analyze the relationship. Data analysis in this study occurred simultaneously throughout the process allowing the identification of insights that emerged and additional data sources were added, as needed, to explore the formation of the policy, the underlying values, and impact of the policies. Critical policy analysis requires a focus on the actual text of the policies and related documents but also must pay attention to the values of the policymakers and the institutional structures and practices that shape the policies (Edmondson, 2004; Taylor, 1997).

The qualitative phase of the data analysis began by organizing the data into manageable units. The researcher organized the selected data sources into digital files. The researcher converted documents into text files as needed in preparation for upload to computer analysis software. All data documents were uploaded into NVivo qualitative analysis software to aid in the coding process. The data analysis process occurred in multiple phases throughout the research process, however, analysis truly began at the onset of the research (Merriam & Tisdell, 2015). The extant nature of the data sources lent itself to the simultaneous process of data collection and analysis. The analysis began with the onset of data collection and continued throughout the entire research process.

The first phase of qualitative analysis provided a high-level understanding of the data and begins to synthesize the data through analytical memo writing. The researcher conducted an initial read through of every policy document to get a sense of the material and began to grasp the overall structure and tenor of the policies. Writing analytic memos throughout this process helped the researcher to capture insights, questions, and additional context to explore. Saldaña (2016) argued that qualitative researchers should write memos about anything that comes up in the course of reading or data analysis. Analytic memos are ways to reflect on the data and capture "future directions, unanswered questions, frustrations with the analysis, insightful connections, and anything about the researched and the researcher" (Saldaña, 2016, p. 45). Capturing insights about myself as the researcher through memo writing and self-reflection helped to ensure that my subjectivities are managed. Analytic memos also afford the researcher an opportunity to explore the nuances and context of the policies. The language and text used in the policy is important, however critical policy analysis affords the researcher the opportunity to dig deeper into the context and nuances of the policy, often driven by the values and vision of the policymakers and the political environment (Ball, 2019). Analytic memo writing provides an avenue to capturing these insights and identifying areas for further research to better understand the nuances at play in the policymaking process. The process of memo writing began early in the research process and continued through the conclusion of the study.

The second phase of the qualitative data analysis utilized the coding technology within the NVivo software to assign codes to selected text to aid in identifying themes that align with the research questions. Coding provides the researcher a tool to assign a word or phrase to a selection of text to capture the meaning or essence of the text and allows the researcher to draw out and organize salient points (Saldaña, 2016). Coding is also useful in narrowing down vast

sums of data into manageable chunks (Saldaña, 2016). The policy documents included in this study feature hundreds of pages of text. The coding process provided the researcher a tool to draw out the important sections of policy language and identify the passages relevant in addressing the research questions. Analytic memo writing continued concurrently throughout this second phase of analysis. The assigning of a code to a piece of data serves as a prompt to reflect on why the code was chosen, what it means, and how it may connect to the broader context (Saldaña, 2016).

A combination of versus coding and values coding was used in this phase of analysis. Versus codes provided the researcher a method to document "individuals, groups, social systems, organizations, phenomena, processes, concepts, etc… in direct conflict with each other" (Saldaña, 2016, p. 137). Versus coding helped code the conflicts at play with these policies including the conflicts between different stakeholders, the values and the actions, and the winners and losers that emerge from the policies. Values coding was also employed to categorize the conflictual nature in the values and beliefs of policies and policymakers. After coding for values, "the next step is to categorize them and reflect on their collective meaning, interaction, and interplay" (Saldaña, 2016, p. 133). The research sought to develop a deeper understanding of the interaction between these values through coding and analytical journal writing.

The combination of coding and memo writing provided a process to identify and capture themes emerging from the data. Tools within NVivo allowed me to sort and analyze for patterns. The software also allowed the generation of a memo for each code. I continued to expand upon these memos to examine how the text impacts the issues outlined in the research questions. Coding and memo-writing were used to identify themes related to improving or diminishing access to higher education in the state and the values associated with the policies. The data was

also be analyzed to find gaps or incongruencies with the stated goals of the policymakers and the language currently in policy.

A quantitative research approach was used to address the second research question which seeks to measure the impact of the policies on college access, based on geography. This phase of analysis used Geographical Information Systems (GIS) software to measure the distance between a local geographic area and the nearest public postsecondary institution of each classification within Kansas: university, community college, and technical college. GIS technology, while often used in geography research, has cross-discipline applications within spatial inequality research and provides a method to measure proximity to higher education (Lobao & Saenz, 2002). The study used individual census tracts within the state of Kansas as the local geographic areas. This method deviates from previous studies that use commuting zones (Hillman, 2016; Klasik et al., 2018) or zip code level (Turley, 2009) data as the measurement of a local geographic area. While these methods provide a useful measure, they are a broad measurement that lacks the specificity needed to adequately measure the impact of geography down to the neighborhood level. Dache-Gerbino's (2018) study of college proximity in the Rochester, NY area used census tracts as the unit of measurement because of their granular nature and the ability to connect the area to up-to-date social characteristics. Similarly, census tract data satisfies the need in this study for a neighborhood level measurement with population data.

The researcher first obtained datasets containing 2020 U.S. census tract data, point locations of Postsecondary School Locations from the 2021-2022 IPEDS data, and educational attainment data from the U.S. Census Bureau American Community Survey. The school location data was cleaned to narrow the dataset to include only public institutions of higher education in Kansas. While other types of higher education, including private institutions and proprietary

schools, offer access to higher education, they are not governed or controlled by the statutes and policies central to this study and therefore are excluded. Additionally, only the main locations of each college or university were included for the purposes of this study. The main location was determined by the mailing address listed in the IPEDS data for each college or university.

These datasets were uploaded into ArcGIS Mapping & Analytics software. An initial analysis was performed to find the centroids of each census tract. This provided a central location within each census tract to conduct the proximity analysis. Next, proximity calculations were run, measuring both the straight-line distance and the driving distance from each centroid to the location of each college or university. Finally, statistical analysis was conducted to calculate the percentage of population that lies within proximity to the different levels of public higher education in the state.

Data Representation

To share results, the researcher provided a narrative describing the findings of the analysis. Each of the three research questions were addressed using the data collected and in the context of the theoretical and methodological frameworks. A detailed description of each policy is provided with real world examples to provide additional context on the policy. Attention was given to describing the nuances, political motivations, and underlying values that drive each policy. Additionally, the findings include examples of contrasting values between the stated goals of the policymakers and the language and action of the policy. Finally, data demonstrating the impact of these policies on postsecondary enrollment, college attainment, and economic success on an individual and community level is shared.

Trustworthiness

A sound research study should incorporate elements of validity and trustworthiness in the research design. Ideally, these elements of credibility should be considered throughout the entire research process, not simply as a single step (Weaver-Hightower, 2014). In a purely qualitative study, there are a variety of criteria that can be used as benchmarks to assess the quality of the study. These criteria include measures such as pursuing a worthy topic, utilizing sufficient rigor, sincerity, credibility, and meaningful coherence (Tracy, 2010). This study was designed in a way that each of these elements are addressed as described in the following sections. Additionally, mixed-method research provides an added challenge and additional considerations for quality. There are overlapping markers for quality with qualitative and quantitative research, however, when conducting mixed methods research, there are specific issues that need to be addressed. Several elements of quality relevant to mixed methods research were also incorporated into this study as described below.

The selection of a worthy topic is a foundational element of good qualitative research and scholars should strive to select topics that are "relevant, timely, significant, interesting, or evocative" (Tracy, 2010, p. 840). Critical policy analysis research is often focused on exposing injustices and advocating for change on behalf of groups that have been disproportionately impacted by policy (Edmondson, 2004; Taylor, 1997). This topic of this study is relevant and significant due to the potential economic and social consequences that the policies studied can have on individuals, families, and the broader community. Researching and raising awareness around the impact of these policies pushes back on commonly held assumptions about access to higher education within the state of Kansas system. Tracy (2010) argued that "worthy studies are interesting and point out surprises—issues that shake readers from their common-sense

assumptions and practices" (p. 841). The focus of this research aims to point out the flaws in the current system that unintentionally limit access to higher education and may impact underserved populations in a disproportionate manner. I hope that the findings of this study shine light on a subject that is taken for granted in the state and spark change.

Conducting a research study with sufficient rigor is a requirement for producing quality research. Carefully planning the research to ensure that it includes the necessary tools and data to sufficiently address the research questions is critical. Furthermore, documenting the planning and execution of the research provides the reader with evidence of the study's rigor and gives the researcher an opportunity to provide rationale for choices in things like interview methods, coding styles, data sources, and samples (Tracy, 2010). This study exhibits sufficient rigor by a transparent explanation of the data coding and analysis process described below. I maintained a research journal throughout the process to document decisions and provide rationale for decisions made. Finally, I conducted periodic peer debriefings with colleagues external to the research process but who are well-versed in the subject matter. These debriefings provided feedback on the credibility and reasonableness of the findings and ensured that my subjectivities are not driving the narrative. The findings and discussion included thick descriptions in the narrative, providing detail and context beyond what can be gleaned from simply reading the policy. Providing sufficient detail and context surrounding the policy language can help establish credibility with the reader. Tracy (2010) argued that the "significant role of tacit knowledge transcends the immediate surface of speech, texts, or discursive" (p. 843). Uncovering the underlying meanings and assumptions through peer debriefs and providing the reader with thick, rich descriptions of the policy including relevant examples helped to establish credibility in this research.

Another indication of high-quality research is sincerity. Tracy (2010) described sincerity as research "marked by honesty and transparency about the researcher's biases, goals, and foibles as well as about how these played a role in the methods, joys, and mistakes of the research" (p. 841). Two practices used in this study to demonstrate sincerity are self-reflexivity and transparency. Self-reflexivity is the practice of examining one's own influence on the research and the research process (Creswell & Miller, 2000; Tracy, 2010). Disclosing my own biases and assumptions along with beliefs and experiences that shaped them provided insight into how I came to certain judgements and assertions (Creswell & Miller, 2000). The subjectivity statement in this chapter provides an attempt at documenting my own biases and beliefs prior to engaging in the research. As the research progressed, providing an account of my own reactions and thoughts throughout the narrative served to provide a transparent account of how the research was completed. This documentation can clearly show the reader the choices that were made throughout the research process (Creswell & Miller, 2000; Tracy, 2010).

A challenge with mixed methods research is that assessing the quality of a study should go beyond assessing the individual parts and include ways to assess the whole study (O'Cathain, 2010). Multiple frameworks have been put forward to establish criteria for the quality of a mixed methods study (Onwuegbuzie & Johnson, 2006; Tashakkori & Teddlie, 2003). O'Cathain (2010) provides a conceptual framework that builds on the body of knowledge to offer several domains of quality through the multiple stages of research. These domains include planning quality, design quality, data quality, interpretive rigor, inference transferability, reporting quality, synthesizability, and utility (O'Cathain, 2010). O'Cathain (2010) recognized that a challenge of this framework is the number of criteria and the challenge of applying this to a study. The framework can, however, be used over the entire study including the periods planning the

research and designing the study through the completion of the research to guide the study and ensure quality measures are considered (O'Cathain, 2010; Weaver-Hightower, 2014).

Subjectivity Statement

Qualitative researchers begin their research with an understanding that their own backgrounds and experiences shape the way they view their data and make interpretations from their findings (Creswell, 2013). Peshkin (1988) argued that researchers must remain conscious of their subjectivities throughout the entire research process. He wrote, "These qualities have the capacity to filter, skew, shape, block, transform, construe, and misconstrue what transpires from the outset of a research project to its culmination in a written statement" (Peshkin, 1988, p. 17). It is not enough to simply acknowledge and disclose subjectivities. Researchers should seek to continually challenge our own subjectivities throughout the research process in an attempt to manage the biases that will inevitably creep into our research if unattended (Peshkin, 1988; Pillow, 2003). A caveat to this comes with the political nature of critical policy analysis. My personal beliefs and commitment to policies that support college access are a significant part of the motivation to pursue this research and align with the moral vision of critical policy analysis (Prunty, 1985). The first step to gaining this understanding is to reflect on my own subjectivities as described below.

My interest in this topic stems from both personal and professional experiences. I began my higher education journey in a community college, as did many of my friends and family members. My experience provided me a solid educational foundation that propelled me to transfer and earn my bachelor's degree, on to a master's program, and now to this stage in my doctoral journey. The personal growth and lifelong friendships that were formed during my time in a community college are invaluable. These experiences have instilled in me an appreciation

for two-year colleges and a desire to spend my professional career working in the two-year sector.

I have now spent over 15 years working in two-year colleges, with experience in two different technical colleges, and have witnessed firsthand the impact that access to education can have on a student and family. My interest in the topic of policy and the impact on underserved populations came later in my career as I moved to Wichita to work at what was then Wichita Area Technical College (now named WSU Tech) and realized that the policies in place at the state level played a role in restricting access to higher education for some students. This quickly became an area of curiosity and passion for me as a higher education professional.

One interaction helped to spark an interest and helped me to see the situation through a different lens. I was working with a group of students at a high school in Wichita, a high school that traditionally serves one of the lowest socioeconomic populations in the state. I was speaking with a student about where he was planning to go to college, and he casually mentioned that he was not sure but that he had never been east of I-35 in his life and every option seemed so far away. In Wichita, all the public options to access higher education are east of I-35. There are two private universities, Newman University and Friends University, which are somewhat close to this student's neighborhood; however, each of those options was likely cost prohibitive for him to attend. It occurred to me that the actual location of the colleges is a microcosm of a larger issue at play in Wichita. One of the biggest advantages of a community college is the accessible location. Community colleges are often located right in the community and many feature satellite campuses directly in the neighborhoods. When done right, community colleges are an integral part of the neighborhood and serve many functions beyond just academics, including cultural activities, continuing education, and community enrichment programs. After speaking with this

student, it occurred to me that there were much larger barriers to him attending college than I had originally thought, and they were partly due to the policies prohibiting a comprehensive community college operating in Sedgwick County.

In my professional work in technical education in Wichita, my colleagues and I recognized the need for general education transfer curriculum within the county and have worked to find creative ways to offer this to students in our service areas, despite the statutory limitations. Beyond the state policies limiting technical colleges from offering the Associate of Arts or Associate of Science, degrees primarily designed for transfer to a four-year institution, a significant barrier is federal financial aid. Financial aid can only be awarded when a student is seeking a degree. A solution, albeit an imperfect one, has emerged because of the affiliation between WSU Tech and Wichita State University (WSU). A creative partnership was formed where students may take a certain number of general education transfer courses at WSU Tech and then transfer to WSU to earn an associate degree. A consortium agreement between the two institutions allows the awarding of financial aid for these students. This program, called the "Shocker Pathway," provides an alternative to students who otherwise would have no other option within the county. The program, however, is difficult to explain to students, parents, and counselors. There can also be a cumbersome paperwork process due to the students having to submit an application to both institutions and complete a consortium agreement for financial aid. This program is a good step in the right direction but does not come close to filling the need within the county.

Working with students from the Wichita area over the past 10 years of my career has instilled a deep desire to find ways to effectively serve students. I have developed a solid understanding of the importance of postsecondary education for individuals to earn a sustainable

wage. I moved to the Wichita area during the Great Recession and witnessed firsthand the disproportionate impact the recession had on those with a high school diploma or less (Zhang et al., 2015). Similarly, the current COVID-19 pandemic has impacted some citizens much differently than others. Jobs that require little or no training after high school have been the hardest hit by job loss (Montenovo et al., 2020). For some individuals, primarily those with jobs that require advanced education, the pandemic has not impacted them financially at all. These experiences serve to reinforce my desire to make higher education as accessible as possible.

My personal and professional experiences have helped me to gain a deep understanding of the political, economic, and cultural factors regarding this issue in Kansas, and specifically Sedgwick County. It is worth noting that that the experience and passion for this issue also reveals subjectivities that I bring to this research. Certainly, my work at WSU Tech and experience in technical colleges in Kansas create a bias toward the desire to offer the transfer curriculum and the belief that technical colleges are equipped to effectively offer the education. WSU Tech would be poised to gain enrollment if allowed to expand their mission in this manner. In many respects, the Sedgwick County market is highly desired due to the large population and the lack of community colleges currently operating in the county. Several community colleges work to entice Sedgwick County students by offering courses in towns bordering Sedgwick County or by offering online and hybrid courses. Butler Community College, Hutchinson Community College, and Cowley College all have a presence near Sedgwick County. Ultimately, however, the motivation to pursue this research is deeply rooted in the desire to better understand the policies at play, the political forces at work, and to open pathways for students to access quality higher education. Developing a deeper understanding of the impact these policies have on different populations can provide local and state policymakers data on

geographic areas and populations that are disproportionally impacted by current policy and guidance on how current legislation can be changed to increase access rather than limit access. Policymakers and other stakeholders should carefully weigh the needs of the individuals in these geographic areas as well as the positive economic impacts of an educated citizenry against the current policies which favor specific institutions and students.

Role of Researcher

My role as a researcher in the analysis of data and the study is approached with a deep understanding of the dynamics that my professional career brings to the research. I have over 15 years of experience working in technical colleges in the state of Kansas. This experience has provided me with an insider's view of the dynamics that shape the higher education structure in Kansas, especially as it pertains to two-year colleges. Additionally, my experience has provided me a deep understanding for the barriers that currently exist for many people in accessing education after high school. My professional work includes a significant passion for finding ways to eliminate and/or help students overcome those barriers to enrolling in college. This experience and passion have also influenced the direction of my scholarly studies and motivated my pursuit of this topic. The combination of my work as a higher education professional and my studies as a doctoral student have converged in a topic where I can use both to affect change. The overt political nature of critical policy analysis and the focus on advocacy are appealing for this reason.

The experiences, beliefs, and passions I bring inform the research but also have the potential to bias the research. Throughout the research process, I have taken steps to address these potential biases. Reflexive journaling will be my primary method to maintain my role as a researcher. Capturing my own thoughts, assumptions, questions, and personal reflections during

the research process will help to “bracket” potential biases (Creswell, 2007). Additionally, the use of peer debriefings will be used to gauge the research for reasonableness. Special attention will be given to the selection of peer debriefers. Colleagues will be sought out that do not hold the same experiences and potential biases that I hold. For example, colleagues from the four-year sector will be invited to discuss the research and provide feedback on the credibility of the study and identity and potential biases I may be presenting.

Chapter Summary

Using critical policy analysis and a mixed methods approach, this study attempted to examine the laws, regulations, and policies that have shaped the public higher education landscape in Kansas. Through the lenses of critical theory and spatial inequality, the study explored policies that limit the presence of comprehensive community colleges to operate within the same county as a Kansas Board of Regents (KBOR) university. A description of the state and federal policies to be analyzed were provided. Additionally, several datasets were used to analyze the impact these policies have on postsecondary enrollment, attainment, and economic success. The chapter shared information on steps taken to enhance the credibility of the study. The results of the chapter are presented in the next chapter.

Chapter 4 - Results

The purpose of this mixed methods, critical policy analysis study was to examine the power differentials that exist within Kansas higher education because of policies surrounding territory assignments and degree offerings for Kansas two-year community and technical colleges. The study used critical policy analysis as the methodological framework with a key assumption that policy is made, enacted, and enforced through dynamics that tend to favor some groups over others. The qualitative phase of this study sought to examine policy documents from the Kansas legislature, the Kansas Board of Regents (KBOR), and the United States Department of Education to explore the policy language, values, and goals of Kansas policymakers as they relate to college access. The quantitative phase of the study utilized data from the United States Census Bureau and the National Center for Education Statistics to analyze access to the different higher education sectors in Kansas, by geographic distance. The findings of this study are presented in this chapter. The chapter begins with a descriptive overview of the legislation and policies at the center of higher education access in Kansas. This overview is followed by the themes identified during the review of policy documents. The chapter ends with the results and data analysis from the quantitative phase of the study.

Descriptive Findings

This section provides a descriptive overview of the legislation and policies that influence higher education access in Kansas. This stage of analysis is meant to provide an overview of each policy, provide a historical perspective, and identify nuances within the polices that influence higher education in Kansas and impact college access. This first level of analysis identified policies that shape the governance, coordination, and structure of the Kansas higher education system, including the mission and degree offerings within each level of education.

Additionally, policies and legislation that dictate service area assignments are described, including factors that influence funding levels for public higher education institutions. Finally, a description of the federal financial aid policies that play a role in access due to the scope of programs and degrees the Kansas two-year sector is allowed to offer.

Statutes Defining Levels of Higher Education in Kansas

Kansas state statute clearly defines the different levels of higher education within the Kansas system. K.S.A. 76-711 defines state educational institutions as the University of Kansas, Kansas State University, Wichita State University, Emporia State University, Pittsburg State University, and Fort Hays State University (Kan. Stat. Ann § 76-711, 1970/1991). Additionally, Washburn University has a unique definition as a municipal university (Kan. Stat. Ann § 13-13a03, 1925/1981). The state system has a clear delineation between the four-year and two-year sectors and discourages state universities from offering associate degrees in academic or technical areas (Kansas Board of Regents, 2023b). The manual does provide a caveat that "student demand and community needs may engender requests for associate degree programs, particularly in areas of technology education" (Kansas Board of Regents, 2023b, p. 29) and outlines a process for state universities to request approval for an associate degree program.

The distinction between colleges within the two-year sector is not as clear but plays a key role in the college access discussion. One difference between community colleges and technical colleges is the composition of their governing boards. Community colleges have a board of trustees that is publicly elected within the home county of each college. Importantly, K.S.A 71-204 also authorizes each community college board of trustees to levy a property tax of their district to supplement tuition and state aid (Kan. Stat. Ann § 71-204, 1695/1999). This authority

differs from the technical colleges who are appointed, not elected, and do not have taxing authority. Technical colleges therefore rely solely on tuition and state aid for funding.

Community colleges are defined under Chapter 71 of the Kansas Statutes which outlines general provisions, organization, and governance. The scope of a community college's courses is limited to those "at a level not higher than those subjects or courses normally offered to freshmen and sophomores in four-year institutions of postsecondary education which subject or course is approved by the state board" (Kan. Stat. Ann § 71-601, 1961/2011, para. 1). Furthermore, the statute indicates that the state board will not authorize funding for courses offered at a higher level (Kan. Stat. Ann § 71-601, 1961/2011). Interestingly, state statute does not define further the types of degrees a community college is allowed to offer. However, the Kansas Board of Regents website lists the mission of Kansas community colleges as helping "students achieve successful outcomes in such areas as: degree programs designed for transfer, technical education certificate and degree programs, adult education, developmental education, and customized training" (Kansas Board of Regents, 2023c, para. 11). The website further clarifies that community colleges may offer the Associate of Arts (A.A.), Associate of Science (A.S.), Associate of General Studies (A.G.S.), and the Associate of Applied Science (A.A.S).

Technical colleges are codified in statute as "an educational institution that formerly was an area vocational school or an area vocational-technical school that has been converted to, established as, and officially designated a technical college" (Kan. Stat. Ann § 74-32,407, 1969/2011, para. 12). The statutes that provide direction for the governing body further expand on this definition by defining the scope of degrees and authorizing the board to "confer the associate of applied science degree upon students who successfully complete an associate of applied science degree program of the college and to award a certificate or diploma to students

who successfully complete a career technical education program of the college" (Kan. Stat. Ann § 74-32,452, 2003/2017, para. 12). The mission of the Kansas technical colleges, as defined by KBOR, is to "prepare individuals for gainful employment in technical and professional careers supporting economic development and civic responsibility" (Kansas Board of Regents, 2023c, para. 13).

The state makes a clear delineation between technical education and coursework intended for transfer to a four-year university, often termed general education. This delineation factors into the college access discussion and manifests in what types of programs technical colleges may offer. The state does not view technical education as a transfer pathway, but rather a terminal degree designed to go directly into workforce. State statutes separate courses into tiered courses and non-tiered courses (Kan. Stat. Ann § 71-1802, 2011). Tiered courses are courses included in a technical program which are "designed to provide competency-based applied instruction to prepare individuals with occupationally specific knowledge and skills necessary for employment" (Kan. Stat. Ann § 71-1802, 2011, para. 10)). All other courses are identified as non-tiered courses. These are courses that more commonly considered general education. State statute further defines general education as

> courses that are generally designed to: (1) Contribute to academic knowledge or skills across multiple disciplines and occupations, such as communication, writing, mathematics, humanities, social or behavioral science and natural or physical science courses, some of which may be considered for transfer as general education credit toward a baccalaureate degree. (Kan. Stat. Ann § 71-1802, 2011, para. 6)

The separation of technical education and general education/transfer work and the separation of missions between community colleges and technical colleges may be well intentioned to prevent duplication across the system and maximize resources (S.B. 345, 1999). However, the

combination of this separation and the state university "home county" designation limit geographic access in areas across the state to open access education intended for transfer (Kan. Stat. Ann § 71-609, 1973/2011). The statute is favorable to the state universities in ensuring that a lower cost option for the first two years of education is not available nearby.

Kansas Higher Education Coordination Act

A central piece of legislation for the Kansas higher education system is Senate Bill 345, enacted in 1999, and cited as the Kansas higher education coordination act (S.B. 345, 1999). This legislation made significant changes to the structure of higher education in Kansas, including authorizing the Kansas Board of Regents to coordinate higher education in Kansas. The legislation outlined the purpose of the act:

> The purpose of this act is to provide for the general improvement of postsecondary education in the state of Kansas and to provide leadership, supervision and coordination for postsecondary educational institutions so that enhanced accessibility, quality, excellence, accountability, research and service may be achieved in the postsecondary educational system for Kansas residents through the efficient and effective utilization and concentration of all available resources and the elimination of costly and undesirable duplication in program and course offerings, faculties and physical facilities at postsecondary educational institutions. (S.B. 345, 1999, p. 1)

The legislation transferred supervision of the Kansas community colleges, technical colleges, area vocational schools, and area vocational-technical schools from the Kansas State Board of Education to the Board of Regents. The legislation did, however, state that community colleges, technical colleges, area vocational schools, and area vocational-technical schools "shall continue to be operated, managed, and controlled by locally elected boards of trustees" (S.B. 345, 1999, p.

9). This distinction in the legislation means that KBOR does not control or govern the community or technical colleges but does coordinate aspects of funding, degree offerings, and territory assignments, among other items.

Taxing Authority and Out of District Tuition

Senate Bill 345 also outlined several important policies related to two-year college funding. Sec. 27 included language permitting community colleges to continue to levy a property tax within their county to bolster the college's budget needs that are not covered by any other source, primarily state aid (S.B. 345, 1999). The bill also included new language phasing out a long-standing practice where a community college's board of trustees are permitted to charge other Kansas counties for each student enrolled from that county at a per credit hour rate codified in the legislation (S.B. 345, 1999).The practice, termed out-district tuition, was initially slated to phase out over a four-year period, however the phase out was delayed after the first two reduction periods before finally phasing out completely in 2006 (S.B. 556, 2004). Out-district tuition applied only to community colleges and courses taught at technical colleges/schools were exempt.

State University Home County

Another provision codified in Senate Bill 345 and K.S.A. 71-609 that is central to the college access discussion is a limitation placed on state funding for courses taught by community colleges outside their home county without KBOR authorization (Kan. Stat. Ann § 71-609, 1973/2011). Additionally, the legislation included language barring state funding for enrollment in courses "taught in a county in which the main campus of a state educational institution is located, unless the teaching of such subject or course is specifically authorized by the chief executive officer of the state educational institution" (Kan. Stat. Ann § 71-609, 1973/2011, para.

2). Additional language is included to clarify that the main campus designation applies to both Riley County and Saline County for Kansas State University (Kan. Stat. Ann § 71-609, 1973/2011). This language, commonly referred to as the home county designation, essentially prevents a community college from offering courses physically in the home counties of the state universities. This places a potential geographic barrier for students living in Crawford, Douglas, Ellis, Lyon, Riley, Saline, Sedgwick, and Shawnee counties whose educational goals align with a two-year open access community college.

Career Technical Education Outside Service Area

State statute does provide a process for career and technical education programs to be offered outside service areas. The legislation stated that

> provided a particular career technical education program is not offered in a particular service area, the governing board of a community college, technical college or institute of technology located outside such service area, in coordination with one or more school districts located within such service area, may apply to the state board of regents for permission to establish such career technical education program to be taught at a location in such service area. (Kan. Stat. Ann § 74-32,433, 2012, para.1)

This is important because it highlighted the recognition by policymakers that not all areas of the state have access to career and technical education and provides a mechanism for colleges to fill that need. Processes to ensure access to other sectors of education, specifically community colleges, is not referenced in the legislation.

Federal Financial Aid

The restrictions on degree type offerings imposed by the legislature on technical colleges affect those college's ability to offer federal financial aid for programs outside the narrow scope

allowed by policy. The Federal Student Aid Handbook outlined the requirements for program eligibility and includes a fundamental provision that "students must be enrolled in an eligible program to receive FSA funds" (U.S. Department of Education, 2021b, p. 25). Furthermore, the guidelines also state that the "school should make certain that it is authorized by the appropriate state to offer the program" (U.S. Department of Education, 2021b, p. 25). In some cases, students may choose to enroll in courses that either do not lead to a degree or certificate at the college or they simply do not intend to pursue the degree or certificate. For example, a student may desire to bolster their accounting skills and choose to enroll in one or more accounting classes at a college or university but not pursue a degree. Students in this situation are not eligible for federal financial aid. The Federal Student Aid Handbook stated that a person must be a regular student to receive aid, defining regular student as "someone who is enrolled or accepted for enrollment in an eligible institution for the purpose of obtaining a degree or certificate offered by the school" (U.S. Department of Education, 2021a, p. 7). Non-degree seeking students are therefore excluded from accessing federal student aid. This is an important factor in the college access discussion in Kansas.

The interplay of policy within the state of Kansas, specifically service area assignments, degree limitations on technical colleges, and restrictions on community colleges operating in the home county of a state university, present a scenario where a student in certain geographic areas may be limited in accessing federal student aid within their geographic area. For example, a student wishing to take courses at a two-year open access institution with the intention of transfer to a university may have limited options based on their geographic location. A community college is authorized by statute to offer the transfer curriculum however students that live in the home county of a state university do not have local access to a community college. This includes

Crawford, Douglas, Ellis, Lyon, Riley, Saline, Sedgwick, and Shawnee counties. Students living in Ellis, Lyon, Riley, Saline, Sedgwick, and Shawnee do have geographic access to a technical college; however, those colleges are not authorized by the state of Kansas to offer the Associate of Arts or Associate of Science. The combination of state legislation, service area assignments, and federal student aid policy create a situation where certain populations within the state may lack access to federal student aid for certain programs within their geographic area, potentially limiting access to higher education for those populations.

Qualitative Results - Themes

Three primary themes emerged through the review of legislation, policy documents, strategic plans, and meeting minutes. The themes provide insight into the language, values, and goals used by Kansas policymakers and higher education administrators that impact college access across the state. Each overall theme includes sub-themes that either support the theme, serve as a barrier, or expose a contradiction in the stated goal or value of the policy and the actual effects of the policy. Examples and other contextual information are provided to support each theme. The themes follow the style of coding employed in the analysis and are largely reflected as values espoused by policymakers or conflicts between groups or populations.

Higher Education Attainment is Valued

A theme that clearly emerged within the document review is the stated goal of the Kansas Board of Regents (KBOR) to build a highly educated populace within the state of Kansas. Language supporting the value of access to higher education, higher education attainment, and the impact higher education has on upward mobility is clearly stated in KBOR's language, goals, and values. There is also an understanding that changing demographics within the state

necessitate a focus on reaching underserved populations and connecting them to higher education.

Over the past 20 years and multiple KBOR strategic plans, the value of increasing higher education attainment remained a constant thread. The current strategic plan, "Building a Future" highlights the importance of access and affordability for Kansas higher education (Kansas Board of Regents, 2020a). The plan emphasized the economic data that "make it clear that education beyond high school offers Kansans the best opportunity to secure a prosperous future" (Kansas Board of Regents, 2020a, p. 3). The plan challenges Kansas colleges and universities to identify what skills and knowledge people need to compete in today's economy and build programs that help students develop those skills and knowledge (Kansas Board of Regents, 2020a). There is a clear emphasis in Building a Future for Kansas colleges and universities to offer relevant higher education that meets the needs of the citizens within their service areas and missions. What is lacking from KBOR and policymakers is an emphasis on assessing the system to determine if the service areas and missions of each higher education sector adequately reach all citizens in Kansas.

A review of previous strategic plans and KBOR meeting minutes revealed the emphasis on higher education access and attainment has been a major focus for the state over the last 30 years. Foresight 2020, KBOR's strategic plan that spanned the decade from 2010 – 2020 declared that "increasing higher education attainment among Kansans remains the principal goal of the Board's strategic plan as it is fundamental to the mission of higher education and because of the positive impact a credential has on individuals and their families" (Kansas Board of Regents, 2020b, p. 3). The original development of Foresight 2020 occurred as the state and nation was in the middle of the Great Recession. The plan's emphasis on higher education

attainment was clearly influenced by the economy at the time, noting that citizens that obtained a postsecondary credential have higher wages and lower unemployment. The plan also observed the disproportionate impact of job loss during the recession on those that lacked postsecondary credential, noting that four out of every five jobs lost impacted those that did not have any postsecondary education (Kansas Board of Regents, 2020b).

Foresight 2020's commitment to increasing higher education attainment included an aspirational goal to increase the number to 60% of Kansas adults who earned a certificate, associate, or bachelor's degree by 2020 (Kansas Board of Regents, 2013b). This number reflects data that shows that 64% of Kansas jobs would require some level of postsecondary education, including 54% that require an associate or higher by 2018 (Kansas Board of Regents, 2013b). The January 2012 annual progress report given to the Regents noted that the percent of Kansans with an associate degree or higher stood at 41% in 2010 (Kansas Board of Regents, 2012a). The 2014 annual update to the plan introduced an attainment model, developed by the National Center for Higher Education Management Systems (NCHEMS) (Kansas Board of Regents, 2014). The 2014 update indicated that 43% of the population held an associate degree or higher (Kansas Board of Regents, 2014). The update also added in postsecondary certificates to the metric, which increased the overall progress to 52%. The 2014 update also stated that Kansas, and the United States, have made little progress overall noting that "forty years ago the educational attainment of Kansans was only a few percentage points lower – there simply hasn't been much change in this state or in the United States as a whole" (Kansas Board of Regents, 2014, p. 1). Even more troubling is that the trends in Kansas in 2014 showed that the state was losing ground towards the goal with a projected 33,324 credentials to be awarded in 2019-2020, over 19,000 short of the 53,002 goal (Kansas Board of Regents, 2014). The addition of the

attainment model provided a useful visual to track the progress of the number of undergraduate certificates and degrees awarded across the system during the duration of the plan. The ninth and final update in February 2020 reported progress toward the goal but the state still fell well short of the projected need:

Figure 4.1 Attainment Goal Progress

Undergraduate Certificates and Degrees

(Kansas Board of Regents, 2020b)

The 2020 update noted that 40% of the 12,000-credential gap should be bachelor's degrees to meet the states workforce needs. The remaining 60% should be associate degrees and technical certificates (Kansas Board of Regents, 2020b). The report indicated the development of the next strategic plan and the need to consider this need, stating "as the new Board strategic plan is developed the attainment goal will remain as a fundamental part, but the metric will be evaluated with an eye toward ensuring it is consistent with the future needs of Kansas employers" (Kansas Board of Regents, 2020b, p. 4). The 2020 update showed a combined 37,744 bachelor's degrees, associate degrees, and certificates awarded by the Kansas public higher education institutions (Kansas Board of Regents, 2020b). The 2023 update of "Building a Future" indicated a decrease in this output awarding 34,752 degrees and certificates in 2022 (Kansas Board of Regents, 2023b). Reviewing the progress reports on educational attainment metrics over the last 15 years revealed a downward trend in attainment and a widening gap in meeting the state's workforce needs. The state has focused attention and resources to address this issue but has fell short.

Similarly, the Regents' System Goals in the early 2000s had a stated goal of increasing higher education access. In the discussion to develop performance agreements, which set goals for each institution in the system, the Regents emphasized the importance of the Kansas system becoming more seamless and accessible. They provided further definition, stating "a Seamless Educational System offers the best resources to provide a high-quality education for every citizen, and empowers and encourages each citizen to reach maximum potential by engaging in life-long learning" (Kansas Board of Regents, 2003a, p. 4). The stated goals included providing access to higher education and aligning the system, both within the multiple sectors of higher education, and also between high school and college to set students up for success. (Kansas Board of Regents, 2003a). Finally, the seminal legislation which brought the multiple sectors of higher education under the coordination of the Board of Regents charged the board to "conduct continuous studies of how state policies affect higher education and how Kansas economic and demographic trends impact upon accessibility and affordability of postsecondary education to Kansas residents, and initiate ways to improve such accessibility and affordability" (S.B. 345, 1999, p. 4).

Focus on Underserved Populations. The policy review and analysis of KBOR meeting minutes revealed an understanding by policymakers that increasing college access and improving the overall educational attainment levels of Kansas requires reaching those Kansans that are not currently served by higher education. The Regents and other state policymakers clearly recognize and value the importance of providing access to traditionally underrepresented populations, including racial and ethnic minorities, low-income populations, and rural students and included this language in their policies and planning documents. In 2003, the Board adopted a series of goals for the system and related performance agreements for each institution.

Increasing access to higher education was a central goal. The policymakers included a goal stating that colleges and universities "will increase participation of under-served populations in postsecondary education and organized lifelong learning activities" (Kansas Board of Regents, 2003a, p. 5). Foresight 2020 took a detailed and targeted approach to measuring access for underserved populations with metrics tracking higher education participation levels by Pell grant eligibility, race/ethnicity, and age (Kansas Board of Regents, 2017).

The plan also had a strong focus on re-engaging adult learners, who are often working, which is critical in meeting the state's projected need of 60% of Kansans having a postsecondary credential. The Regents understood that the numbers of high school graduates coming into higher education each year is not sufficient to meet the state's workforce needs and therefore increasing access for working adults is imperative (Kansas Board of Regents, 2020b). The report stated that over 330,500 adults aged 25-64 that have some college credits yet have not completed a degree. Additionally, the report detailed the number of adults aged 25-64 returning to college after an absence was decreasing in 2018 (Kansas Board of Regents, 2020b). Additionally, Foresight 2020 focused metrics on participation by race/ethnicity and noted the increasing Hispanic population in Kansas. The plan stated that "as the proportion of Kansans who identify as Hispanic grows, it will be important for postsecondary institutions to recruit greater numbers of Hispanic students" (Kansas Board of Regents, 2023b, p. 10).

Building a Future, the current KBOR strategic plan, also includes a focus on underrepresented populations and a goal to close enrollment equity gaps (Kansas Board of Regents, 2020a). The plan focuses on three specific equity gaps within the state: enrollment of Kansas students by race and ethnicity to the overall population, percentage of students who qualify for Pell grants with the percent of students who enroll that receive Pell grants, and

finally, the enrollment gap between rural and urban students (Kansas Board of Regents, 2020a). The plan defined rural as any county with less than 20,000 residents. Notably, annual progress reports for Building a Future focus on enrollment equity gaps for state universities only and omit data including enrollment at community or technical colleges (Kansas Board of Regents, 2023b). In 2022, there remained significant enrollment gaps in all three areas. The gap between the Kansas Hispanic population and Kansas Hispanic resident students was 5.4%, up 0.4% from 2021. Enrollment gaps for African American students were 2.4%. The percentage of White students enrolled in Kansas universities was 7.6% more than the percentage of White 18 to 24-year-old residents in Kansas (Kansas Board of Regents, 2023b). The enrollment gap for rural students is even wider, with 29.7% of the Kansas 18 to 24-year-old population living in rural areas, but only 15% enrolling in public state universities. This gap also widened from 2021-2022 by 1.2% (Kansas Board of Regents, 2023b). Finally, the gap in enrollment between the 18 to 24-year-old population that is Pell eligible, and the population of students enrolled at state universities that received Pell grants stood at 3.2% in 2022 (Kansas Board of Regents, 2023b). The omission of the two-year sector in tracking enrollment equity gaps is a signal of a disconnect between the stated values of the policymakers and the actions to achieve those values. The two-year community and technical colleges have an important role in serving the very populations for which the Regents are working to close enrollment gaps. Building a Future does recognize the value of an associate degree, noting that the average associate degree holder contributes significantly more in taxes over their lifetime than they receive in state benefits (Kansas Board of Regents, 2020a). There is also a recognition that the Kansas economy requires a mix of degrees and certificates to meet the workforce needs. KBOR research shows that the talent gap in Kansas is wider for jobs that require an associate degree or technical certificate, making up 60% of the

additional credentials needed to close the gap where bachelor's and higher make up the remaining 40% (Kansas Board of Regents, 2020a). Despite these statistics, the policies and metrics to measure college attainment are focused primarily on the state universities.

Imbalance of Power Creates Tension between Sectors

The second major theme identified is an imbalance of power within the state system and a tension on multiple levels including between the state universities and two-year colleges, between state versus local control, and tension between governance of the entire system versus coordination for certain sectors. The passing of the Kansas Higher Education Coordination Act in 1999 authorizing the Kansas Board of Regents to provide coordination of postsecondary institutions in Kansas, in addition to their primary role of governing the state universities, created a dynamic that emerged as this theme and a thread that connects the other themes and sub-themes. The legislation consolidated supervision and coordination of the Kansas community colleges and technical colleges under the state Board of Regents. The two-year sector had previously been coordinated by the Kansas State Board of Education. Each college within the two-year sector retained a local board that governs the college; however, KBOR coordinates certain parts of their operations. The KBOR policy manual outlines these activities as:

> (1) Determining institutional roles, reviewing institutional missions, and approving performance agreements for each institution;
>
> (2) Developing a comprehensive plan for coordinating all program and course offerings and locations, including transfer and articulation procedures;
>
> (3) Developing a unified budget for state funding of the system institutions, distributing state and federal funds, and requiring accountability for use of those funds;
>
> (4) Representing the system before the Governor and the Legislature; and

> (5) Collecting, aggregating and reporting common and institution specific information documenting effectiveness of each community college, technical college, Washburn University, Washburn Institute of Technology and state university in meeting its mission and goals. (Kansas Board of Regents, 2023b, pp. 3-4)

In addition to the coordination outlined above, the state universities are also governed by KBOR, which includes functions such as appointing and supervising the chief executive officer of each state university, overseeing and/or delegating the daily operations of each state university, maintaining physical assets, and setting policy for each state university (Kansas Board of Regents, 2023b).

State versus Local Control. The dynamic created through this legislation is one where each college within the two-year sector seemingly has local control but many of the significant factors in their ability to operate and serve their community are controlled by KBOR. The first bullet point above determines what each institution can offer in terms of academic programming and the third ensures compliance through funding mechanisms. The legislation clearly outlines this authority by stating that KBOR

> shall be an advocate for the provision of adequate resources and sufficient authority for all postsecondary educational institutions so that each postsecondary educational institution can realize, within its prescribed mission, role and scope, its full potential to the benefit of the students who attend such postsecondary educational institution and to the benefit of all Kansas residents in terms of receiving the benefits of a highly educated and vocationally trained populace. (S.B. 345, 1999, p. 3)

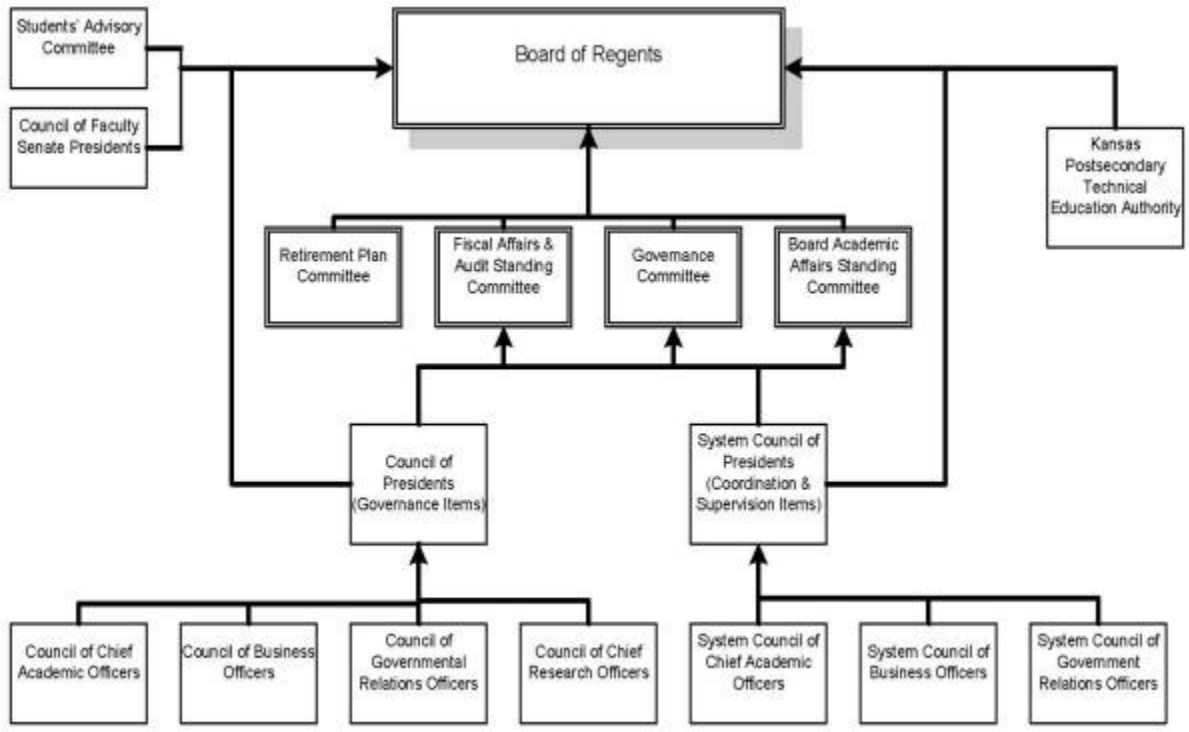
This legislation created a system that can pit the state universities and the two-year sector against each other. The legislation and policy in place create a power dynamic that favors the state

universities. This manifests most clearly in the protection that the legislation provides the state universities to ensure that an open-access two-year college cannot offer general education within the home county of a state university. The combination of the home county designation, service area assignments, and limitations on the technical colleges' academic scope and mission create a scenario that protects each state university from competition for courses that may seem duplicative. The establishment of distinct roles and missions with the goal of systemwide efficiency is clearly valued by state policymakers, as was established above. However, the desire to reduce or eliminate duplication across the system creates a situation where the Board's value and stated goal of increasing higher education attainment across the state conflicts with its value and stated goal of systemwide efficiency.

Collaboration. A sub-theme that factors into the governance versus coordination dynamic is the desire to create a collaborative environment within the KBOR system. The KBOR policy manual outlines a process of councils, committees, and other groups that strive to provide a voice to each sector when new proposals are submitted for approval. The policy manual states that "as a general rule, individuals and groups who are directly affected by a proposal, or have a vested interest in a proposal, shall be given an opportunity to review and provide advice about the proposal prior to its final adoption" (Kansas Board of Regents, 2023b, p. 5). The system of councils is delineated by the board's dual roles as the governing body of the state universities and the coordinating/supervision body for the statewide system. Items that are of significance to the state university sector follow the process outlined in the left side of the flow chart in Figure 4.2 below, going through the Council of Presidents before going to the Board committees and then the full Board for approval. The right side of the flow chart outlines the process for items that are considered "coordination and supervision items" (Kansas Board of

Regents, 2023b, p. 5). The System Council of Presidents serves to address these items and "make recommendations to the Board on general policy affecting the system as a whole" (Kansas Board of Regents, 2023b, p. 9). Like the governance side of the process, there are several councils across the system, including the chief academic officers, business officers, and government relations officers, the provide input to the System Council of Presidents before moving the Board of Regents for approval.

Figure 4.2 Kansas Board of Regent's Councils and Committees



(Kansas Board of Regents, 2023b, p. 5)

The makeup of each council is relevant to this study and the theme of governance versus coordination. The System Council of Presidents is made up of the "six presidents of the state universities, four presidents selected by the nineteen community colleges, one president selected by the six technical colleges, and the president of Washburn University" (Kansas Board of

Regents, 2023b, p. 9). The Chief Academic Officers, Business Officers, and Government Relations councils follow the same structure. The makeup of these councils again provides evidence of priority to the state universities. Each state university and Washburn University has a representative on each council, ensuring 100% representation across the four-year sector. The 19 community colleges have four representatives on each council, or 21% representation. The six technical colleges have one representative, or 17% representation. Perhaps more important than the percentage of representation from each sector is the balance of the overall 12-member council where the six state universities and Washburn have a majority of the representation. The Board policy manual does outline a provision that members "of other institutions (when not current members) are invited to provide input to System Council of Presidents when agenda items affecting those institutions are to be considered" (Kansas Board of Regents, 2023b, p. 9). A similar provision is included in the description of the other established councils as well as a statement that "on matters that have systemwide impact, all positions will be reported to the Board, and a majority will be required for Council endorsement" (Kansas Board of Regents, 2023b, p. 9). The makeup of the councils established by KBOR to consider issues that impact the statewide system are weighted in favor of the four-year sector and contribute to the overall theme of an imbalance of power within the state's higher education system.

The value of collaboration is also evident in KBOR policy manual language regarding service areas and processes to approve off-campus academic programming. The policy language clearly lays out the responsibility of each state university to meet "the needs of the area that are within the university's mission and have priority in offering off campus face-to-face academic courses and programs within the area over other state universities and Washburn University" (Kansas Board of Regents, 2023b, p. 121). Similar language exists in the section outlining

service area responsibility and requirements for community and technical colleges (Kansas Board of Regents, 2023b). Additionally, the policy manual outlines the process for community colleges and technical colleges to request approval to maintain eligibility for state reimbursement for any new off-campus course or program for credit offered in a service area other than its own and in the same county as a state university or Washburn University. Board policy places the approval power with the chief executive officer of that university. The state reimbursement language is key and provides an additional incentive to not offer courses within the home county of a state university. Community colleges may offer courses within the home county of a state university without approval from the state university CEO, but they must forego state reimbursement for enrollment in those courses.

An interesting caveat included in the KBOR policy manual places responsibility upon each state university to "request that other public institutions in Kansas serve identified or expressed needs in that area when the home institutions are unable to do so" (Kansas Board of Regents, 2023b, p. 121). This policy language seemingly encourages collaboration among the state higher education system to identify and meet needs in the service areas where the local institution cannot. KBOR policy language is careful to emphasize the mission of each sector in the language when outlining responsibilities for meeting the needs of their respective services areas. The language for the state universities includes the clarifier "within the university's mission" (Kansas Board of Regents, 2023b, p. 121). The same clarifier is included in the language for the two-year sector: "the community college and technical college in a service area have primary responsibility for meeting the needs of that area that are within the college's mission" (Kansas Board of Regents, 2023b, p. 124). This nuance in the policymakers' language ensures that each sector – state universities, community colleges, and technical colleges – stays

within its prescribed mission. Unfortunately, an access issue arises when the needs of a geographic area do not fully align with the mission of the type of institution assigned to serve that area.

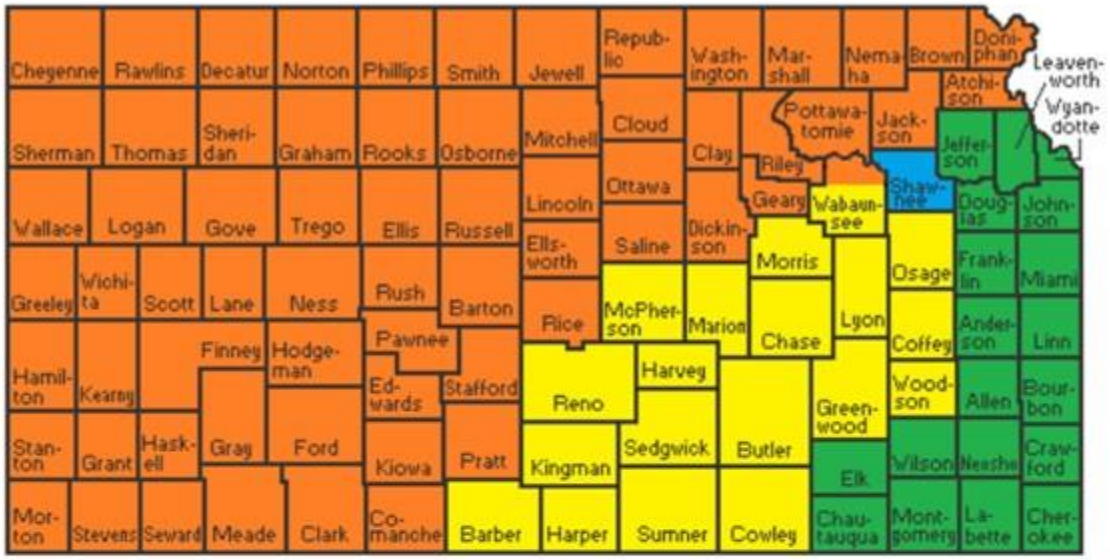
Systemwide Efficiency and Non-Duplication is Valued

A third major theme that emerged through the analysis is a clear value of systemwide efficiency and a desire to limit duplication within the system. Two of the primary factors supporting the efficiency theme is the desire to be good stewards of taxpayer funding while also using those resources in an efficient manner. These values were especially evident in the late 1990s and early 2000s as the current iteration of the Board of Regents was formed. Senate Bill 345, which provided the foundational policy for the current governance and coordination structure, outlined in the opening paragraphs the importance of "efficient and effective utilization and concentration of all available resources and the elimination of costly and undesirable duplication in program and course offerings, faculties and physical facilities at postsecondary educational institutions" (S.B. 345, 1999, p. 1). Early strategic planning discussions at KBOR included similar language. In 2003, while discussing performance agreements, the Regents communicated that a primary goal for institutions in the system was to "initiate, strengthen or extend collaborative efforts within and across sectors that result in a postsecondary education system that is more efficient, effective, and seamless" (Kansas Board of Regents, 2003a, p. 31) An early update to Foresight 2020 discussed the importance of institutional alignment and gave reasons why this was important: "It is imperative that the Kansas public higher education system use resources as efficiently as possible" (Kansas Board of Regents, 2012f, p. 5). Furthermore, examining the physical locations of Kansas public higher education institutions and the missions

in which they operate, provides evidence supporting the value of non-duplication. However, the locations also reveal a flaw in the state's logic and actions taken to avoid duplication.

Duplication. State policymakers' stated value to reduce or eliminate duplication across the system mistakenly considers the first two years of a community college education the same as the first two years of a state university education. While the courses do overlap, it is important to look past the courses themselves as duplicative and consider the missions are not duplicative. Not every student within the home county of a state university meets the Regents' qualified admissions requirements. Similarly, not every student within the home county of a state university has the financial means to attend a state university. The open access, low-cost mission of the community college provides a pathway for students who are not academically prepared, not financially capable, or whose educational goals do not align with a state university. This clarifier is important because it highlights the value state policymakers place on what they call systemwide efficiency, eliminating duplication across the state, specifically for the state universities. The service area maps included in the KBOR policy manual show the service area assignments for each sector. These maps present an interesting illustration of both who has access to each sector across the state and where duplication occurs. The map for the state universities (Figure 4.3) shows that every county in the state is assigned at least one state university. In most cases, two state universities share service areas except for Shawnee County, which is shared by four universities.

Figure 4.3 Map of State University and Washburn University Service Areas



Service Area	University	County of Main Campus
	Fort Hays State University	Ellis County
	Kansas State University	Riley County
	Wichita State University	Sedgwick County
	Emporia State University	Lyon County
	University of Kansas	Douglas County
	Pittsburg State University	Crawford County
	Washburn University	Shawnee County*

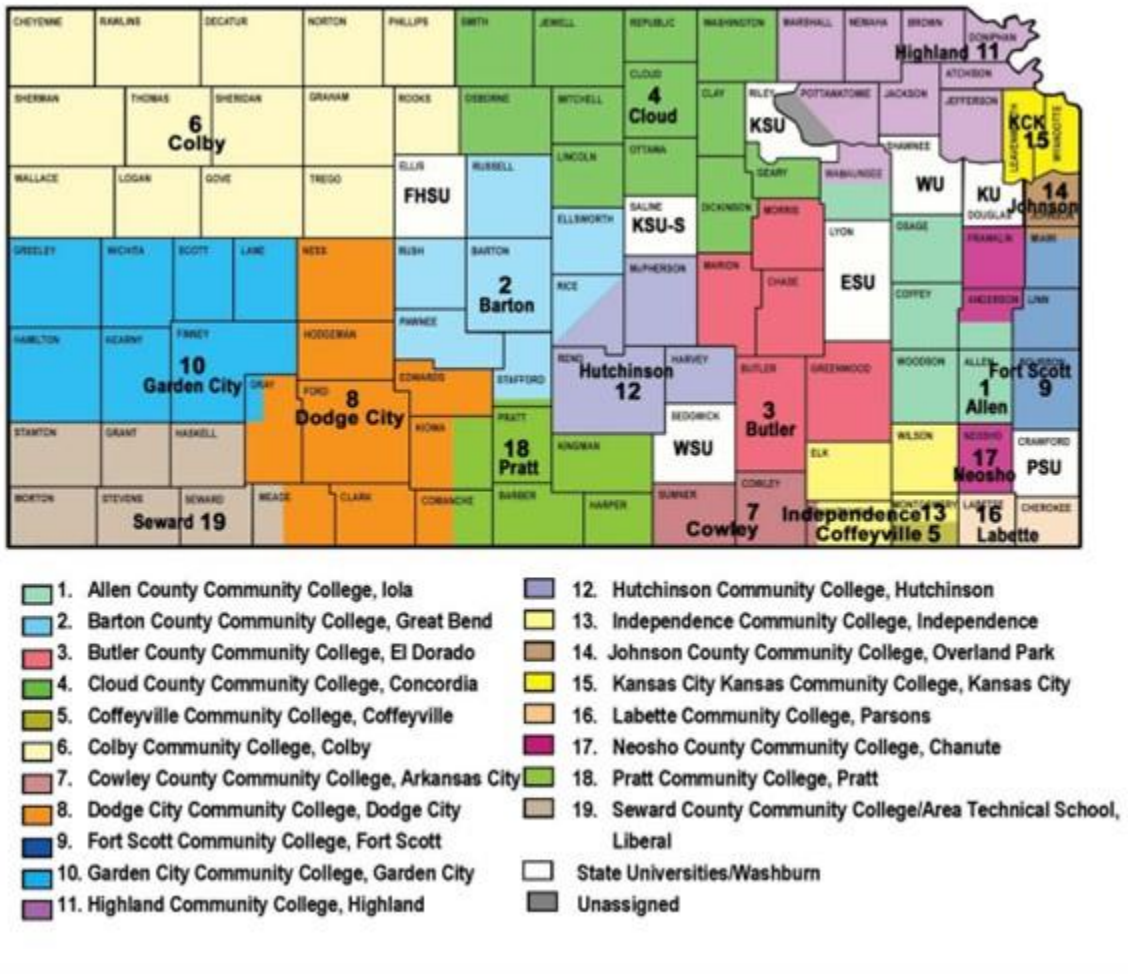
*KU, KSU, ESU, and WU share responsibility for serving Shawnee County

(Kansas Board of Regents, 2023b, p. 134)

The map outlining the service areas for Kansas community colleges (Figure 4.4) shows that most counties have an assigned community college. Eight counties, however, do not have a community college assignment and are assigned to the state universities per the home county designation discussed previously. Interestingly, a portion of Pottawatomie County is listed as unassigned. The review of policy documents did not reveal why or when this decision was made. The September 2009 KBOR meeting referenced the unassigned area while discussing a policy amendment regarding the ability for community colleges to purchase property outside their

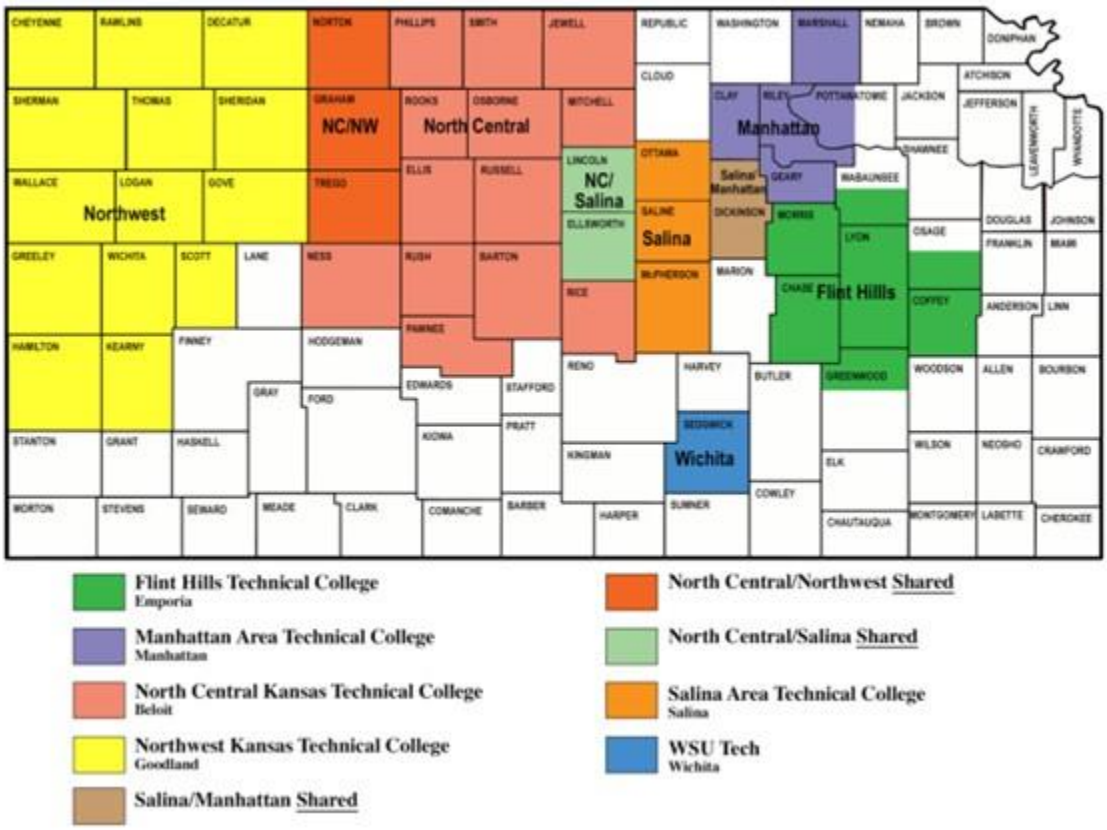
taxing district. The minutes show that the map was reviewed and adopted by the board in 2003 (Kansas Board of Regents, 2009); however, a review of the 2003 and 2004 minutes revealed that the service area assignments were reviewed but no action or changes were made. Similarly, the service areas were reviewed again in 2012 and 2018 but no changes were made after either review. The map outlining service areas for Kansas Technical Colleges (Figure 4.5) shows much less coverage across the state, with less than half of Kansas counties being a part of a technical college service area.

Figure 4.4 Map of Service Areas for Kansas Community Colleges



(Kansas Board of Regents, 2023b, p. 135)

Figure 4.5 Map of Service Areas for Kansas Technical Colleges



(Kansas Board of Regents, 2023b, p. 136)

Analyzing all three maps to determine gaps and overlaps reveals that, as mentioned before, all counties in Kansas are included in a service area for the state universities. Despite the considerable number of counites not included in a technical college service area, most still have access to technical education due to the community colleges' expanded mission which includes technical education. Interestingly, where five of the state university home counties are part of a technical college service area, three are not: Douglas, Crawford, and Shawnee. It is worth noting that Shawnee county is designated in the KBOR policy manual as the service area for Washburn Institute of Technology, a technical school under the umbrella of Washburn University (Kansas Board of Regents, 2023b). Also, Pittsburg State University in Crawford County offers a two-year

A.A.S. in certain technical programs. The community college service area encompasses every county except the eight counties housing a state university. There is significant overlap and duplication within the two-year sector, however. For example, Norton, Graham, and Trego counties in northwest Kansas are assigned Colby Community College, Northwest Kansas Technical College, and North Central Technical College. Similarly, Chase and Morris counties in southcentral Kansas are assigned both Butler Community College and Flint Hills Technical College. The analysis of Kansas higher education service areas reveals that, despite the stated value of systemwide efficiency, there are areas of the state with duplication among the different sectors of higher education and there are areas without access to one or more of the sectors. Table 4.1 below outlines all 105 counties and their service area assignment by type of degree offered by that sector. Population for the county is included for context. As mentioned previously, eight counties are not assigned to an open-access community college service area. These eight counties, highlighted in gray, represent eight of the top 20 counties in Kansas in terms of population. The total population of these eight counties is 1,044,198 or 36% of the total population of the state according to census population estimates (Kansas Division of the Budget, 2022).

Table 4.1 Kansas Counties by Type of Degree Offered and Population

County	State University	Community College A.A./A.S.	Technical Education A.A.S.	Population	Population Rank
Johnson	X	X	X	602,401	1
Sedgwick	X		X	516,042	2
Shawnee	X		X	176,875	3
Wyandotte	X	X	X	165,429	4
Douglas	X			122,259	5
Leavenworth	X	X	X	81,758	6

Riley	X		X	74,232	7
Butler	X	X	X	66,911	8
Reno	X	X	X	61,998	9
Saline	X		X	54,224	10
Crawford	X		X*	38,818	11
Finney	X	X	X	36,467	12
Cowley	X	X	X	34,908	13
Harvey	X	X	X	34,429	14
Miami	X	X	X	34,237	15
Ford	X	X	X	33,619	16
Lyon	X		X	33,195	17
Montgomery	X	X	X	31,829	18
Geary	X	X	X	31,670	19
Ellis	X		X	28,553	20
McPherson	X	X	X	28,542	21
Barton	X	X	X	25,779	22
Franklin	X	X	X	25,544	23
Pottawatomie	X	X	X	24,383	24
Sumner	X	X	X	22,836	25
Seward	X	X	X	21,428	26
Cherokee	X	X	X	19,939	27
Labette	X	X	X	19,618	28
Jefferson	X	X	X	19,043	29
Dickinson	X	X	X	18,466	30
Atchison	X	X	X	16,073	31
Neosho	X	X	X	16,007	32
Osage	X	X	X	15,949	33
Bourbon	X	X	X	14,534	34
Jackson	X	X	X	13,171	35
Allen	X	X	X	12,369	36
Marion	X	X	X	11,884	37
Nemaha	X	X	X	10,231	38

Marshall	X	X	X	9,707	39
Linn	X	X	X	9,703	40
Brown	X	X	X	9,564	41
Rice	X	X	X	9,537	42
Pratt	X	X	X	9,164	43
Cloud	X	X	X	8,786	44
Wilson	X	X	X	8,525	45
Coffey	X	X	X	8,179	46
Clay	X	X	X	8,002	47
Anderson	X	X	X	7,858	48
Thomas	X	X	X	7,777	49
Doniphan	X	X	X	7,600	50
Kingman	X	X	X	7,152	51
Grant	X	X	X	7,150	52
Wabaunsee	X	X	X	6,931	53
Russell	X	X	X	6,856	54
Pawnee	X	X	X	6,414	55
Ellsworth	X	X	X	6,102	56
Gray	X	X	X	5,988	57
Greenwood	X	X	X	5,982	58
Mitchell	X	X	X	5,979	59
Sherman	X	X	X	5,917	60
Ottawa	X	X	X	5,704	61
Morris	X	X	X	5,620	62
Stevens	X	X	X	5,485	63
Harper	X	X	X	5,436	64
Washington	X	X	X	5,406	65
Norton	X	X	X	5,361	66
Phillips	X	X	X	5,234	67
Rooks	X	X	X	4,920	68
Scott	X	X	X	4,823	69
Republic	X	X	X	4,636	70

Barber	X	X	X	4,427	71
Stafford	X	X	X	4,156	72
Meade	X	X	X	4,033	73
Haskell	X	X	X	3,968	74
Kearny	X	X	X	3,838	75
Smith	X	X	X	3,583	76
Osborne	X	X	X	3,421	77
Chautauqua	X	X	X	3,250	78
Woodson	X	X	X	3,138	79
Rush	X	X	X	3,036	80
Lincoln	X	X	X	2,962	81
Jewell	X	X	X	2,879	82
Decatur	X	X	X	2,827	83
Trego	X	X	X	2,803	84
Edwards	X	X	X	2,798	85
Logan	X	X	X	2,794	86
Ness	X	X	X	2,750	87
Cheyenne	X	X	X	2,657	88
Chase	X	X	X	2,648	89
Gove	X	X	X	2,636	90
Morton	X	X	X	2,587	91
Hamilton	X	X	X	2,539	92
Elk	X	X	X	2,530	93
Rawlins	X	X	X	2,530	94
Sheridan	X	X	X	2,521	95
Graham	X	X	X	2,482	96
Kiowa	X	X	X	2,475	97
Wichita	X	X	X	2,119	98
Stanton	X	X	X	2,006	99
Clark	X	X	X	1,994	100
Hodgeman	X	X	X	1,794	101
Comanche	X	X	X	1,700	102

Lane	X	X	X	1,535	103
Wallace	X	X	X	1,518	104
Greeley	X	X	X	1,232	105

The emphasis in the analysis on service area assignments is important because it highlights a contradiction in state policymakers' stated value of access and increasing higher education attainment with their stated value of systemwide efficiency. These two competing values leave a situation where eight counties do not have a community college service area assigned to them. This creates a scenario where not every type of education is available to every citizen geographically. In their efforts to reduce duplication in the state system, state policymakers are seemingly willing to disenfranchise students who live in these areas and whose academic goals align closer with a two-year community college.

Furthermore, the community college sector appears to have no clear structure or logical process for ensuring the locations of Kansas community college support access. The locations of community colleges were not coordinated by the state, nor were they created by the state. Legislation simply enabled local authorities to establish a college and levy a tax to support the college (Kan. Stat. Ann § 71-204, 1965/1999). Kansas statutes setting requirements for the establishment of a community college indicated that "the community college shall have a potential attendance volume within the commuting distance in the area of at least nine hundred (900) students enrolled in grades nine (9) to twelve (12)" (Kan. Stat. Ann § 71-1102, 1965/1980, para. 4). While the state statute sets a minimum limit on the attendance volume for a community college area, there does not appear to be any consideration for ensuring that populations across the state have access to a community college. This created a scenario where essentially any county that wished to pursue a community college could do so during this time. State statute 71-

1108 enacted a moratorium on new community colleges in the late 1960s which stopped the proliferation of new community colleges (Kan. Stat. Ann § 71-1108, 1968/1980). The result, however, is a community college system that lacks geographic coordination. Southeast Kansas, for example, has six community colleges within an 11-county area while northwest Kansas has just one to support 14 counties. Fortunately, community colleges are allowed to establish satellite campuses within their respective service areas to provide geographic access to potential students. Despite this, the system has inefficiencies related to geographic access. Some populations within the state have easy geographic access to one or more community colleges while other populations have a considerable distance to access the open-access option.

Review of Service Areas. One area of focus for this study is the geographic locations of the state colleges and universities and the service areas they are assigned to support. As discussed previously, the service area assignments across the state are segmented by the three sectors of higher education. The service area assignments have remained relatively unchanged since the passage of Senate Bill 345. State policymakers have conducted reviews of the service area assignments three times over the last 25 years, without taking any substantial action to adjust territory assignments.

The service area assignments were first reviewed in the early 2000s as KBOR was transitioning to its new role after the passage of Senate Bill 345. The motivation to review the territories stemmed primarily from a report commissioned by the state to assist with the evolution of the Board and to implement the changes outlined in the legislation. The report, titled "A New Horizon," was conducted by the Northwest Education Research Center and was informally referred to as the NORED (2001) report in KBOR meetings and documents. This was a key document in the qualitative phase that was not included in the original list of data sources

but was discovered in the review of KBOR meeting minutes. The primary emphasis of the NORED (2001) report was to review the missions and roles of the different sectors and to make "recommendations for improvements to the postsecondary education system that may be achieved from a restructuring of governance and administrative entities" (p. 5).

The report made several key recommendations for the Kansas Higher Education system highlighting many of the same issues uncovered in this study. Included in these recommendations are:

- The receipt of state funds should obligate an institution to follow state policy.
- The Board should review the community college service areas, redrawing and reconstituting them as community college districts or higher education planning districts.
- As a general rule, except for selected specialized programs, state universities should not offer Associate degrees. Those programs presently provided should be turned over in a phased manner to the state community and technical college system. The phasing process should allow present students to complete their programs in a timely manner.
- The Board should seek elimination of policies preventing the delivery of community college services in counties with four-year institutions
- The community colleges and technical institutions of Kansas should be 'open door' institutions and serve as the principal points of access to higher education.

(Northwest Education Research Center, 2001, pp. 7-9*)*

The report clearly delineated the importance of the mission of each sector within the Kansas higher education system and the important role each plays in college access. The report notes that comprehensive community colleges offer a wide range of services to the postsecondary learner, including many for people who are not interested in four-year degree

(Northwest Education Research Center, 2001). The report pointed out that the home county designation creates an exclusivity issue for residents in the counties of a state university and argued that the services then need to be offered by the university or not at all. Specifically, the report advises that "if these institutions are precluded from bringing their full array of services into these localities, then it must be left to the indigenous four-year institution to provide them" (Northwest Education Research Center, 2001, pp. 28-29). These services include things like developmental education, adult basic education, career and technical education, continuing education, and non-credit programs, and other services offered by a typical community college. The report further argued that "in view of the experiences of states in which community colleges and state universities share the same local service area, it is difficult to understand either the need for or the persistence of such exclusionary procedures" (Northwest Education Research Center, 2001, pp. 28-29). The report also addressed two of the key drivers of sustaining the home county practice, duplication and competition, both of which may put the university at a disadvantage. The report pointed to other states where community colleges and universities share a service area, arguing that "examples of community colleges and four-year institutions operating in close proximity to each other, in the same city, county, or 'market,' can be cited as effective examples of comprehensive program delivery services" (Northwest Education Research Center, 2001, p. 80).

Despite the clear recommendations outlined in the Northwest Education Research Center (NORED) (2001) report, the review of service areas stemming from the report made no significant changes. In May of 2003, KBOR charged the System Council of Presidents to complete a review of the service area policy and make recommendations on any changes to be made. The review was to answer, "whether there is a persuasive rationale for the continuation of

the three service areas or home county policies noted in the NORED report" (Kansas Board of Regents, 2003a, p. 5) and to articulate that rationale along with making recommendations for changes to the policy. According to minutes from the October 2003 Board meeting, the process to conduct the review consisted of contacting the CEOs by email with a "specific request for assessment of current service area polices and boundaries" (Kansas Board of Regents, 2003b, p. 78). The System Council of Presidents then reviewed the responses along with the Regents appointed to participate in the review and developed a response to the Board's charge (Kansas Board of Regents, 2003b). That response was submitted to KBOR during the January 2004 Board meeting. The report concluded that a persuasive rationale supported keeping the current community college and university service area intact with no significant changes.

At this time the technical colleges did not have defined service areas. The justification outlined in the report pointed towards the prevention of duplication, limiting unproductive competition, and that the policies had served the state well (Kansas Board of Regents, 2004). The university home county exclusion was also left unchanged with the report, arguing that "the primary rationale for continuing this university home county exclusion policy is that it prevents duplication of offerings in these counties, particularly lower division program duplication" (Kansas Board of Regents, 2004, p. 29). It is important to note that the only stakeholders consulted in the review of service areas were the institutional CEOs and the Regents. There does not appear to have been an effort to engage other stakeholders in the process nor discussion of the rationale laid out in the NORED (2001) report. Also of note is that while consensus was reached, the minutes reflected that "while the SCOPs vote in favor of this report was overwhelming, it was not unanimous" (Kansas Board of Regents, 2004, p. 30).

The service area policies were again reviewed during the 2012-2013 academic year. The Board goals for that year included a goal on "Revising the Board policy on geographic jurisdiction with a focus on students and accessibility" (Kansas Board of Regents, 2012e, p. 39). The Board's review of existing policies and potential policy alternatives considered the following pertinent matters:

- How we might better level the playing field between state educational institutions and out-of-state public and proprietary colleges.
- How we might best authorize state institutions to provide the greatest number of quality educational opportunities to Kansans while preserving resources and avoiding unnecessary duplication. (Kansas Board of Regents, 2012a, p. 50)

Much like the 2003 review, a workgroup was formed by the System Council of Presidents to review the service area policy and report to the broader group and Board (Kansas Board of Regents, 2012c). KBOR staff again surveyed the college and university CEOs on potential changes to the current policies (Kansas Board of Regents, 2012b) and indicated to the CEOs that they "would really like a consensus from the CEOs of what the policy should be in the future" (Kansas Board of Regents, 2012c, p. 143). The June KBOR meeting included discussion from the System Council of Presidents. The key issue from the minutes was eliminating duplication (Kansas Board of Regents, 2012d). The minutes indicated that the meeting also included discussion about private/for-profit colleges and where they could offer courses within the state. Changes to the policy were voted on during the April 2013 KBOR meeting. The meeting minutes provided an overview of the review process noting that the primary stakeholders engaged in the review were the Chief Academic Officers and the Chief Executive Officers of the community colleges, technical colleges, and state universities along with KBOR staff and the Regents

themselves (Kansas Board of Regents, 2013a). The minutes did not indicate any external stakeholders in the process. The result of the policy review was relatively minor changes to the policy and the addition of an appeal process. The services areas, including the home county exclusion, were left unchanged. Additional language was also added to the introduction to the Off-Campus Delivery of Academic Courses and Programs section of the policy manual. This language articulated the importance of college access and seemingly acknowledges the diverse nature of students seeking higher education in Kansas and the barriers they face, including location:

> This philosophy recognizes that students seeking off-campus academic courses and programs are a diverse population with differences in educational requirements, motivation, constraints, goals, access, and opportunities. To accommodate these differences, such academic programs are designed to reach established as well as underserved constituencies.
>
> Using available learning resources, including electronic delivery, off-campus academic courses and programs at the Kansas public postsecondary institutions collectively work toward increasing opportunities for the entry and reentry of individuals and groups into higher education by assisting them to overcome or minimize participatory barriers such as location, employment, finance, and family-social-civic responsibilities. These efforts, which may involve a variety of course and delivery formats, are sustained by a commitment to developing and maintaining convenient, quality, and affordable services and instruction. (Kansas Board of Regents, 2023b, p. 127)

The most recent review of the service area policy occurred in 2018-2019 and followed a similar model and outcome as the reviews in 2003 and 2012. In August of 2018, the board

established several goals for the upcoming year including a goal to "study university and college service areas to determine if the delivery model for off-campus instruction continues to meet the educational needs of Kansans" (Kansas Board of Regents, 2018, p. 105). Multiple times throughout the session, the topic of how to define and measure unmet educational need surfaced in the discussion (Kansas Board of Regents, 2019a, 2019b). Similarly, the technical college representative noted that "the technical colleges believe service areas are still relevant; however, there may be specific locations in Kansas where the policy needs to be adjusted to address specific educational needs" (Kansas Board of Regents, 2019a, p. 8). Despite the question of unmet educational need being raised and left unanswered, both the technical college and community college sector opposed any major changes to the service area policy (Kansas Board of Regents, 2019b).

Like previous reviews and the Board's stated value of non-duplication, the primary motivation to maintain the current service area policy appears to be based on eliminating duplication across the state and protecting each institution's current territory. The System Council of President's (SCOP) indicated that they "would like to see 1) no duplication of programs, 2) collaboration, 3) pathways with high schools, and 4) existing institutions to work together to meet the needs of students" (Kansas Board of Regents, 2019a, p. 90). Also, while the community and technical colleges were united in their support for maintaining the policy, the universities were split. Kansas State University "stated support for relaxing or eliminating service area restrictions to open access for Kansas and promote completion" (Kansas Board of Regents, 2019c, p. 123). It is unclear from the minutes if Kansas State University was also in favor of relaxing the home county designation. Most of the other state universities, except for Fort Hays State University, expressed support for maintaining the current policy. Wichita State

University specifically indicated “the importance of retaining the home county designation for universities to protect the investment of the state as well as the local investment of 1.5 mills of property tax paid by Sedgwick County residents to support WSU” (Kansas Board of Regents, 2019c, p. 123).

The stakeholders also discussed the population in each university service area and noted that the total population in each university service area was not equitable among the state universities (Kansas Board of Regents, 2019c). It is important to note that the discussion of population trends was only in the context of state university service areas and not community or technical college service areas. At the June 2019 KBOR meeting, the only change made to the service area policy was to align the state’s definition of distance education with that of the Higher Learning Commission (HLC) (Kansas Board of Regents, 2019d).

Quantitative Phase Results

Spatial Analysis

This phase of the study sought to identify the spatial disparities in the location of Kansas community and technical colleges, measured by the percentage of the Kansas population with geographic access to each of the public sectors of higher education in Kansas: state university, community college, and technical college. The study used census tracts as the local geographic area. A total of 829 census tracts exists within the state of Kansas. Table 4.2, Table 4.3, and Table 4.4 present the percentage of the population that resides within 30 miles of the nearest community college, technical college, and state university, respectively. Geographic access was measured using ArcGIS software by calculating the straight-line distance between the centroid (the geographic center) of each census tract to the main campus location of each public institution of higher education in Kansas. Additional analysis was conducted on a subset of the

census tracts to determine the driving distance between the centroid and the main campus locations.

Table 4.2 Census Tract Distance to Nearest Community College with Population

Miles to nearest community college	Census tracts	Population	Percent of total population
0-30	573	2,016,189	68.6%
30-60	215	780,783	26.6%
60-90	40	138,334	4.7%
90-120	1	2,574	0.1%
Grand Total	829	2,937,880	100.0%

The most geographically accessible higher education sector within the state is the community college sector. Of the state's census tracts, 573 are within 30 miles of a community college, representing 68.6% of the state's total population. The remaining 31.4% of the census tracts are more than 30 miles from the nearest community college.

Table 4.3 Census Tract Distance to Nearest Technical College with Population

Miles to nearest technical college	Census tracts	Population	Percent of total population
0-30	331	1,259,530	42.9%
30-60	319	1,131,026	38.5%
60-90	95	289,036	9.8%
90-120	54	156,169	5.3%
120-150	22	72,185	2.5%
150-180	8	29,934	1.0%
Grand Total	829	2,937,880	100%

A smaller percentage of the state's population are within 30 miles of a technical college. Of the state's census tracts, 331 reside within 30 miles of a technical college, representing 43% of the total population. A key difference between the technical colleges and community colleges is the percentage of population that is more than 60 miles from the nearest college. Less than five percent of the state's population is more than 60 miles away from the nearest community college. Over 18% of the state's population is more than 60 miles from the nearest technical college.

Table 4.4 Census Tract Distance to Nearest State University with Population

Miles to nearest state university	Census tracts	Population	Percent of total population
0-30	474	1,812,592	61.7%
30-60	250	809,048	27.5%
60-90	62	186,443	6.3%
90-120	22	64,771	2.2%
120-150	13	35,097	1.2%
150-180	8	29,929	1.0%
Grand Total	829	2,937,880	100%

Geographic access to the state university sector is available to 474 census tracts, representing 61.7% of the state's population. Conversely, 38.3% of the population resides more than 30 miles from the nearest state university and nearly 10% of the state's population is more than 60 miles from the nearest state university.

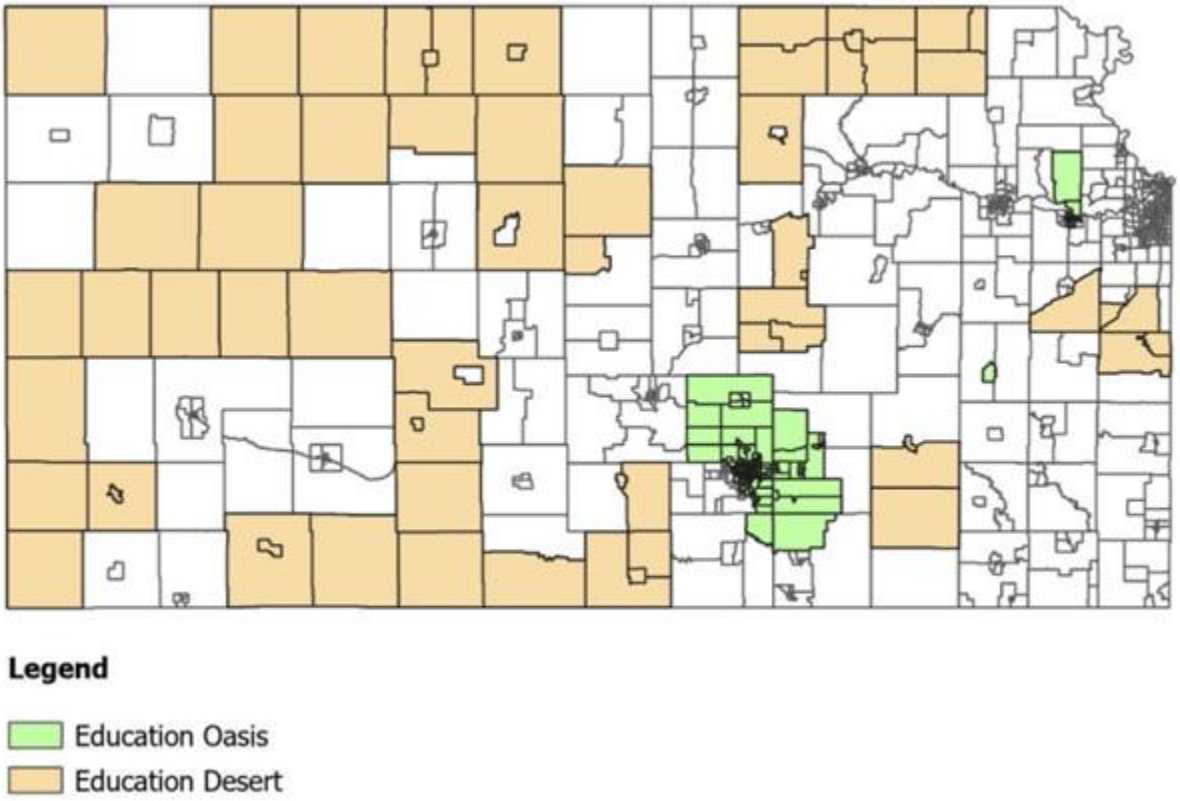
After determining the distance from each census tract centroid to the nearest college within each sector, the data was analyzed to understand which geographic areas within the state have access, or not, to multiple sectors. This analysis allowed the researcher to identify higher education deserts, match deserts, or oases that exists geographically within the state. Table 4.5 outlines every combination of higher education access across sectors.

Table 4.5 Higher Education Access within Kansas

Sectors accessible within 30 miles	Census tracts	Population	Percent of total population
No Access	64	169,739	5.8%
Technical College Only	28	99,820	3.4%
Community College Only	252	824,224	28.1%
State University Only	22	82,773	2.8%
At least 1 Technical College and 1 State University	142	569,359	19.4%
At least 1 Technical College and 1 Community College	10	27,453	0.9%
At least 1 Community College and 1 State University	160	601,614	20.5%
Access to all 3 Sectors	151	562,898	19.2%
Totals	829	2,937,880	100%

Notably, 64 census tracts, representing 5.8% of the population reside in a complete education desert, lacking geographic access to any type of public higher education within 30 miles. Conversely, 151 census tracts, representing 19.2% of the population, reside in an education oasis. Derived from Dache-Gerbino's (2018) study on college access in the Rochester, NY areas, an education oasis is an area with higher numbers of higher education institutions. An education oasis is defined for this study as having geographic access to all three public higher education sectors within 30 miles of the census tract's centroid. Figure 4.6 displays the census tracts that contain an education desert or an education oasis.

Figure 4.6 Education Deserts and Oases



While over 94% of census tracts in Kansas have access to at least one type of higher education within 30 miles, it is important to consider the previously discussed nuances in the Kansas laws determine service area territories and that limit degree offerings. This study considers the type of two-year college and the types of degrees and programs offered when determining if a geographic area has access to an appropriately matched institution and the different undergraduate degree types offered within the Kansas higher education system, the bachelor's degree, Associate of Arts/Science, and the Associate of Applied Science. As previously established, the community college sector can offer all three types of associate degrees while the technical colleges are statutorily limited to the Associate of Applied Science. Therefore, for the purposes of this study, a match desert is defined as lack of access to at least one public four-year and one two-year community college. This study utilizes a more relaxed

definition than previous studies did. Hillman and Weichman (2016) and Klasick (2018) both defined match deserts as an area lacking one public, four-year non-selective college and two public two-year colleges. Figure 4.7 displays the 454 census tracts, representing 54.6% of the state's population, which reside in a match desert. Conversely, 311 of the 829 census tracts in the state do have geographic access to at least one state university and one community college. This represents 39.7% of the total population. Figure 4.7 also displays the 311 census tracts with access to both sectors. These geographic areas are limited to southeast Kansas, northeast Kansas near Kansas City, and portions of the Wichita metropolitan area. Further analysis was conducted on this subset of census tracts to determine the driving distance as opposed to straight line distance. Figure 4.8 displays the results of this analysis. A total of 129 census tracts representing 16.1% of the state's population has access to at least one state university and one community college within 30 driving miles. Using driving distance as a measurement reduces the accessible areas to a smaller area of Southeast Kansas, the areas west of the Kansas City metropolitan areas, and the northeast areas of the Wichita metropolitan area.

Figure 4.7 Match Deserts, Education Deserts, and Areas with Access

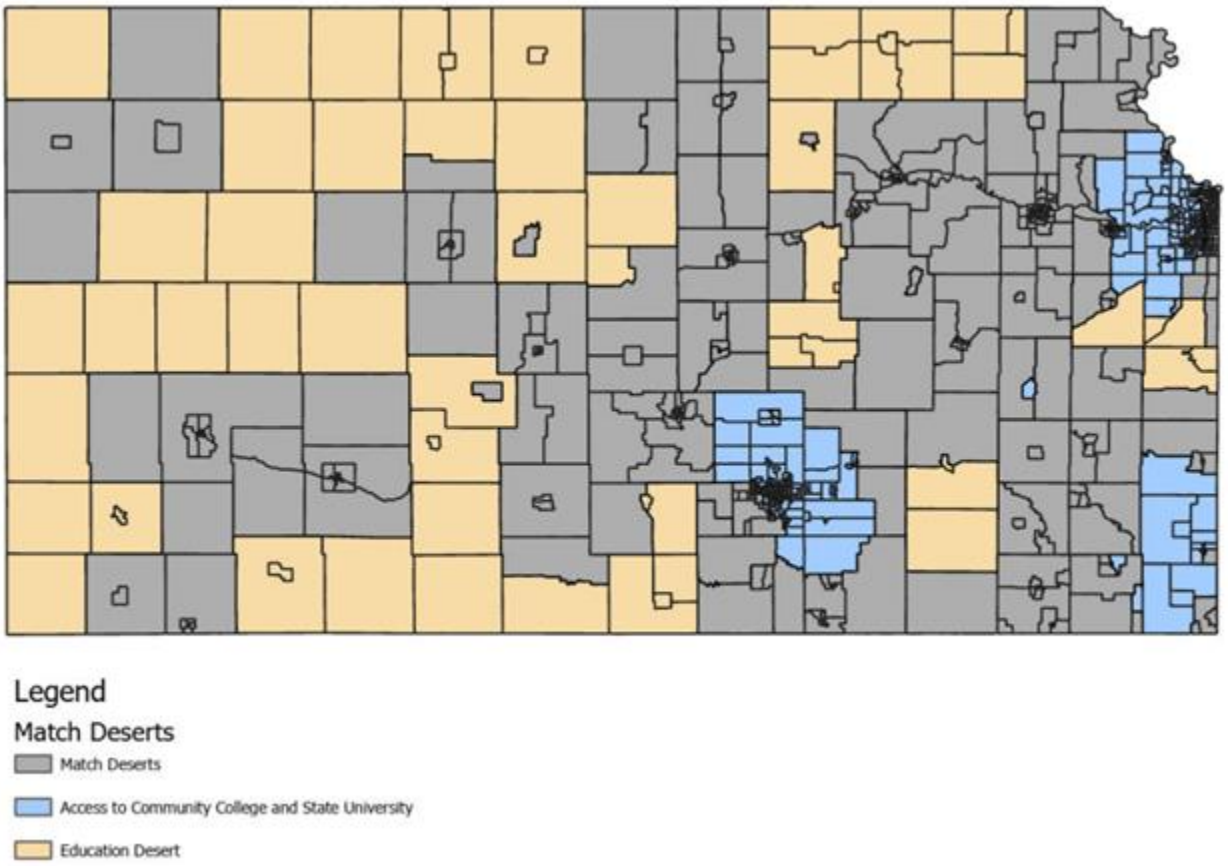


Figure 4.8 Census Tracts with Access to a State University and a Community College using Driving Distance

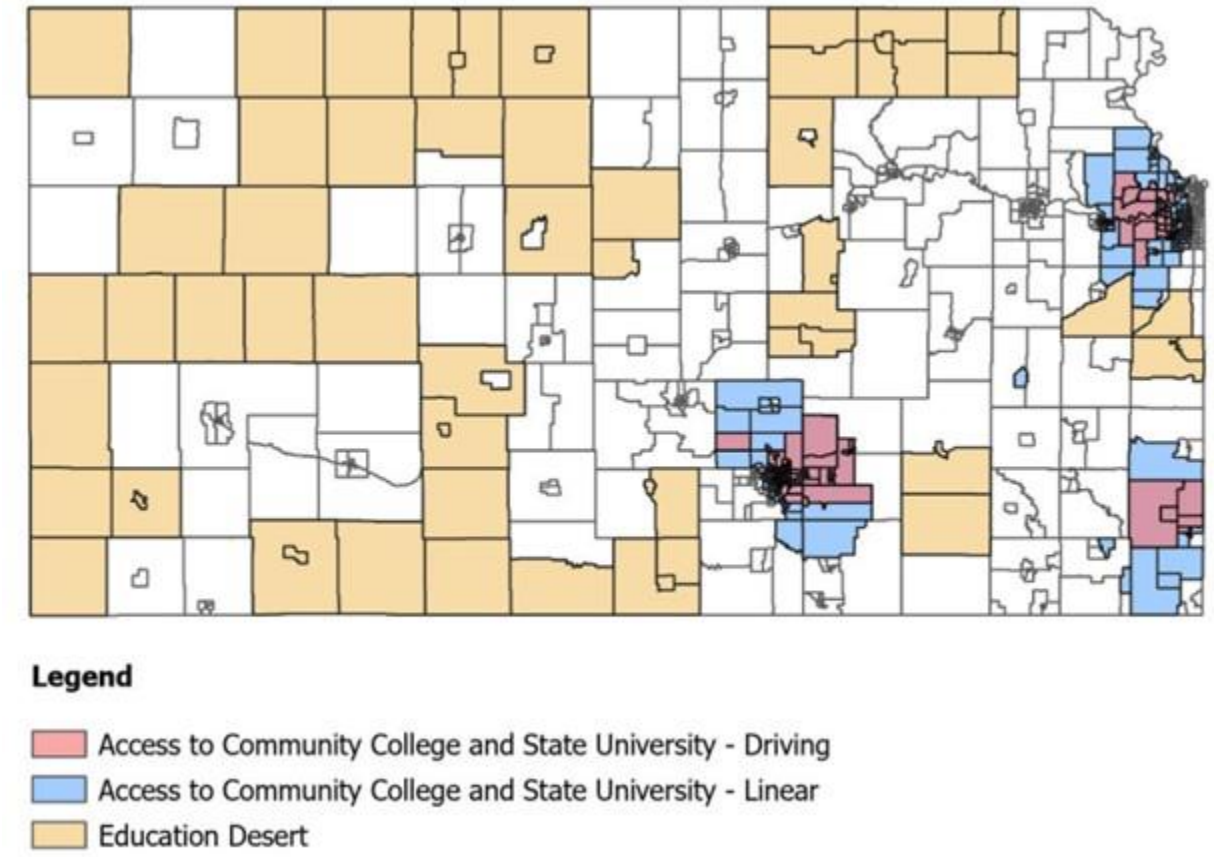


Figure 4.9 provides a visual summary of the different combinations of access outlined in Table 4.5. Figure 4.10 adds a layer outlining the home counties of each state university to show the impact of state legislation and policy that limits community colleges in those counties. Several home counties have limited access to one or more higher education sectors. Ellis County has access only to the local state university, Fort Hays State University. Riley, Shawnee, and Lyon counties have access to both a state university and a technical college but lack access to a community college, as do portions of Sedgwick and Douglas counties. Nearly every census tract in Crawford County has geographic access to a state university and a community college as do certain census tracts within Sedgwick and Douglas counties.

Figure 4.9 Higher Education within Kansas

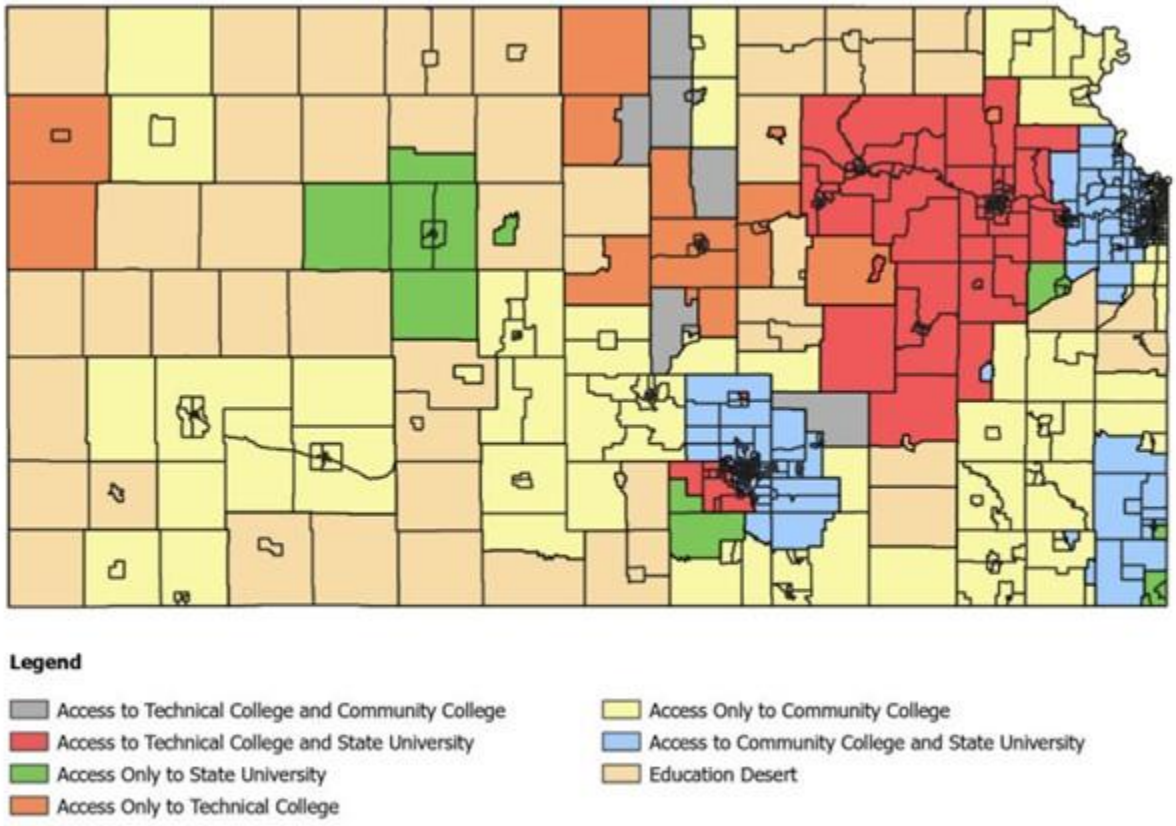
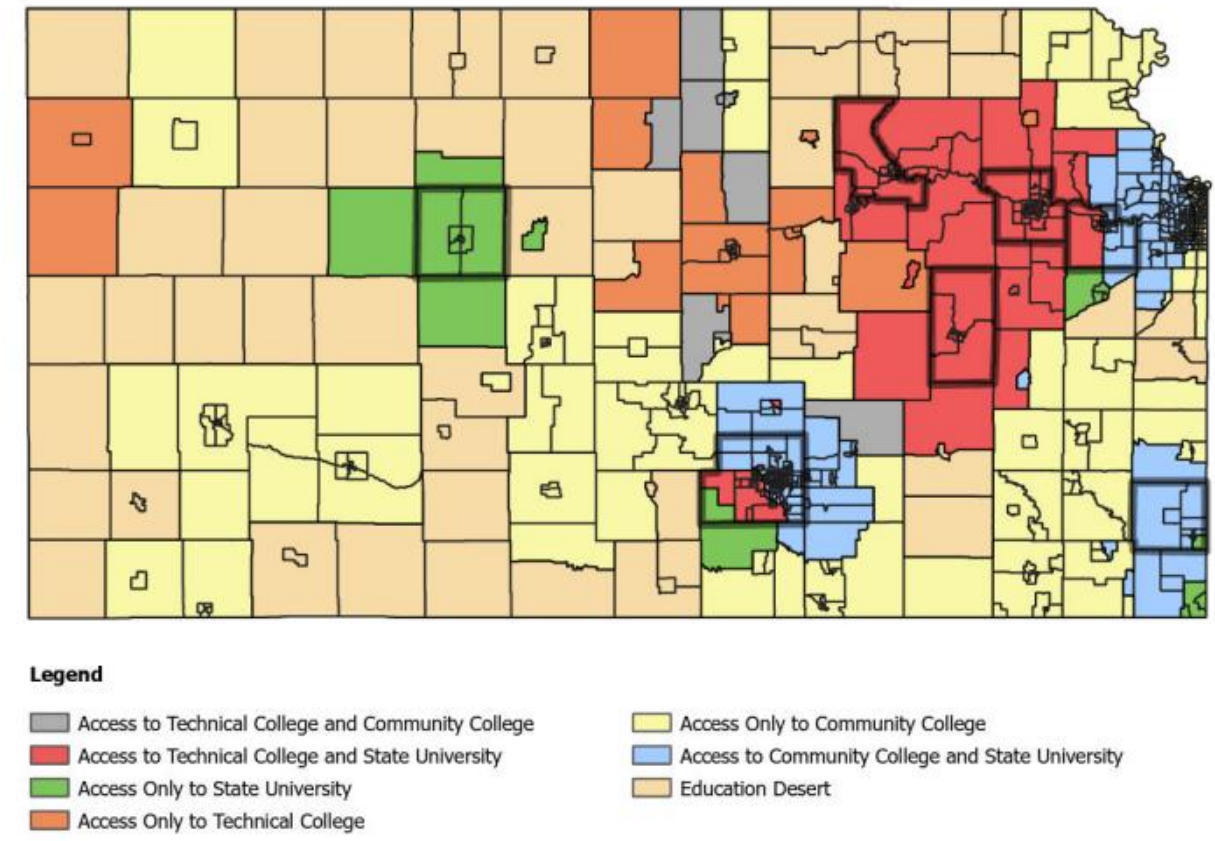


Figure 4.10 Higher Education within Kansas with State University Home County Outlines



Demographic Data

Tables 4.6 through 4.9 provide demographic data for the overall state of Kansas and for the census tracts that make up education deserts, match deserts, and areas of the state that have access geographically to a community college and a state university. The demographic data includes race/ethnicity, educational attainment data, and income. As shown in Table 4.7, when comparing the mean percentages of census tracts, the percentage of the population over 25 years of age that have an associate degree, bachelor's degree or higher is 9% lower for the census tracts classified as education deserts compared to the broader state. Table 4.8 shows that census tracts classified as match deserts are 4% lower for the same metric. Areas with access to at least

one state university and one community college have a mean educational attainment rate of 45.8% compared to the overall state mean of 42%, based on the findings in Table 4.9.

As shown in Table 4.7, education deserts, more likely to be rural, tend to be predominantly white and overall are less diverse in terms of race and ethnicity than the broader state. Table 4.9 shows that areas with educational access, which are located near larger metropolitan areas, have a more diverse population, especially of Black or African American, American Indian, and Asian populations. Match deserts, according to Table 4.8, largely mirror the overall state race and ethnicity demographics. Median household income data presents an interesting scenario where census tracts classified as education deserts have a lower average median household income than the broader state $56,566 in Table 4.7 to $67,211 in Table 4.6. According to data in Table 4.9, Census tracts with educational access have a higher average median household income than the broader state $73,649 to $67,211. Census tracts with educational access also have more extremes in household incomes. The census tracts that have the lowest median household income, $16,071, in the state are in areas with educational access. The census tracts with educational access also contain areas with a median household income of $244,569, just short of the highest in the state at $250,001.

Table 4.6 State of Kansas Demographics

Educational Attainment	Mean	Min	Max
Percentage of population over the age of 25 with a bachelor's degree or higher	32.0%	2.4%	90.2%
Percentage of population over the age of 25 with an associate degree	9.0%	0.0%	23.3%
Percentage of population over the age of 25 with some college	23.0%	4.6%	51.1%

Race	Mean	Min	Max
White alone, Not Hispanic	74.2%	0.9%	99.5%
Black or African American	5.9%	0.0%	71.8%
American Indian	0.55%	0.0%	20.5%
Asian	2.8%	0.0%	37.9%
Native Hawaiian or Pacific Islander	0.056%	0.0%	6.0%
Some other race	0.24%	0.0%	8.5%
Two or more races	3.7%	0.0%	20.4%
Hispanic or Latino	12.7%	0.0%	86.5%

Income	Mean	Min	Max
Median Household Income in past 12 months	$ 67,211.70	$ 16,071.00	$ 250,001.00

Note. The data for Educational Attainment are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B15002. The data for Race is from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B03002. The data for income are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B19013B, B19013C, B19013D, B19013E, B19013F, B19013G, B19013H, B19013I, B19049, B19053.

Table 4.7 Education Desert Demographics

Educational Attainment	Mean	Min	Max
Percentage of population over the age of 25 with a bachelor's degree or higher	21.8%	11.0%	40.6%
Percentage of population over the age of 25 with an associate degree	10.2%	2.8%	18.7%
Percentage of population over the age of 25 with some college	25.2%	14.7%	38.3%

Race	Mean	Min	Max
White alone, Not Hispanic	86.7%	44.9%	97.4%
Black or African American	0.6%	0.0%	4.4%
American Indian	0.047%	0.0%	2.4%
Asian	0.7%	0.0%	5.7%
Native Hawaiian or Pacific Islander	0.004%	0.0%	2.3%
Some other race	0.1%	0.0%	2.8%
Two or more races	2.5%	0.0%	10.1%
Hispanic or Latino	8.9%	0.4%	52.9%

Income	Mean	Min	Max
Median Household Income in past 12 months	$ 56,566.60	$ 38,605.00	$ 100,035.00

Note. The data for Educational Attainment are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B15002. The data for Race is from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B03002. The data for income are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B19013B, B19013C, B19013D, B19013E, B19013F, B19013G, B19013H, B19013I, B19049, B19053.

Table 4.8 Match Desert Demographics

Educational Attainment	Mean	Min	Max
Percentage of population over the age of 25 with a bachelor's degree or higher	28.9%	2.4%	90.2%
Percentage of population over the age of 25 with an associate degree	9.1%	0.0%	23.3%
Percentage of population over the age of 25 with some college	23.4%	0.0%	51.1%

Race	Mean	Min	Max
White alone, Not Hispanic	75.7%	0.9%	98.2%
Black or African American	4.7%	0.0%	71.8%
American Indian	0.56%	0.0%	20.5%
Asian	2.2%	0.0%	37.9%
Native Hawaiian or Pacific Islander	0.075%	0.0%	6.0%
Some other race	0.21%	0.0%	8.5%
Two or more races	3.4%	0.0%	20.4%
Hispanic or Latino	13.3%	0.0%	80.0%

Income	Mean	Min	Max
Median Household Income in past 12 months	$ 63,354.00	$ 17,177.00	$ 250,001.00

Note. The data for Educational Attainment are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B15002. The data for Race is from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B03002. The data for income are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B19013B, B19013C, B19013D, B19013E, B19013F, B19013G, B19013H, B19013I, B19049, B19053.

Table 4.9 Areas with Education Access Demographics

Educational Attainment	Mean	Min	Max
Percentage of population over the age of 25 with a bachelor's degree or higher	37.1%	2.9%	77.7%
Percentage of population over the age of 25 with an associate degree	8.7%	0.7%	22.9%
Percentage of population over the age of 25 with some college	22.4%	5.7%	40.1%

Race	Mean	Min	Max
White alone, Not Hispanic	71.4%	5.1%	99.5%
Black or African American	7.8%	0.0%	68.6%
American Indian	5.1%	0.0%	12.8%
Asian	3.7%	0.0%	27.5%
Native Hawaiian or Pacific Islander	0.002%	0.0%	1.9%
Some other race	2.8%	0.0%	5.5%
Two or more races	3.7%	0.0%	17.1%
Hispanic or Latino	12.0%	0.0%	86.5%

Income	Mean	Min	Max
Median Household Income in past 12 months	$ 73,649.50	$ 16,071.00	$ 244,569.00

Note. The data for Educational Attainment are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B15002. The data for Race is from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B03002. The data for income are from U.S. Census Bureau's American Community Survey (ACS) 2017-2021 5-year estimates, Table(s) B19013B, B19013C, B19013D, B19013E, B19013F, B19013G, B19013H, B19013I, B19049, B19053.

The results of this quantitative phase of the study identified geographic areas of Kansas that experience spatial inequality in access to public higher education. The results provide a quantitative and visual summary of the areas of the state that lack access to higher education, lack access to an appropriately matched institution, or have access. Additionally, context was provided for those areas with regards to educational attainment, race, and income data. The following section provides a summary of the results chapter.

Chapter Summary

This chapter first provides a descriptive overview, including historical context, of legislation, policy, and processes at the state and federal levels that impact access to higher education in Kansas. Policies were identified and analyzed that influence the governance and coordination of each sector of public higher education in Kansas. Specifically, policies and legislation that shape the mission, degree offerings, service area assignments, and funding levels were analyzed. Next, using critical policy analysis as a framework, the qualitative phase of this study found three distinct themes that highlight the language, values, and goals used by policymakers that impact access to higher education in Kansas. First, policymakers in Kansas clearly value and seek to promote higher education attainment and set goals that seek to improve access to higher education, enhance upward mobility, and focus on better serving underrepresented populations. Secondly, an imbalance of power between technical colleges, community colleges, and state universities creates tension among the sectors and, despite a focus on collaboration, favors the state universities. This leads to situations where the two-year sector may lack the necessary control to meet the needs of their local communities due to KBOR policy and state legislation that favors the state universities. The third theme found that policymakers clearly value efficiency within the overall state system and seek to limit duplication across the system. However, in their efforts to reduce duplication among courses offered within a geographic area, they fail to consider the missions of each sector of higher education and the populations each sector is designed to serve. The efforts to reduce duplication and prevent overlap in service areas limit opportunities and access for broad sections of the state.

Finally, the results of the quantitative phase of the analysis were presented. Spatial disparities were identified based on access to the different sectors of higher education. Areas

classified as education deserts, match deserts, and areas with access to higher education were identified and presented. Demographic information, including educational attainment, race/ethnicity, and household income, was presented for each of the areas. The following concluding chapter provides a discussion on the findings, implications, recommendations for policy changes, and future research opportunities.

Chapter 5 - Discussion and Recommendations

This concluding chapter provides an overview and discussion of the findings presented in the previous chapter regarding the impact of Kansas policies on college access as it relates to geography. This chapter also discusses the limitations of the study and outlines potential research opportunities that can build upon this foundational study. The chapter concludes by making several recommendations for policy changes that should be considered by state officials to better support college accessibility in the state.

Overview of the Study

Edmondson (2004) argued that educational policy is inherently political and is subject to power dynamics that can favor one group at the expense of others. Drawing from that key assumption in critical policy analysis research, this study sought to examine the power differentials in Kansas higher education and the structural inequalities that have been created and persist due to policy decisions, particularly as it relates to the impact of geography on college accessibility. The study provided a descriptive overview of the policies and legislation that impact the coordination, governance, and structure of the Kansas public higher education system, including policies that directly or indirectly influence college going behaviors. The qualitative phase used a critical policy analysis framework to review policy documents, identifying three primary themes that offer perspective into the language, values, and goals used by policymakers that shape college access across the state. The quantitative phase used GIS technology to measure and display disparities in geographic access to Kansas community and technical colleges. Overall, the study sought to identify power differentials within the Kansas public higher education system regarding territory assignments and degree offerings and then provide

insight into the differential effects of those policies, based on geography. The research questions guiding the study are:

Research Question 1: What language, values, and goals are used in Kansas higher education policy that impact the location and academic scope of community and technical colleges?

Research Question 2: In what ways and to what extent do Kansas' policies regulating community and technical college territories and degree offerings produce differential effects, related to geography, in access to higher education?

Research Question 3: What spatial disparities exist in the location of Kansas community and technical colleges, measured by the percentage of the Kansas population with geographic access to each of the public sectors of higher education in Kansas: university, community college, technical college?

Discussion and Implications

A core tenet of critical policy analysis research is that researchers should "ask questions of policy that illuminate inequalities and injustices, particularly because these questions lead them to expose contradictions" (Edmondson, 2004, p. 18). The qualitative phase of this study exposed a clear contradiction between the stated goal of Kansas policymakers in promoting college access and the actual policies in place to support that goal. As laid out in Chapter 4, increasing educational attainment in the state has been a constant goal of the Kansas Board of Regents over the last 30 years. State policymakers clearly recognize and value the importance of an educated populace both for the individual's prosperity and the social and economic benefits that higher education attainment brings to the overall society. Unfortunately, the policies and structure of the public higher education system in Kansas not only fail to support that goal but, in

some cases, actively detract from achieving that goal, as evidenced by the geographic disparities found in the quantitative phase of this study. The themes that emerged in the qualitative phase provide insight into the root causes of this contradiction and are discussed further in this chapter. Specifically, the findings outlined in the second theme, which highlights the imbalance of power between the two and four sectors, and the third theme, which found that policymakers value efficiency within the system, defined largely as reducing duplication, lie in direct contradiction with the stated goals and values of promoting access to higher education. Further discussion of the implications of these findings follows in the next section.

Imbalance of Power

A key purpose of this study was to examine the power differentials that exist in the Kansas public higher education system and seek to understand how power imbalances influence policy regarding college access. Understanding who holds the power, who makes the policies, and how the polices impact those that lack power and influence is at the heart of critical policy analysis research (Young & Diem, 2018). The results of this study clearly demonstrate an imbalance of power within the state system, with the state universities holding much of the power, including the power to limit access to a community college education within their home counties, potentially reducing opportunity for many potential students. Additionally, the results demonstrate a clear conflict for the Regents in coordinating the two-year sector while simultaneously governing the state universities. A question arises about who the Regents are there to serve? Clearly, their mission is to govern and serve the state universities. What is not as clear is if there is a charge to serve the two-year sector and the populations they serve.

The origin of this power imbalance can be found in the Kansas Higher Education Coordination Act, the legislation enacted in 1999 to combine all the public higher education

sectors under the authority of the Kansas Board of Regents. A caveat exists in the legislation that technical colleges and community colleges can continue to be governed by their locally elected boards of trustees. While technically accurate, this governance is limited or nonexistent regarding what types of degrees can be offered, where classes can be offered, and what academic programs can be offered. Those items are controlled by KBOR, and state funding is tied to compliance with these processes and policies. This distinction tips the balance of power from local authorities to the state. Technical colleges and community colleges are formally governed by their local boards, however their ability to govern is limited by the scope of programs and degrees approved by the board of regents. Additionally, as described in the results chapter, the committee structure and membership are weighted in favor of the state universities.

The imbalance of power manifests most clearly in the policies surrounding funding, course offerings, and service areas. The power dynamic in place pits the two- and four-year sectors against each other at the expense of access to higher education for some populations. The policymakers' stated desire to limit duplication, and subsequent policy, protects state universities from competition for courses that are duplicative within their home counties limiting opportunity for citizens. Several of the most populous areas in the state, and most diverse, lack access to an appropriately matched higher education institution due to this protection afforded to the state universities. Sedgwick County is a clear example of this dynamic. The geographic analysis in the quantitative phase of this study highlights the match deserts that exist in the southern and western areas of the county. Citizens in these neighborhoods that do not meet the KBOR admissions requirements for a state university or whose goals do not align with a state university lack geographic access to an open-access community college. Wichita State University and KBOR hold the power to prevent a community college from operating in the county through the

legislation in place and limiting funding for courses that do not have. This dynamic lies at the heart of critical policy analysis research. Inequities are perpetuated through policy decisions and actions that favor those that are already in power. Clearly the laws, regulations, and policies favor the state universities at the expense of potential students whose academic goals, cultural fit, or financial situation do not align with attending a state university. Simply put, the policymakers in Kansas are willing to give up the potential increase in community college access in exchange for preventing duplication within the home counties of the state universities. An exchange this researcher believes limits opportunity for economic mobility for individuals but also presents a longer-term impact on enrollment for the state universities.

Lack of Progress

This study highlights the lack of progress towards higher education attainment goals as one effect of the state's policies. Over the last 25 years, KBOR's goal has been for 60% of the state's population to have some form of post-secondary credential. The sobering reality is that, despite inclusion in strategic goals, the state has lost ground toward this goal. The final update to the Foresight 2020 strategic plan listed a 12,000-credential gap in what was achieved versus what was needed to meet the state's workforce needs (Kansas Board of Regents, 2020b). The current KBOR strategic plan, *Building a Future*, tracks the percentage of Kansas high school graduates who attend a public postsecondary college or university after high school. The percentage has been on a steady decline from 55.7% in 2011 to 43.7% in 2021 (Kansas Board of Regents, 2023a). Despite the outward focus on seamlessness and accessibility, the state has continued to utilize the same structures and same policies that disenfranchise a significant portion of the population, yet they expect different results. The state has made progress in including alternative credentials such as certificates that are less than an associate degree in the

attainment data. This shows a recognition of the importance of non-traditional avenues of higher education. However, changes in policy have not followed to expand access to those forms of education. This dilemma presents a tremendous challenge but also a tremendous opportunity to make significant gains in college attainment across Kansas.

Duplication

A key takeaway from the qualitative phase of this study is the contradiction between the goal of systemwide efficiency and the goal of expanding higher education access for Kansans. The two stated goals, as presently applied, work against each other. At the core of this contradiction is the desire of policymakers to limit duplication across the system. While it is logical to put policies in place to prevent duplication of efforts, achieving systemwide efficiency should take a more nuanced approach them simply limiting the same courses or programs being offered within a geographic area. Using Wichita as an example, it makes sense to prevent another state university from offering courses within the county, especially considering there are two private colleges already established in Wichita. However, this logic does not extend to community colleges when one considers that the missions of the two institutions are different, and the corresponding populations served are different. Essentially, state policymakers want to avoid duplicating courses within certain counties and are okay with certain populations losing access to higher education to achieve that "efficiency." The effort to reduce duplication is clearly rooted in a desire to limit perceived competition from a two-year college for the state universities within their local geographic area, which potentially could lower their enrollment. This approach is shortsighted because expanding access to a community college could expand the universities' potential student base, eventually serving as a driver of enrollment growth through transfer. Students who initially were not academically prepared to enter the university and attended a

community college first would have a path to admission that currently does not exist in their home county. While some duplication will likely exist, allowing each sector to play its role can expand the overall number of students in the system.

Service Area Reviews

A core tenet of critical policy analysis research is striving to find the underlying value or motivation behind policy decisions. The results of this study show a clear incentive on the part of KBOR and the state universities to maintain the status quo and keep the A.A. and A.S. option out of the same geographic area as the state universities. The locations of the technical colleges largely align with the locations of the state universities; however, their degree options are limited to the A.A.S. Manhattan Area Technical College (Kansas State University), Flint Hills Technical College (Emporia State University), and WSU Tech (Wichita State University) all reside within the same city and county as a state university. Furthermore, Salina Area Technical College and North Central Technical College – Hays share a city and county with KSU-Salina and Fort Hays State University, respectively. This nuance in the degree offerings within service areas has not been considered during previous reviews in 2003, 2012, and 2019. It is critical for policymakers to develop an understanding of which colleges can offer certain types of degrees in each geographic area is critical to achieving access across the state. Information detailing previous reviews of service area assignments reinforced the idea that stakeholders simply want to maintain the status quo rather than conducting a rigorous study using the vast database of information from KBOR, the Kansas Department of Education, and other state level databases. Past reviews appear to only have considered the views of the internal stakeholders, primarily the Chief Executives, who have a vested interest to maintain their current territory. Despite the

emphasis on systemwide efficiency, territory assignments do not appear to have any structure or coherent vision other than protecting long standing service areas.

Further complicating this issue is the dynamic at play regarding the types of degrees that can be offered by each sector of public higher education, specifically the distinction between the Associate of Arts, Associate of Science, and Associate of Applied Science degrees. The inability of the technical college system to offer the Associate of Arts or the Associate of Science is an antiquated practice and no longer makes sense in today's economy. KBOR's definition of the A.A.S. as a terminal degree does not reflect a modern understanding of how some students approach their higher education and career goals. Students may choose to pursue a technical program to begin their education but still have a desire to build upon those skills by transferring to a four-year college and completing their bachelor's degree. Construction science, among many others, is a pathway that blends both nicely and provides a needed and prosperous career trajectory. Unfortunately, Kansas policymakers' narrow view of the A.A.S. and the inability of the technical colleges to offer the A.A. or A.S. limit opportunities for students under current regulations and federal financial aid rules to transfer to a four-year institution seamlessly.

Spatial Disparities

The maps provided in Chapter 4 provide a stark visual of the differential effects of these policies and the lack of focus on ensuring the system provides accessible options. Wide swaths of the state, especially in rural areas of the state, reside in an education desert lacking geographic access to any higher education option. Additionally, the study added an often overlooked, but important, nuance in identifying areas of the state that reside in a match desert, lacking access to one or more sectors of public higher education. In addition to the rural areas, match deserts include areas closer to the state's population centers. Critical policy analysis seeks to determine

who benefits from policies and who is left out (Edmondson, 2004). The spatial analysis provided in this study clearly shows the geographic areas that are left out due to the policies and higher education structure in Kansas. Less than 40% of the state's population has geographic access to both a state university and an open access community college. The remaining 60% lack access to one or more appropriately matched institutions, despite the policymakers' stated values of systemwide efficiency and commitment to access. Furthermore, due to the protections afforded the state universities in policy, portions of each of the seven counties that house a state or municipal university lack access to an open access community college. KBOR has a noble vision and worthwhile goals to expand access and close equity gaps across the state (Kansas Board of Regents, 2023a); however, the policies in place disenfranchise citizens across the state geographically, including the large population centers which makes the math difficult to compute when trying to determine how to close equity gaps and expand access.

Future Research Opportunities

The present study provides a foundation for future research opportunities that can expand on the findings and explore other facets of the college access discussion related to geographical disparities. Certainly, as this study is focused on the state of Kansas, the methodology can be replicated to higher education systems in other states. Similarly, replicating the research on a national scale would allow for comparisons across states and regions. Furthermore, conducting studies that explore states with high college attainment rates and those with lower comparative rates can provide insights into how policies in each state may contribute insight and help inform policymakers of best practices. Several additional areas for future research are outlined next.

Additional Campus Locations

One limitation of this study is the reliance on the main campus locations as listed in the IPEDS database. A research opportunity exists in expanding the current study but including a review of any additional campus locations of each public college and university. A challenging aspect of this approach is that there is a wide range of satellite campuses across the state. It can be difficult to determine the full scope of programs and services offered at additional locations. For example, the Cloud County Community College Geary campus, located away from the main campus in Junction City, offers a full array of academic programming, degree options, and student services. Conversely, Cowley College lists an additional location in west Wichita. This location, however, does not and cannot offer classes, and is primarily for students to access academic advising and career exploration. Conducting an in-depth review of all public locations can enhance the findings in this study and provide policymakers more information on who has access to what types of higher education and services across the state.

Impact on Admissions and Enrollment Behavior

The present study sought to measure the distance between the citizens of Kansas and the nearest public college or university. Follow-up studies could take a step further and measure the impact that geography has on college admissions and enrollment behaviors. A key to pursuing this research tract is tying the impact to individual students. Longitudinal data from KBOR and Kansas Department of Education (KSDE) could be used to explore the relationship between distance to each type of college or university in Kansas and the probability of enrolling in higher education. Griffith and Rothstein (2009) used a longitudinal dataset to explore the role of proximity on the likelihood of applying to a selective college. A similar study could be conducted with access to datasets from KBOR and KSDE and could present an interesting

opportunity to add to the research in this area. Descriptive college attainment data is valuable and provides context to the issues but fails to tell the entire picture when considering migration within the state and migration into and out of state. Additionally, the dataset would ideally include information on high school students who do not matriculate to higher education. This can provide insight into not just the students who enrolled in higher education but also those that are not currently served.

Intersection of Factors Influencing College Attainment

Similarly, future research tracts can and should explore the myriad of factors that may influence college attainment. It would be valuable to explore the issue from a deeper perspective on race/ethnicity, socioeconomic status, first-generation status, gender, and other demographic categories. Exploring other variables such as access to broadband internet, public transportation infrastructure, and access to affordable housing and childcare can provide additional insight to challenges faced by potential college students that may impact college access. Additionally, the intersection of all these variables with each other and within the context of geographic disparities can provide critical insight into differences in college-going rates across different neighborhoods, cities, and states. This line of research can also be expanded to explore the impact of these same variables on the retention and completion rates. Accessing higher education is only one part of the equation as retention and completion are key to upward social mobility and economic prosperity. The same issues that are critical to the access discussion apply in context of retention and completion. Analyzing the impact of geography and proximity to higher education institutions can help inform colleges of additional ways to support students who may be commuting long distances to college each day. This research is especially important for students who lack access to reliable transportation, live in areas with no public transportation options, and

come from a lower socioeconomic background. Students may be able to overcome these barriers on a short-term basis to initially enroll in college but may struggle when unexpected events such as automobile break downs, rising gas prices, or changes to public transportation routes occur, causing lapses in attendance and affecting academic performance.

Identify Geographic Areas for Expansion

This study has shown that not all geographic areas are adequately served by the Kansas public higher education system. The quantitative phase of the study provided an analysis of geographic areas where gaps in college access exist based on geography. A research opportunity exists in using geographic analysis, along with other factors such as economic activity, demographic data, and labor market data, to determine where new higher education institutions or campuses should be established in the state. Rephann (2007) explored this issue with a study analyzing gaps in college access and determining geographic areas where community college expansion would make the most sense. This line of research can provide insight to policymakers in improving the reach of the state system. Similarly, the research can help inform colleges of areas where satellite campuses or outreach centers might be a good investment for increasing enrollment. It should also be noted that while the focus of this study has been primarily on two-year college access, there are areas of the state where Kansans also lack access to a bachelor's degree. Specifically, the southwest corner of the state houses several two-year colleges but lacks geographic access to a state university. In fact, the state universities, other than Fort Hays State University, are all located in the eastern half of the state. Identifying areas of Kansas where state universities can establish satellite campuses can continue to drive college access and degree attainment across the state. Building on KBOR's established values efficiency and collaboration,

partnerships between community college and state universities to provide access to a bachelor's degree on the same campus would help solve geographic disparities.

Recommendations for Policy Changes

A common thread that has remained persistent over the last 25 years of KBOR strategic plans is the importance of addressing the labor shortage and closing the skills gap. In addition to the economic and social benefits to the individual, an educated populace helps make Kansas a competitive place to build, attract, and retain businesses that support economic growth and prosperity. The economic and workforce challenges highlighted throughout this study continue to be at the forefront of economic, education, and social mobility concerns. Kansas continues to face a tremendous challenge in closing the talent gap and educating more people, a challenge that will become even more acute as the population of graduating high school seniors continues to decline. The legislation, policies, and strategies that have been utilized over the last quarter century have proven to be ineffective in achieving this goal. The following are recommendations, stemming from this research, on how the state of Kansas can better support access to higher education.

Home County Designation

A clear recommendation stemming from the results of this study is to revisit the home county designation for the state universities and develop a policy that does not disenfranchise wide swaths of the population from accessing an open-access, transferable education. The quantitative phase of this study showed a clear impact of this legislation on the ability of people in these counties to access a two-year open access education. Furthermore, the impacted counties are some of the heaviest populated and most diverse counties in the state, further compounding the negative repercussions of the policy. The state's desired goal for nearly two-thirds of the

population to have a postsecondary credential is much more difficult to achieve when over one-third of the population is limited in their access to all sectors of public higher education, especially the sector with an open access mission. Policymakers should heed the advice provided in the NORED (2001) report to study other states where community colleges and state universities share a geographic area in the same city or county. The University of Central Florida (UCF) and Valencia College provided an excellent example of two public colleges which share a service area and have created innovative partnerships such as DirectConnect, a program to ensure a smooth transition from Valencia College to UCF. A closer comparison can be made in Omaha where the University of Nebraska-Omaha and Metropolitan Community College share a service area. Similarly, Kansas City, Missouri houses both Metropolitan Community College and the University of Missouri-Kansas City. Examples are plentiful across the country. In fact, a city the size of Wichita appears to be an anomaly in not having a community college. Policymakers should revisit this policy and consider who they are leaving out with the current policy rather than what they are potentially losing due to potential duplication with the state university. The current goal to eliminate course duplication across the system fails to consider the different missions and populations each sector serves. An approach that considers that long-term benefits of adding more students to the overall system should be the focus, rather than favoring one sector over another. This will, however, require a fundamental shift in how the state views the public higher education system.

Broaden Technical College Degree Offerings

Policymakers should amend legislation to allow the technical college sector to offer the Associate of Arts (A.A.) and the Associate of Science (A.S), along with the currently offered Associate of Applied Science (A.A.S). The distinction between community colleges and

technical colleges, in terms of degrees offered, is antiquated, and no longer reflects the needs of the modern workforce, especially when geographic location is considered. The lack of an A.A. or A.S. degree limits the ability, due to current regulations and financial aid rules, for students to pursue an open option type of major to explore potential career paths. The flexibility of the A.A. or A.S. degrees would allow career exploration during the first semester and potentially provide a gateway to more specific technical programs. A change to the degrees that technical colleges are allowed to offer would not completely erase differences between community colleges and technical colleges, primarily as it relates to local taxing authority. Each county that contains a technical college should be allowed to determine whether financial support in the form of ad valorem taxes makes sense for their county and citizens. This recommendation alone helps the state make significant gains in college access, including alleviating financial aid and geographic barriers, in several of the most populated areas of the state without having to establish new colleges in those counties.

Revisit Definition of Associate of Applied Science and Technical Education

The state should revisit the definition of the Associate of Applied Science as a terminal degree and the overall definition of technical education. The current definition is antiquated and limits opportunities for students who earn technical credentials to transfer and earn a bachelor's degree. The 2020 update to the KBOR strategic plan indicated that 40% of the 12,000-credential gap should be bachelor's degrees to meet the states workforce needs (Kansas Board of Regents, 2020b). This likely cannot be achieved by simply enrolling more high school seniors directly into state universities or transferring more students from a community college to earn a bachelor's degree. Students enrolled in A.A.S. programs, as well as previous graduates who are working in their industries, are prime candidates to return to higher education and complete a

bachelor's degree, adding to their skill set and setting themselves up for career advancement. KBOR should recommend and incentivize the building of transfer pathways for A.A.S. and other technical graduates to earn a bachelor's degree without losing credits. A few pathways currently exist between technical colleges and state universities in areas such as Nursing and Technology Management. However, the ease of transferring and the number of credits from technical programs that apply to a bachelor's degree vary. Building more seamless and relevant pathways towards a bachelor's degree can help many Kansans obtain a bachelor's degree, providing economic benefits to the individual and the state, as well as provide state universities an additional market to boost their own enrollments.

Conduct a Robust Review of Service Area Assignments

The Kansas Board of Regents should conduct a robust review of service areas within the state public higher education system. Senate Bill 345, the original legislation authorizing KBOR to coordinate the state universities, community colleges, and technical colleges, mandated that the Regents "conduct continuous studies of how state policies affect higher education and how Kansas economic and demographic trends impact upon accessibility and affordability of postsecondary education to Kansas residents, and initiate ways to improve such accessibility and affordability" (S.B. 345, 1999, p. 4). As demonstrated in this study, service area assignments have been reviewed three times over the last 25 years. However, the reviews do not appear to have any serious methodology or rigor attached to them. A thorough review of service areas should rely on more than just opinions of the college and university presidents who have a vested interest in protecting their territories. Instead, a thorough review should begin with data analysis and asking hard questions to determine what areas of state lack access to higher education. The quantitative phase of this study provides a good starting point. Reviewing the education deserts

and match deserts resulting from the current service area assignments provides a high-level view of geographic areas that are currently disenfranchised. It should be noted, however, that this study used a more relaxed definition for match desert then previous studies which used one public state university and two community colleges. Using that stricter definition, nearly the entire state would be considered a match desert, which further highlights the challenges the current policies and service areas pose for higher education access.

This study also showed that the only voices involved in the previous reviews were staff from the colleges, primarily the academic vice presidents/provosts and the chief executive officers along with KBOR staff. The review should include input from other stakeholders across the state who truly understand the challenges of accessing college. These stakeholders should include current and potential students, high school faculty, college and career counselors, community organizations, and others. The review should also focus not solely on who is going to college but rather who is not and why? Are there equity gaps across the state across racial, gender, socioeconomic, or geographic lines? Are there gaps in the infrastructure needed for some populations to access higher education? And how can policies and service areas be adjusted to address those gaps? For example, driving distances to college and universities, and the lack of public transportation options, should be a factor in a review for both rural and urban areas. Large percentages of the Wichita and Kansas City metro areas lack adequate public transportation options to access higher education, creating a barrier for students who do not have reliable personal transportation. Another factor that could be considered is the impact of long commutes on retention and persistence. Even if students were able to overcome the initial geographic and transportation barriers, what impact does that have on their chances of success? The rigor of commuting 30-45 minutes each day over the course of two or more years may contribute to

increased attrition rates further contributing to declines in an educated populace. This study also highlights the importance of including geospatial data in the analysis. The methodology used in this study can be expanded on with access to Kansas Department of Education, Kansas Board of Regents, and other state level databases to develop a robust mapping structure and a wealth of data that can inform where colleges should be located.

Address the Imbalance of Power within KBOR Structure

The results of this study highlight an imbalance of power that results from the legislation establishing KBOR as the governing body for the state universities while simultaneously coordinating the community and technical colleges. Ultimately, the role of the Regents is to govern and support the state universities. This responsibility presents a clear conflict of interest with their role of coordination. As demonstrated in this study, the committee structure which vets and makes recommendations to the overall board, heavily favors the state universities. A fundamental question in critical policy analysis research is who holds the power? In Kansas, that answer is clearly the state universities in terms of political clout, public support, funding, and authority within the Board of Regents structure. The difference in missions among the different sectors will continually present conflicts between KBOR's desire for systemwide efficiency that play out at the expense of college access. The NORED (2001) report highlighted the unique structure compared to other states, writing that it is a "consolidated governing board for some public institutions and coordinating board for most of the rest" (p. 40). In fact, the NORED (2001) report discussed the governance versus coordination dilemma at length and pointed out the potential for the coordination aspect to take on a more governance like approach. State policymakers should review the overall structure of KBOR that was established by Senate Bill 345 and determine if the structure fits the needs of the state nearly 30 years later. At a high level,

the structure should consider the changing dynamics of the state's economy and a broader access focus than just transitioning recently graduated high school students to college. The new structure should provide each sector the ability to quickly respond to changes within their local area and, combined with other policy changes previously recommended, expand their reach to meet the needs of potential students who currently lack access to higher education in the state. There are many options to accomplish this, including separate boards for each of the sectors, combining the technical and community colleges under a consolidated board, or relinquishing the governance aspect for the state universities to each university. This change must be considered carefully and with a goal of modernizing the state system to meet the everchanging needs of the citizens of Kansas and the economic factors at play.

Conclusion

An important maxim in education is that educators must meet students where they are, meaning faculty, staff, and administration must think about how systems and strategies can be redesigned to put the student at the center of the learning environment. Understanding students' needs, goals, and backgrounds can help colleges and universities improve their learning experience and outcomes. This study has shown that policymakers and higher education professionals must also know where potential students are physically and how proximity to colleges and universities impacts their ability to access higher education services. Simply put, the study has demonstrated that the legislation and policies currently in place in Kansas make it more difficult to access higher education for certain geographies and certain populations. State policymakers outwardly value college access and higher education attainment in their strategic planning documents, but their actions do not always align with that goal.

The declining trend in enrollment and college-going rates over the last decade combined with the expected decline in high school seniors over the next decade should prompt action by policymakers to take a step back and decide if the public higher education system is structured in a way to meet the needs of this new environment. Clearly, there have been multiple factors at play in these declines including a significant economic recession and a worldwide pandemic, but KBOR and the legislature must take a hard look at the policies in place that have contributed to a persistent decline in the college going population in Kansas. The state must conduct a frank self-assessment in how its policies have contributed to and exacerbated the problem, including assessing the system to determine if the service areas and missions of each higher education sector adequately reach all citizens in Kansas. The system must assess the pockets of the state that are currently underserved by its colleges and strategize about how it can better reach them. College and university leaders must ask not how they can protect the small piece of the pie each college currently has, but rather how they can expand the pie for all colleges, while increasing access and prosperity for individuals.

To truly make an impact on expanding access and prosperity through higher education, policymakers must consider the role the proximity plays in college attainment and, more importantly, take action to mitigate geographical disparities. Fortunately, there are examples from Kansas that indicate the state is making progress toward this understanding. In my own work as a practitioner at WSU Tech, my colleagues and I have recognized that there are areas of the city and county that lack access to higher education services. These areas have higher unemployment, lower college attainment, and disparate levels of income compared to the broader city. These trends that have persisted over many decades. To better support these neighborhoods, WSU Tech has recently added two community navigator positions embedded in

community centers in these areas with the sole purpose of connecting those citizens to higher education and helping them to overcome barriers to enrollment. Another great example occurred recently when Kansas City Kansas Community College (KCKCC) announced a new $62 million dollar campus located in the urban core of Kansas City, Kansas. The location of this campus was purposefully selected to bring services to an area of the city that has experienced persistent socioeconomic disparities compared to wealthier neighborhoods in the county. The location includes community partnerships for health care, dental care, and financial planning. The campus is also located close to a bus stop for citizens who do not have a vehicle. Dr. Greg Mosier, the president of KCKCC, summed up the importance of geography in their site location by saying, "We need to go to where the people need us the most" (Nozicka, 2023, para. 21). Kansas policymakers should heed those words and consider the findings and recommendations in this study to truly make the state's higher education system accessible to Kansans from all backgrounds and locations.

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