RESIDENTIAL INCOME SEGREGATION AND ITS IMPACT ON SCHOOLS

BY

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DISSERTATION

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ABSTRACT

Across the country, the socioeconomic and demographic landscapes of schools are changing. The migratory trends of both minority and White populations have created a pattern of residential income segregation where affluent families choose to reside in certain areas in order to gain access to good schools (Frankenberg & Orfield, 2012; Holme, 2002). This migration results in changes in educational outcomes and an uneven distribution of resources and services in suburban communities (Reardon, 2012). This exploratory mixed methods study was designed to examine residential income segregation and its relationship to schools. Thirteen high schools within the six districts in St. Louis were selected as this city represents some of the starkest racial dividing lines of any American city (Gordon, 2008). The quantitative component involved the use of data from the U.S. Census Bureau and the Missouri Department of Education to calculate the Index of Discrimination (ID), which correlated to the level of services and educational outcomes provided from 2000 to 2013. The quantitative results indicated that when wealthier White residents moved out of North St. Louis County, the students remaining in the schools tended to be poorer, were less likely to attend a 4-year college, and had lower ACT scores. Additionally, as wealthier residents moved in and the White enrollment increased, so too did ACT scores. Qualitative interviews were conducted with three realtors, two school board members, and four building administrators with a focus on understanding how these stakeholders adjusted to meet the desires of the community. In further understanding the quantitative outcomes, the interviews provided a level of insight into real consequences that relate to how students perform in school. Ultimately, further understanding the relationship between residential income segregation and schools is an integral component in remediating the landscape of educational inequities.
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To my husband and my children: Thanks for your endless support and for providing me with time to spend countless hours in the library completing my doctorate. To my mom and Bert: Thank you for all of your unconditional support and encouragement, and for constantly rooting for me to accomplish my goals. To my dad: Thanks for encouraging “Spuz” in all of her endeavors.
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CHAPTER 1:
INTRODUCTION

Overview of the Study

The growing diversity in suburban areas is creating a pattern of socioeconomic and demographic transformation. Additionally, residential income segregation manifests in the suburbs by means of the unofficial choice market as affluent families are choosing to reside in particular communities as a means to gain access to good schools (Holme, 2002). Within the suburbs, high levels of segregation exist for Latino and Black students as these populations are residing in second ring suburban communities while White populations are moving to the outermost third ring suburban communities (Frankenberg & Orfield, 2012). The growth pattern of the unofficial choice market is transforming the interrelationship between race and income as educational outcomes, resources, and services are becoming unevenly distributed in geographic regions of racial homogeneity (Reardon, 2012). At present, more information is needed regarding the interrelationship between residential income segregation and the educational opportunities provided to students (Wells et al., 2012). In order to determine the potential causation between these factors, this study was designed to understand the relationship between the unofficial choice market and schools as it relates to the level of services provided and the educational outcomes of students. To begin exploring this relationship, it is important to understand the conditions that have given rise to this dynamic. As a result, the focus of Chapter 1 is on outlining the necessary elements of this research study.

Background of the Problem

The democratic ideal adopted by many Americans is that all participants are afforded equal opportunities. In attempting to actualize this reality, a neoliberal focus has emerged,
advancing that all individuals should be allowed to choose their own reality. This conceptualization suggests an equitable society for all individuals will be created through the act of choice. Neoliberalism hinges on the individual right to choose or consume, as it places citizens in the role of the consumer (Apple, 2011; Giroux, 2002; Giroux & Giroux, 2006; Wells, Slayton, & Scott, 2002). Proponents contend that an economic market will operate most efficiently and effectively without regulation, thereby creating a reality where consumers’ needs are met (Lakes & Carter, 2011). Many individuals have begun to view their ability to choose as an unalienable right, resulting in a sort of possessive individualism that originates from public choice theory (PCT). The conceptualization of this idea surrounds a citizen’s ability to select the services and goods he or she desires without the interference of government (Apple, 2011). Public choice theorists argue that as a result of this possessive individualism, people become independent consumers who are able to take care of their own needs through the act of choice.

It is important to understand neoliberalism through the tenets of PCT. Public choice theorists suggest that through the act of choice, individuals actualize their own self-interests by consuming various levels of goods and services. The conceptualization of “voting with your feet,” whereby individuals actualize choice by mortgage as a means to select public goods and services, reflects the demonstration of consumer preference (Tiebout, 1956). For example, choice by mortgage occurs when a family chooses to reside in one community over another in an attempt to send their child to the superior school district. According to Tiebout (1956), people can choose from an array of communities that offer different types or levels of public goods and services when looking for a home. Local governments provide services such as police, fire protection, education, hospitals, and courts to citizens. The variance in the level of services provided to people between communities is a byproduct of different expenditure models. When
making residency decisions, individuals consider which services they value most. One family may choose a particular community based on its high level of expenditure allocated to schools, whereas another family may select a municipality for its beach access and parks. This model of capitalism denotes that residents of localities are consumers who shop to find a jurisdiction they believe will provide the right mix of taxes and public services.

The act of choice manifests through individuals choosing where to purchase homes as a means to gain access to particular schools (Tiebout, 1956). This reality dictates that education is a consumable good, thereby creating a dynamic where self-interested individuals make decisions that influence educational outcomes. In conceptualizing an educational reality that supports the common good as suggested by Friedman (1955), it is important to understand possessive individualism as it dictates an educational landscape of inequalities. Affluent families are able to maximize their preferences by consuming education through the act of purchasing homes. Families with more resources rarely experience constraints when actualizing their consumer preference (Goyette, 2014). White families have been shown to be better able to afford neighborhoods with higher quality services and amenities than are their minority counterparts (Clark, 2007). Schools in wealthier communities typically have a higher average expenditure rate per student, and as a result, are able to provide their students with additional resources (Greenwald, Hedges, & Laine, 1996; Rowan-Kenyon, Perna, & Swan, 2011).

Housing trends have a profound impact on a school district’s demographics and resources. There is evidence to support that the relationship between housing trends and schools creates a dynamic whereby districts may be more responsive to the preferences of particular stakeholders residing within the community (Wiley, Shircliffe, & Morley, 2012). Chubb and Moe (1988) suggested the interplay between consumer satisfaction and the organizational well-
being of schools dictates a reality where school leaders will tailor the services they provide to please their clientele. Through the home selection process, individuals take on the role of the consumer and are able to assume a level of responsibility as to how their children will be educated. Parents choose schools by selecting homes in particular school districts for the purpose of maximizing their children’s academic and social outcomes (Holme, 2002). The relationship between the residential home selection process and schools denotes a reality whereby the resources of schools are affected when families enact their preferences for goods and services by choosing where to reside (Lareau & Goyette, 2014). A concern for school quality for all students as it relates to the common good is not often considered when parents actualize their preferences for goods and services in attempting to access the best educational opportunity for their children (Goyette, 2014). This current consumer-based reality dictates that some citizens may be better served than others with regard to educational outcomes (Lareau & Goyette, 2014). Ultimately, possessive individualism through the manifestation of choice by mortgage relates to the educational opportunities provided to students. To further understand this problem, it is important to examine the pattern of residential income segregation that is occurring in suburban communities.

**Statement of the Problem**

During the 1980s, minorities began migrating from the city to the suburbs (Frankenberg & Orfield, 2012). In 2000, nearly 40% of Black families and 48% of Latino and Asian families were living in suburban communities (Frey, 2001). Reardon and Yun (2001) reported that as minority populations increased in particular suburban communities, the residential and school segregation of the surrounding suburbs also increased. Despite the increase in the number of minority students residing in suburban communities, “currently about 80 percent of Latino
students and 74 percent of Black students attend majority nonwhite schools” (Goyette, 2014, p. 8). Research suggests minority students in predominately minority segregated schools have lower test scores as well as lower educational expectations (Bankston & Caldas, 2000; Bennett, 2011). Logan, Oakley, and Stowell (2003) claimed that a combination of a school district’s racial composition, socioeconomic composition, and the geographical location of the district, along with variations in fiscal resources and teacher quality, contributes to disparities in achievement outcomes for minority students.

In an attempt to further understand how the dynamic of residential income segregation and schools interact, the focus of the present study was on the unofficial choice market, as opposed to the official choice market, that occurs within education. The unofficial choice market operates indirectly and is outside of the realm of legislative initiatives. The official choice market functions differently as it is a result of legislative policies that use public dollars to provide alternate schooling options. The unofficial choice market manifests when high-income parents purchase homes in residential areas as a means to gain access to high-quality schools (Holme, 2002). The official choice-based reform movement occurring within education focuses on the creation of voucher programs, charter schools, and magnet schools to give parents the ability to choose their children’s educational experience for the purpose of providing access to a quality education for all students. Further examination of the unofficial choice market is needed, as the choice dynamic already exists within education as individuals actualize choice through the residential home selection process. This current unofficial choice dynamic promulgates disparities in education. Ultimately, inequity occurs when individuals assume the role of the consumer, as variances in income afford some individuals more choice than others (Alexander, 2012; Goyette, 2014).
The unofficial choice market provides affluent families with more choices when selecting where to reside for the purpose of gaining access to particular school districts. Parents choose communities, as well as school districts, based on their own subjective expectations. Economists suggest that student achievement scores on standardized exams are a desirable commodity when purchasing homes, as a positive correlation exists between test scores and home prices (Goyette, 2014). This perception about the quality of education being provided by school districts is considered a pull factor, as it draws potential home buyers into a specific neighborhood. Research also suggests that status ideologies, demographic change, and perceived decline in the quality of education are considered push factors as they cause people to leave neighborhoods (Goyette, Farrie, & Freely, 2012).

Wealthy White suburban communities are retaining their wealth, resources, and hegemony through a new pattern of socioeconomic stratification and multiculturalism whereby lower-middle class communities are drawing minorities from the city to the suburbs (Orfield, Kucsera, & Siegel-Hawley, 2012). Often, the migration patterns of lower-income communities are influenced by zoning laws and governmental actions to maintain an imbalance of power and resources among wealthy communities. Suburban rings that are adjacent to city boundary lines are becoming more economically and racially diversified. As a result, a pattern is emerging where White populations are moving to the outermost suburban rings and leaving many communities and their schools behind (Frankenberg & Orfield, 2012). Figure 1 (See Appendix A) provides a visual representation of this information. When selecting new homes, middle class families balance the quality of schools with the cost of housing, as school resources and educational outcomes often reflect the economic circumstances of local residents. People tend to
live in neighborhoods comprising other individuals who are socioeconomically and racially similar (Lareau & Goyette, 2014).

As the pattern of residential income segregation occurs, leaders of municipalities are often forced to manage declining revenue streams while facing higher demands for local schooling. Choice by mortgage affects the fiscal resources provided to schools, as local property tax is the primary revenue source for schools. As a result of reliance on local property tax, the quality of education has historically been dependent on the property wealth of the local community. Findings suggest “school resources are systematically related to student achievement and that these relations are large enough to be educationally important” (Greenwald et al., 1996, p. 396). This variance in funding contributes to differences in teacher salaries, teacher experience, teacher–pupil ratios, and class size among school districts. Better-funded schools attract teachers with higher levels of education and experience who have a tendency to generate better achievement scores among students (Darling-Hammond & Post, 2000; Elliott, 1998; Ferguson, 1991; Ferguson & Ladd, 1996). The mechanism of the unofficial choice market creates a structure where schools in communities with a lower socioeconomic status (SES) have fewer institutional resources, lower student achievement outcomes, and fewer goods and services provided to students (Goyette, 2014). In order to further determine how residential income segregation and schools interact, this study involved an examination of schools in residential areas that have developed and changed to explore how this relationship evolves over time.

**Purpose of the Study**

Spatial assimilation reflects the idea that SES among racial and ethnic minority groups is the most influential factor in shaping patterns of residential segregation (Lareau, 2014). The trend of segregation by income is important to conceptualize, as it dictates a reality whereby
higher-income families live in neighborhoods of concentrated wealth that provide high levels of goods and services. This high level of amenities carries over to the schools within these particular communities (Lareau, 2014). Lareau and Goyette (2014) suggested residential income segregation leads to greater inequality in school resources and educational outcomes. As a result, the purpose of this mixed methods study was to measure residential income segregation over time to determine its effect on schools as reflected in the level of services provided and educational outcomes.

**Importance of the Study**

A pattern of socioeconomic stratification and multiculturalism is occurring as individuals are choosing to reside in neighborhoods comprising other individuals who are socioeconomically and racially similar (Lareau & Goyette, 2014). Despite the occurrence of residential income segregation, there is a limited amount of research into how it affects public schools (Wells et al., 2012). The aim of the current study was to gauge the interrelationship of residential income segregation and schools. A better understanding of this relationship is needed in order to lead to potential changes in school funding policy and educational policy matters.

The St. Louis area was selected for this study as it provided a conduit for understanding the relationship between residential income segregation and schools, as this phenomenon is occurring throughout the country. According to Gordon (2008), the demographic change occurring throughout the country is more visible in St. Louis, as this city represents some of the starkest racial dividing lines of any American city. Over the past 30 years, North St. Louis County has experienced an influx of Black families moving into the second ring suburbs and an out-migration of White families (Wells & Crain, 1999). Additionally, St. Louis was chosen for this study as several well-known researchers have conducted studies in the St. Louis area as a
means to understand the segregation, educational inequalities, and unequal boundary lines that are affecting cites across the country. Finally, St. Louis was chosen for this study as the happenings occurring in Ferguson, Missouri, represent the economic and political divisions that typify the racial tensions that are occurring across the country.

**Research Questions**

The purpose of this study was to examine the relationship between changes in the socioeconomic composition of a community and the organizational behavior of districts and schools as it relates to student achievement outcomes, enrollment patterns, and services provided to students. As a result, the following research questions were used to guide the study:

1. How has the relationship between residential income segregation and the level of services provided by the school district changed over time?
2. Is there a correlation between residential income segregation and student performance outcomes associated with various school districts? If so, how has this pattern changed over time?
3. As communities experience demographic change, how do real estate agents, school board members, and school building administrators respond and adjust to meet the preferences and needs of the community?

**Research Design**

The cause of residential income segregation is complex and cannot be narrowed to one specific factor (Rogers, 2008). As a result, the utilization of a mixed methods approach in the current study was imperative, as it provided the means necessary to determine the relationship between residential income segregation and the level of services provided by the school district. In an attempt to investigate the research questions, the researcher made the decision to utilize an
exploratory methodology, as it allowed the researcher to expand on the quantitative findings by conducting qualitative interviews for the purpose of obtaining a deeper understanding. A mixed methods approach allowed the researcher to triangulate various data sources to further understand the relationship between residential income segregation and the level of services provided by the school districts (Creswell & Tashakkori, 2007).

This study was conducted in St. Louis, Missouri, with 13 high schools within six school districts. The high schools examined in this study are located in North St. Louis County and St. Charles County. The socioeconomic status of the high schools, as it related to the percentage of free and reduced lunch students enrolled within each school, varied from 7.8% to 70% of the student population. Missouri’s Department of Education started the process of universally collecting data from school districts in 1995; therefore, the data collection process encompassed information available from 1995 to 2013. The data obtained covered this 18-year time period as a means to examine residential income segregation over an extended period of time to further understand how it relates to schools.

The quantitative portion of the study consisted of data received from the U.S. Census Bureau and the Missouri Department of Education. The quantitative data analysis was designed to address the first and second research questions (RQ1 and RQ2, respectively). The focus of RQ1 involved describing residential income segregation using the Index of Dissimilarity (ID) equation for the school districts and high schools selected for this study. In an attempt to describe residential income segregation, the focus of this study was on describing the pattern of segregation for each district for each variable: income segregation, housing segregation, and race segregation. In addressing RQ1, the researcher utilized Pearson’s correlations to determine the possible relationships between the varying levels of ID with the level of services provided at
each high school. In addressing RQ2, the researcher utilized Pearson’s correlations to determine the possible relationships between the varying levels of ID ascertained in RQ1 to the educational outcomes achieved at each high school (i.e., ACT composite scores, the number of graduates attending a 4-year school, and the number of graduates entering the workforce). Correlations were conducted for all years in which data were available.

The purpose of the qualitative portion of the study was to identify what changes have and continue to occur in districts as residential housing patterns change. This portion was designed to address the third research question (RQ3). The data collection process included interviews with realtors, building administrators, and school board members. Three participants were interviewed from each group. Each stakeholder group was asked different questions as a means to understand their varying perspectives. The purpose of these interviews was: (a) to gain information about influential factors that guide people’s decisions when purchasing a home, (b) to understand the relationship between the socioeconomic composition of the community and the decision-making process occurring within the high school, and (c) to discover what policies and procedures have occurred at the district level in response to the pattern of residential income segregation.

Assumptions

The present study was based upon the following assumptions: (a) the manifestation of individual choice through the process of sorting is evident for a number of public services; (b) affluent families can choose school districts that match their preferences; (c) there is evidence that districts may be responsive to the preferences of particular community members as they relate to the consumption of goods and services; and (d) residential patterns arise from individual choices, discriminatory housing patterns, and public policies that regulate growth.
Limitations

This study’s design and methodology were well suited to answer the research questions, but a few limitations must be recognized. One limitation of this study was that a defined threshold associated with residential income segregation does not exist. As individuals leave a particular community in search of another residential location, a defined percentage does not exist that allows researchers to claim that an area is affected by the pattern of residential income segregation. Establishing guidelines for defining such a pattern may be helpful for future research. This study also included an examination of the standardized achievement results of the ACT exam, which is a college entrance exam given to juniors in high school. The state of Missouri does not mandate that all high schools administer the ACT to their students. However, all of the high schools reflected in the study do, in fact, independently contract with ACT to administer this exam to their junior students. This researcher chose to review these data as the ACT is a national exam used by a majority of colleges and universities in the admittance process. As a result, it is important to articulate that the lack of a mandate associated with this exam may cause school leaders to decide not to implement curricular initiatives that are aligned to this exam specifically.

The focus of the interviews conducted with real estate agents, school administrators, and school board members was on one point in time. While most of the quantitative information included data from an 18-year time span, the interviews provided a snapshot into what was currently occurring in the neighborhood and in the school district. Another limitation surrounded participants’ levels of comfort when discussing matters associated with residential income segregation. An informed consent waiver was used to increase the level of confidentiality. All participants were informed that pseudonyms would be used to protect their anonymity, and they
were provided with verbal and written assurances that all information obtained during the research project would be kept secure. Despite these safeguards, participants may have been reluctant to fully disclose their opinions and biases associated with residential income segregation as it relates to the educational opportunities provided by schools.

The final limitation of this research was the author’s bias related to being born and raised in the St. Louis area. The author does have a contextual understanding of the educational initiatives the state of Missouri has implemented to increase educational outcomes for all students. The author attended a high school that participated in the busing program. The state of Missouri ended the busing program 3 years after the author graduated high school. The author did not attend any high school examined in the study and never lived in any of the areas described in this study. Despite her familiarity with the St. Louis area, the author did not have prior professional or personal relationships with any of the school districts or participants involved in the study. The author was never employed as a high school administrator in the state of Missouri. Her professional career has exclusively occurred within the Chicago area.

**Delimitations**

Delimitations were purposefully determined when structuring this study. This study was confined to North St. Louis County and St. Charles County. Other areas of St. Louis have also experienced residential income segregation through the actualization of choice by mortgage. The author elected to narrow the scope of the study to specifically focus on the school district with a catchment area that was the first community in St. Louis County to offer Section 8 housing to families. Additional high schools selected for this study were adjacent to this initial school district and experienced a pattern of demographic change within the time frame of 1995 to 2013. Within the counties, six school districts were selected that had either experienced demographic
change or population growth for the years examined in the study. Due to time restrictions and limited economic resources, this researcher selected 13 high schools within these six school districts to narrow the sample population for the purpose of creating a rich description of these factors. In addition, the data collected in this study were archival data gathered by the U.S. Census Bureau and the Missouri Department of Education. In further limiting the scope of the study, interviews were not conducted with individuals who actualized choice by mortgage for the purpose of gaining access to better schools. This lack of perspective may have narrowed the conceptualization of factors related to the relationship between residential income segregation and schools.

**Organization of the Study**

The primary focus of Chapter 1 was to provide the reader with a schema to outline the basic elements of this research study by defining the background of the problem, the statement of the problem, the purpose of the study, the importance of the study, the research questions, the research design, the limitations, and the delimitations.

Chapter 2 contains the results of an examination of literature related to the unofficial choice market as influenced by the neoliberal agenda. The literature surrounding the tenets of PCT is included, as PCT is a subsidiary of the neoliberal agenda for the purpose of understanding the impact of possessive individualism. PCT was the conceptual framework for this research study, as it provided a lens through which to understand the patterns currently occurring within public education. After exploring the political and social contexts as they relate to education and PCT, the chapter concludes with an exploration of how schools respond to the unofficial choice market. Through this examination, the rationale for selecting the mixed methods approach to conduct this research study is explored.
Chapter 3 highlights the history of St. Louis as well as its attempts to provide equal educational opportunities to all students. Additionally, this chapter contains a review of the demographic changes that have occurred within St. Louis as well as within the high schools selected for this study. Chapter 4 contains a description of the development of a mixed methods research design to support the research purpose. The sampling methodology, instrument description, data collection methodology, and analysis of the research process are discussed in this chapter. Chapter 5 provides the analysis and findings of the data collected throughout the study. In Chapter 6, conclusions, recommendations, and implications for future research related to creating equal educational opportunities for all students are provided for various audiences.
CHAPTER 2:

LITERATURE REVIEW

Conceptual Framework

The largest discrepancies in the achievement gap between White and non-White children occur in racially segregated schools (Stiefel, Schwartz, & Chellman, 2008). According to Saporito and Sohoni (2007), the typical Black or Hispanic student attends a public school where most of the children are below the poverty line. In contrast, academic outcomes are generally better for minority students when they attend racially-integrated schools (Armor, 2002; Dawkins & Braddock, 1994). Logan et al. (2003) made the claim that a combination of a school district’s racial composition, socioeconomic composition, and geographical location, along with variations in fiscal resources and teacher quality, contributes to disparities in achievement outcomes for minority students. As a result of this claim, it becomes important to further understand the impact of the unofficial choice market whereby high-income parents choose to purchase homes in particular areas as a means to gain access to high-quality public schools (Holme, 2002).

As the suburban rings diversify, White populations move to the outermost rings, leaving many communities and their schools behind (Frankenberg & Orfield, 2012). The pattern of choice by mortgage creates a dynamic whereby leaders of inner-ring suburbs must deal with declining revenues and increasing expenditures. At present, more information is needed to understand how choice by mortgage through the manifestation of residential income segregation relates to public education. In an attempt to further understand how these dynamics interact, this study involved an examination of schools in residential areas that have developed and changed to examine how the relationship between educational attainment and residential income segregation evolves and changes over time.
This literature review begins with an examination of the works of Friedman (1962) and Tiebout (1956), as their work provided the framework for the neoliberal agenda. It then moves to an exploration of PCT, as it is a subsidiary of the neoliberal agenda. PCT was chosen as the conceptual framework for this research study as it provided a means to understand the impact of choice by mortgage on schools as individuals act in a manner to maximize their own self-interests. Furthermore, this chapter contains information about the political context surrounding the neoliberal agenda for the purpose of understanding how it has come to be, as well as how it is being incorporated into public education. After this understanding, this chapter moves to an exploration of the social context of possessive individualism as outlined by PCT to further understand the dynamics occurring in schools. Finally, the chapter concludes with a discussion of how school district leaders respond to the dynamic of choice by mortgage. This discussion helps to highlight the methodological approach utilized for this research study.

**Theoretical Underpinnings**

The tenets of neoliberalism are premised on the principles set forth by Milton Friedman and Charles Tiebout, as they increased the popularity of market-style mechanisms that focused on competition and choice. With the publication of *Capitalism and Freedom* in 1962, Friedman advanced that politics and economics are interconnected. In proving this claim, he highlighted the economic limitations placed on the citizens of Great Britain after WWII, as citizens were banned from vacationing in the United States because of exchange controls occurring between the countries. Additionally, Friedman outlined the political limitations placed on U.S. citizens, as they were banned from traveling to Russia because of the country’s political views. The rationales for these decisions were different, though the outcomes were the same. Through this comparison, Friedman advanced the interrelationship between politics and economics.
To help individuals actualize political freedom in a democratic society, Friedman (1962) suggested the utilization of capitalism to separate economic power from political power. He contended that by allowing the market to regulate itself, self-interested individuals are able to consume freedoms in a manner that is not dictated by the government. He suggested a model where individual households use the resources they control to produce goods and services for the purpose of bargaining with other households. Through this dynamic, individuals enter into mutually-beneficial contracts without the interference of external factors. For Friedman, the implementation of the free market does not dissuade the importance of the government. Rather, he argued that it changes the role of the government, as government should focus on establishing the rules of trade. Additionally, the role of the government is to interpret, as well as to enforce, the agreed upon rules. In redefining the roles and responsibilities of the government, Friedman argued that the government stepped outside of its function and intermingled economics and politics in creating programs such as minimum wage and public housing. These political initiatives are funded through taxes as an act of economic coercion in which individuals are forced to pay prescribed amounts. Friedman’s advancement of competitive enterprise, along with the re-conceptualization of governmental roles and responsibilities, helped to shape the public choice (PC) movement as it provided the foundation to advance market-oriented economic analyses.

In 1956, Charles Tiebout wrote his seminal article entitled, “A Pure Theory of Local Expenditures,” in which he developed a theory of preference for local public services. Tiebout advanced that individuals have the option to “vote with their feet,” which manifests when citizens make decisions regarding a residential location. According to Tiebout, people can choose from an array of communities that offer different types or levels of public goods and
services, all of which are a result of different local expenditure models. Tiebout defined expenditures by local governments as the services provided to citizens, such as police, fire protection, education, hospitals, and courts. Tiebout argued that citizens choose the community that best satisfies their own particular demands. He also argued that residential mobility reveals the true expression of citizen preferences. When conceptualizing this theory, one must consider which variables influence the selection of a specific municipality. One family may choose a particular community because of its high level of expenditure allocated to schools, whereas another family may select a municipality for its beach access and parks. This model of capitalism denotes that residents of localities are consumers who shop to find a jurisdiction they believe will provide the right mix of taxes and public services.

For Tiebout (1956), the ability to select a community that best satisfies the largest number of preferences is contingent upon having a greater number of communities from which to choose. A dynamic manifests whereby towns compete against one another for residents. Tiebout advanced that the demand for public goods creates an efficient allocation of market resources and assumed that communities operating below the optimum level would seek to attract new residents, and perhaps new manufacturing industry, to achieve the perfect balance. Further, he suggested communities that have achieved the optimum level take measures to maintain the population at such a level through zoning laws and implicit agreements among realtors (Tiebout, 1956). Ultimately, Tiebout advanced that the demand for public goods creates an efficient allocation of market resources because the concept of supply and demand for public goods itself creates a dynamic whereby if individuals are unhappy with a public good, they can move to a jurisdiction that meets their individual needs. This mobility inherently creates a market solution that leads to the optimal delivery of public goods. Ultimately, Tiebout contended that
economic factors can provide remedies to social problems that plague society as the act of choice improves the allocation of government expenditures (Tiebout, 1956).

In 1955, during the timeframe in which Friedman and Tiebout were discussing theories to ameliorate inequalities in society, the U.S. was dealing with the Supreme Court’s decision in *Brown v. Board of Education II*, where it was mandated that immediate action be taken in order to desegregate public schools. In response to the events occurring in the country with regard to education, Friedman in his 1955 publication, *The Role of Government in Education*, advanced that schools should not be a federal issue and should remain primarily a local responsibility. He contended that privatization and deregulation combined with competition would create an environment where education supports the common good as all students would be able to flourish (Fiala & Owens, 2010). Further, he argued that “the existence of substantial ‘neighborhood effects’ whereby the actions of one individual imposes significant costs on other individuals” dictated the need to reconceptualize public education (Friedman, 1955, p.1). For Friedman, the act of eliminating school attendance by geographical location would create a reality whereby educational inequalities would no longer predetermine achievement outcomes for minority students.

To this end, Friedman suggested the implementation of school vouchers for parents to use public money to send their child to any secular or non-secular school of their choosing. Friedman argued that the implementation of competitive enterprise in education would advance the common good as the complexities of education that have plagued our society will be ameliorated by default. Furthermore, the success of Tiebout’s (1956) theory on the preference for local public services with regard to education is predicated on a reality whereby all parents have the ability to
make educational choices for their children. This model’s need for parental choice aligns with Friedman’s conceptualization of school vouchers as it provides the means to create this reality.

In advancing that the demand for public goods creates an efficient allocation of market resources, both Friedman and Tiebout failed to consider the impact of behavioral economics with regard to the fact that parental decisions about education are shaped by race, religion, wealth, and ethnicity (Alexander, 2012). According to Stigltiz (2012), parental decisions regarding education are grounded in racial and socioeconomic bias, convenience, and other factors that are not related to education. Additionally, Stigltiz (2000) contends that parents lack the knowledge to appropriately assess quality education. This reality denotes that incorporating competitive enterprise into education creates “imperfect competition” as the influential factors that guide parents’ decisions about education replicate the same inequalities occurring within public schools (Alexander, 2012, p.170). Ultimately, the success of the theories advanced by both Friedman and Tiebout with regard to education are contingent upon a reality whereby rational parents make educated decisions about schooling within the structure of a perfect market economy (Alexander, 2012).

Despite the philosophical difficulties associated with the incorporation of choice into education, this model has continued to grow. The expansion of school vouchers and charter schools increased significantly with the U.S. Supreme Court’s 1997 decision in Agostini v. Felton and its 2002 decision in Zelman v. Simmons-Harris as the outcomes of these cases demolished the impact of the Establishment Clause. In these particular cases, the U.S. Supreme Court held that public school teachers could teach secular material at religious schools and that it was not unconstitutional to use public money to support religious schooling as long as the choice programs did not incentivize either secular or non-secular schooling options. With the expansion
of choice programs, research validates the need to account for behavioral economics with regard to parental decisions about education as choice models continue to replicate the same pattern of educational inequalities. In examining the patterns occurring in charter schools, Frankenberg and Lee (2003) report that “charter schools are largely more segregated than public schools” (p.3).

Public Choice Theory

Through their focus on competition and choice, Friedman (1962) and Tiebout (1956) helped shaped the neoliberal agenda, as it proposes the implementation of market-style incentives to create political and economic change for the purpose of improving the welfare of all individuals (D. Harvey, 2005). Public choice theorists expand this conceptualization of the neoliberal agenda by considering the role of the consumer within the market environment. PCT focuses on economic decisions, both within the public and private sectors, that are driven by self-interested individuals (Lubienski, 2005). PCT hinges upon an individual’s right to choose or consume, as it places citizens in the role of the consumer (Apple, 2011; Giroux, 2002; Giroux & Giroux, 2006; Wells et al., 2002). PCT also addresses the notion of possessive individualism, which manifests when citizens are able to select the services and goods they determine to be appropriate without the interference of government (Apple, 2011). As a result of this possessive individualism, public choice theorists advance that people become independent entrepreneurs who are able to take care of their own needs through the act of choice.

The theory of public choice focuses on the actions people take as consumers in the marketplace and then applies these actions to the goods and services provided to the public for the purpose of increasing the options offered to consumers (Shaw, 1993). When assessing how people behave in the marketplace, an assumption is made that individuals are primarily concerned with their own self-interests (Niskanen, 1971). Through this conceptualization, PC
theorists suggest capitalizing on individuals’ self-interests for the purpose of improving the level of goods and services provided to people. Through this delivery model, individuals drive the market by consuming goods and services. As a result, profit margins become contingent upon responding to the desires of individuals. Businesses will be unsuccessful if they are unable to meet the needs of the consumer. This reality dictates that businesses compete against each other to provide the best product to consumers and suggests this competition will increase the standard of living for all individuals as businesses strive to provide the best goods and services to consumers to remain viable in the marketplace. In substantiating the need to advance this agenda, PC theorists contend that structural problems exist within the governmental practices of the election process, the legislature, and the bureaucrats, as they represent components of a larger system that fails to meet the needs of individuals (Niskanen, 1971).

According to Shughart (2008), the election process, as defined by the government, is based on a collective decision-making process. Arrow (1963) suggested this collective decision-making process creates a dynamic through which individual choices and decisions become an amalgamation of collective desires where everyone is left settling for outcomes they did not select. Through his “impossibility theorem,” Arrow utilized logic to show that it is impossible for one option to emerge as the most preferred. According to Arrow, a dictatorship is the only avenue for distributing preferences to diverse individuals. Additionally, he claimed that the Electoral College further exacerbates this issue, as individual votes rarely decide an election. Downs (1957) claimed that the ineffectiveness associated with the voting process promotes a reality whereby individuals choose not to educate themselves on various initiatives as they are unable to effect change. He claimed that this level of ignorance does not occur in the private sector and argued that when individuals purchase cars, they make educated decisions because
these decisions directly affect their lived experience. Additionally, Black (1987) suggested that in an election process where the majority rules, the median voter has the most impact. Decisions that are to the left or to the right of the median voter are usually defeated. As a result, candidates and parties tailor their platforms and campaign promises to the center as a means to get elected. Ultimately, PC theorists contend that the election process itself dictates a reality where individuals’ needs are not being met.

Through the election process, candidates are selected to represent individuals at the legislative branch of government. For PC theorists, this branch of the government also represents a fractured system that fails to meet the individual needs of consumers. The legislative structure dictates that representatives make decisions about resource allocation for individuals who do not reside in their boundary area. This creates an issue whereby legislators are not focused on making efficient fiscal decisions, as the outcomes do not directly affect their constituents (Buchanan & Tullock, 1962). Additionally, PC theorists advance that the legislative branch is further fractured by special interest groups that use their coercive powers to shape laws and regulations in a way that is beneficial to their own self-interests. When this dynamic occurs, public interest groups advance agendas that fail to meet the needs of all people. Government subsidies provided to farmers point to the influence of special interests groups, as these regulations increased the profit margins of farmers by charging consumers higher prices for food (Buchanan & Tullock, 1999). The influence of special interest groups is further supported by Stigler’s (1971) capture theory. He suggested that monopolies are fostered by governmental decisions, as legislators have the power to tax, obtain extra resources in a coercive manner, and make regulations for the purpose of preventing competition. The ability to create monopolies promulgates the influence of special interest groups, as companies are clamoring for government
regulations to help increase their profit margins. When the influence of special interest groups unfolds, decisions are often made that are not cost effective to the consumer. Often, these decisions go undetected because voters do not typically monitor the behaviors of legislators. Additionally, Stigler’s capture theory addresses problems associated with the role of bureaucrats, as they do not follow profit goal margins when creating legislation.

For Stigler (1971), bureaucrats aid in the creation of monopolies as they rely on Congress for budgets. Stigler argued that this lack of budgetary constraints supports monopolies, as the services they supply are predicated by the demands of the government. The lack of influence from external forces on this relationship dictates that services are produced at a level that exceeds a threshold where the cost equals the benefit. Budgetary inefficiency occurs because bureaucrats rarely experience budget constraints, and therefore are not forced to make decisions to limit the supply for the purpose of meeting a budget. Additionally, excessive spending results from the utilization of lump payments for services. A government contract for the development of military products typifies this dynamic where bureaucracies choose output levels based upon subjective measures. Ultimately, PC theorists contend that self-interested people within the government facilitate a democratic decision that is influenced by the power dynamics reflected in society (Buchanan & Tullock, 1999). As a result of individuals making decisions to accommodate their own self-interests, a remedy to the problem facing the government does not surround the idea of changing the elective officials. Rather, PC theorists suggest that the solution is contingent upon introducing market-style incentives to fix the institutional problems of the government.

Due to the fact that public institutions are unable to meet the needs of individuals, PC theorists suggest governmental agencies should be deregulated for the purpose of introducing
business-style enterprise in the form of competition so providers can compete with each other to best meet the needs of the consumer (Arrow, 1963; Buchanan & Tullock, 1999; Lubienski, 2006). The incorporation of market-style incentives into the public sector is seen as the best way to actualize public interest, as this arrangement sorts individuals into groups based upon their preferences (Buchanan & Tullock, 1962; Chubb & Moe, 1990). This remedy hinges on the idea of allowing individuals to consume public goods in a manner that models how goods are consumed in the private sector. Paying taxes in order to receive access to public schools as well as to receive protection from the police and fire department is an example of consuming a public good. Selecting a cell phone company provider or purchasing an Apple computer is example of consuming a private good. Through the process of allowing citizens to consume public goods in the same manner as private goods, PC theorists contend that individuals will be able to utilize the exit option by “voting with their feet” to select their preferred provider (Hirschman, 1970; Tiebout, 1956). Allowing individuals to select the educational opportunity provided to their child is an example of allowing individuals to consume a public good in a private manner. This consumption of education manifests through the implementation of charter schools and voucher programs.

In meeting the individual preferences of people, PC theorists advance that the government should be small, local, and decentralized as a means to provide public goods that are efficient and responsive to consumers (Gauri, 1998; Lubienski, 2006). The argument is that consumers will sort themselves into “preference clusters,” thereby creating homogenous populations defined by common interests (Chubb & Moe, 1990). PC theorists suggest this market reality where individuals become the consumer and are able to pursue their own preferences is advantageous, as individuals are able to dictate their own reality (Lubienski,
2006). PC theorists argue that the current reality of bureaucratic control is detrimental, as it creates a dynamic whereby the ideas of those in power dictate the reality for all participants. The incorporation of market-style influences into the public sphere as favorable denounces the current democratic model where the preferences of the minority are rejected by the power of the majority (Chubb & Moe, 1990).

In addition to issues with the government, PC theorists suggest public schools represent a defunct bureaucracy as they are forced to meet the demands of too many stakeholders (Chubb & Moe, 1990). Schools are failing because they are bureaucratic agencies that are not held accountable, which creates a dynamic that enables schools to be unresponsive to the needs of the consumer. The democratic structure of education systematically hampers parents from having their voices heard as related to making changes. Chubb and Moe (1988) suggested that the interplay between consumer satisfaction and organizational well-being is minimal, as public schools represent a local monopoly that exists because children attend schools based upon their catchment area. Schools are failing because they are producing a monopolistic public good that fails to incorporate market influences to improve the system. Additionally, Chubb and Moe suggested that the influence of local citizens and school boards is minimal in comparison to the impact of the federal government on education. They argued that public schools are subject to larger societal objectives that derail the intent of education. The federal government provides funding to schools and imposes various standards (e.g., the federal mandate of complying with the Common Core State Standards).

For PC theorists, the solution for solving educational inequalities surrounds the incorporation of competition through the implementation of market-like arrangements as a means to meet the diverse needs of consumer preferences. This argument assumes that
competition will enhance the education delivered to students, as schools will be forced to change more rapidly to meet the needs of their consumers. This notion of competition itself manifests through various initiatives that expand parents’ and students’ abilities to choose their educational path (Lubienski, 2005). Chubb and Moe (1988) stated that “this process of selection promotes a match between what educational consumers want and what their schools supply” (p. 1068). The belief associated with this idea is that schools that fail to meet the expectations of their consumers will be affected on multiple levels. This reality dictates that schools will tailor the services being provided to please their clientele.

**Political Context**

After conceptualizing the neoliberal agenda through the actualization of PCT, it becomes important to understand the evolution of how this guiding philosophy came to be as well as how it is currently shaping the educational landscape. To highlight this progression, the focus of the political context segment of this paper is on judicial decisions, the influence of philanthropic foundations, schooling options provided to students, and specific school options provided to students residing in the St. Louis area, as it was the focal point for this research study.

**Judicial Decisions/Mandates**

In 1954, the Supreme Court mandated the integration of public schools in *Brown v. Board of Education*, as it declared that de jure racial segregation inherently provided unequal opportunities for students educated in separate schools. President Johnson further strengthened the desegregation movement by passing the Civil Rights Act of 1964, the Voting Rights Act of 1965, and the Fair Housing Act of 1968. The intent of this legislation was to provide civil rights leaders with the power to litigate matters of racial inequalities. In 1971, the U.S. Supreme Court ruled that schools should attempt to create racial balance in the case of *Swann v. Charlotte-
Mecklenburg Board of Education in an attempt to desegregate schools. According to the court, in areas where minority groups are concentrated, one-race schools within a district mark a system that still practices segregation by law. In an attempt to remediate this racial homogeneity within schools, the court found that transportation in the way of busing was a possible way to begin to desegregate schools.

However, in the case of Milliken v. Bradley, the U.S. Supreme Court reversed the impact of Brown v. Board of Education. The court determined that racially segregated schools resulting from de facto segregation were not in violation of the law and were not required to take measures to desegregate because the racial isolation was created by policies enacted by state agencies (Alexander & Alexander, 2011). Further, the court explained that a violation of the law only occurs in instances of de jure segregation when school districts implement measures for the purpose of segregating students within their own district. As a result, the court held that Detroit’s plan to bus students across district lines to desegregate schools was unconstitutional because the racial divisions within the schools were permissible as the residential boundaries were not intentionally created to create segregation in schools. As a result, Milliken v. Bradley enabled a pattern of de facto segregation that created a dynamic of residential and educational segregation across metropolitan areas (Frankenberg & Orfield, 2012).

Since the 1970s, the court has continued to make decisions that have increased patterns of residential income segregation and racial segregation within schools (Frankenberg & Orfield, 2002). After the court’s decision in University of California v. Bakke, where it was held that affirmative action plans could not utilize a quota system solely based on race to admit a certain number of minority students, the court made it clear in Grutter v. Bollinger and Gratz v. Bollinger that efforts to create diversity are compelling. However, diversity itself does not dictate
the creation of racial balance (Alexander & Alexander, 2011). Once again, in Parents Involved in Community Schools v. Seattle School District No. 1 and Meredith V. Jefferson County Board of Education in 2007, the U.S. Supreme Court decided that school districts attempting to mitigate the impact of de facto segregation by reducing the amount of racially concentrated schools could not implement a quota system that used race as the sole determining factor for assigning students to various schools. According to the court, the creation of racial distinctions as a means to remediate racial discrimination was not “narrowly tailored” enough as it used more discrimination than necessary. Additionally, the court decided that the districts’ desegregation plans did not meet the standard of strict scrutiny. The court explained that although the schools’ attempts at desegregation were compelling, this was not a valid enough reason to violate the protection set forth by the Fourteenth Amendment that mandated neutrality toward race. Ultimately, this decision suppressed desegregation efforts in public schools as it meant that states did not have the authority under the Equal Protection Class to use race to determine which schools would children attend (Alexander & Alexander, 2011).

These legal cases helped to shape the pattern of residential income segregation occurring in metropolitan schools across the country as an inextricable relationship exists between race and income. The court’s shift in philosophy coincided with the neoliberal agenda set forth by the work of Milton Friedman. The Ronald Regan administration (1981-1989), the George H. Bush administration (1989-1993), and the George W. Bush administration (2001-2009) all took measures to incorporate the neoliberal agenda into education that manifested through philanthropic foundations and policymakers turning to market-style incentives to remediate educational disparities among students. This movement contends that providing parents with the
option to choose the educational reality for their children is the solution to improving schools and ensuring academic achievement for all students (Lubienski, 2005).

**Philanthropic Foundations**

In 1983, Ronald Regan requested a report from the National Commission on Excellence in Education (NCEE) regarding the status of public education. The report, entitled *A Nation at Risk*, advanced that the public education system promulgated a level of mediocrity that threatened the future of the nation. The authors suggested the failing educational system was creating a dynamic whereby “the once unchallenged pre-eminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world” (NCEE, 1983, p. 1). As a means to facilitate change, the authors called upon “elected officials, educators, parents, and students” (NCEE, 1983, p. 1) to reform a failing public school system. During this time frame, states assumed primary governance over schools (Koppich & Esch, 2012). The fear of lagging U.S. productivity and international competitiveness generated by this report caused many business leaders to begin having policy conversations about enhancing educational outcomes as a means to ensure students would be able to successfully compete in a global workplace. In 1989, President George H. Bush convened a committee of governors and corporate leaders in Charlottesville, Virginia, for the purpose of creating the first ever national goals for education. Governor Bill Clinton chaired the committee (Koppich & Esch, 2012). This trend of expanding the role of the federal government and reducing the autonomy of state governments in education has continued to grow (Hess & Petrilli, 2006). This federal effort to exert more control in educational policy has led to the strengthened influence of special interest groups and philanthropic foundations (Marsh & Wohlstetter, 2013).

Between 2000 and 2008, philanthropic funders contributed $684 million to reshape
educational policy in the United States (Suggs & DeMarrais, 2011). The Carnegie Corporation, the Walton Foundation, the Ford Foundation, the Joyce Foundation, and the Gates Foundation are contributors that continue to make donations for different educational endeavors. Since 2000, the Teach for America program has received $213 million to increase opportunities for non-teachers to enter the field of education (Suggs & DeMarrais, 2011). The Joyce Foundation has invested money to assist with the development of a teacher evaluation system based on student test scores as a means to earn compensation and career advancement (Koppich & Esch, 2012). Since 1999, the Bill and Melinda Gates Foundation has contributed $3.4 billion toward various initiatives focused on improving education (Darick, 2014).

The cooperation between the U.S. Department of Education and the Gates Foundation becomes evident when examining the Race to the Top (RTTT) initiative implemented by the Obama administration. RTTT focuses on adopting the common core curriculum standards, linking teacher pay to test score gains, and increasing the number of charter schools. Arne Duncan is the U.S. Secretary for Education. His Chief of Staff and his Assistant Deputy previously worked at the Gates Foundation (“Bill Gates’ School Crusade,” 2010). The Gates Foundation spent roughly $200 million on funding the development of the common core curriculum standards (“Bill Gates’ School Crusade,” 2010; Darick, 2014). Additionally, the Gates Foundation invested $45 million in the Measures of Effective Teaching (MET) project, which is designed to identify reliable measures to track teacher effectiveness as it relates to increased standardized achievement scores (Koppich & Esch, 2012). Furthermore, the Gates Foundation has supported a number of charter schools across the United States since 2001. Charter schools are publicly-funded schools run by organizations apart from the school district (Leknes, 2012). In reference to charter schools, Bill Gates has stated, “I really think that charters
have the potential to revolutionize the ways students are educated” (Rousseau, 2010, para. 4). The interconnectedness between the federal government and the Gates Foundation dictates a reality where the Gates Foundation has an immense amount of unchecked power and influence over the American education system (Ravitch, 2011).

Schooling Options

The traditional model of education dictates that the school a child attends is connected to the location of his or her home. The attendance boundaries within school districts are referred to as catchment areas (Lareau & Goyette, 2014). In 2009, the U.S. Department of Education indicated 73% of children attended their neighborhood schools (Lareau & Goyette, 2014). In the past 2 decades, the interconnectedness between catchment area and school attendance has begun to change with the incorporation of voucher programs, private denominational and nondenominational schools, charter schools, school transfer programs, and magnet schools. The school choice initiatives occurring within education have focused on providing parents with the ability to choose their children’s educational experience that goes beyond the arrangement of schooling options relative to particular neighborhoods.

Voucher programs support the use of public funds to provide parents with the opportunity to send their children to a school of their choice (Friedman, 1955). This choice initiative focuses on providing parents with a tuition waiver for the purpose of gaining admittance into any educational environment. With this tuition waiver, parents can elect to send their children to public schools outside of their catchment area or to private denominational and nondenominational schools. Additionally, private denominational and nondenominational schools provide parents with an educational alternative beyond sending their children to the school district associated with their particular neighborhood. These schools are relieved of
federal, state, and local regulations and are able to create a specific curricular focus that aligns to the mission of the school. Attendance at these schools is typically reserved for families with the financial means to pay the yearly tuition.

Charter schools represent another choice initiative within education. They operate independently of the public school district, yet are supported by tax dollars. Charter schools are typically relieved of federal, state, and local regulations that dictate standards and expectations for students. In exchange for this freedom, charter schools adhere to a student selection process as a means to demonstrate positive student achievement outcomes in order to ensure continued funding (Fierros & Bloomberg, 2005; Lubienski & Weitzel, 2010). Student achievement scores typically define success at these schools because funding to remain viable depends on this success. Support for the charter school model surrounds the ability to improve equity among students by providing the same high-quality education to disadvantaged students that higher income families can access through choosing to purchase houses in better neighborhoods or sending their children to private schools (Lubienski & Weitzel, 2010).

Another school choice initiative is the creation of the school transfer program. This program provides students attending an unaccredited school with the opportunity to transfer to a successful accredited school outside of their catchment area. In some states, this structure dictates that the failing district pay tuition to the receiving school. Furthermore, magnet schools represent another school choice program. Magnet schools are public schools that admit students based upon an academic talent or criteria.

**Schooling Options in St. Louis**

Saint Louis Public Schools (SLPS) has 11 high schools, 25 magnet schools, and 27 charter schools; a total of 5,100 students participate in the voluntary interdistrict transfer program
and attend public schools in St. Louis County (City of St. Louis, n.d.). In Missouri, charter schools can only be located within the boundaries of the Kansas City Public Schools and the SLPS. The voluntary interdistrict transfer program allows Black students residing in the City of St. Louis to attend one of several participating school districts in St. Louis County, provided they meet certain eligibility requirements regarding residency and behavioral records (Voluntary Interdistrict Choice Corporation, n.d.). The voluntary interdistrict transfer program is funded by the state of Missouri through its normal public school aid sources.

The suburbs of the St. Louis area are broken down into two primary municipalities: St. Louis County and St. Charles County. St. Louis County comprises 23 school districts while St. Charles County has six school districts. When discussing school options in St. Louis it becomes important to address the number of private and parochial schools. The St. Louis area comprises three million people and has 402 private or parochial schools (Pellissier, 2014). Roughly 49% of the population affiliate themselves with a religion (Sperling’s Best Places, n.d.). St. Louis has one of the strongest dioceses in the United States, enrolling thousands of children, both Catholic and non-Catholic, into its schools.

When addressing the educational opportunities provided to students residing in the St. Louis area, it is important to consider the student transfer law, as it continues to be a heavily debated topic. The legislative branch of the government in Missouri passed the Outstanding Schools Act of 1993. The student transfer law was one of the many state statues included in this law (Singer, 2014). This law allows students living in unaccredited school districts to transfer to nearby accredited schools. Unaccredited school districts are required to pay the tuition bill of the nearby school district as well as the transportation costs associated with getting the student to the school. This statue did not become heavily debated until 2007 when SLPS became the second
school district to lose accreditation. Four parents residing in the City of St. Louis sued Clayton School District and the City of St. Louis Board of Education. The parents argued that due to the student transfer statue outlined in the Outstanding Schools Act of 1993, SLPS should pay the tuition for their children to attend Clayton School District.

In a response to this lawsuit, the Clayton School District immediately commissioned a study to determine the number of students residing in the City of St. Louis who would be interested in attending specific school districts in St. Louis County. Through this survey, it was determined that more than 15,000 students from the city were likely to transfer to county schools (Singer, 2013a). The projected cost to SLPS was “$224 million for tuition and another $40 million to $60 million for transportation” (Singer, 2013b, p. 1). SLPS officials argued in this case that the financial burden would make it impossible to operate schools for the students still residing in the City of St. Louis. Clayton School District leaders argued that with no limits as to how many students they were required to take, they could not adhere to this legislative decision, as they would be forced to exceed optimal class size targets set forth by the Board of Education and add facilities that would be paid for by their own residents. In May of 2012, the St. Louis County Circuit Court held that SLPS and the Clayton School District were excused from complying with this mandate, as the Hancock Amendment prevented the state from imposing additional costs on the districts without providing the money to meet the burden. This decision was appealed to the Missouri Supreme Court, and in June of 2013, the court held that the student transfer law was constitutional and transfers could proceed.

The impact of the transfer law was renewed when Normandy School District lost its accreditation. In March of 2014, Normandy School District filed a suit stating that this transfer law violated Missouri’s Hancock Amendment, as the state does not provide funding for the
transportation costs (Crouch, 2014a). Additionally, the district argued that paying tuition and transportation to approximately 1,000 Normandy children denied educational resources to 3,000 children still in Normandy schools. This transfer law cost Normandy School District an additional $8 million that was not accounted for in the budget. In May of 2014, Senate Bill 493 was passed to change the stipulations associated with the student transfer law. Some of the changes included the guidelines that receiving districts may establish polices for acceptable classes sizes, and students who have been suspended from school two or more times for acts of school violence will be denied the opportunity transfer (Singer, 2014). Additionally, the new bill states that the sending district may provide transportation for transfer students, but is not required to meet this burden. Furthermore, students are able to transfer to private schools as long as these schools are accredited and provide data to the state for annual performance reports.

In June of 2014, Normandy dropped the lawsuit, as the Missouri State Board of Education made the decision to rename Normandy School District to Normandy Schools Collaborative. Through this name change, the new school district was not given accreditation status, and therefore was no longer obligated to comply with the transfer law. The State Board of Education decided to implement a new structuring plan for the purpose of improving instructional measures occurring within the school district. Additionally, the State Board instituted a cap of $7,200 on the amount of tuition that Normandy School District would have to pay other districts for the students currently enrolled in the transfer program (Crouch, 2014b). The State Board of Education created a phase-out plan for those Normandy students enrolled in the transfer program for the upcoming school year. After learning that some students could no longer participate in the transfer program and thereby were required to return to the Normandy Schools Collaborative District for the 2014-2015 school year, parents residing in this community
filed a lawsuit, arguing that the Missouri Board of Education acted wrongfully by allowing a new school district to operate without an accreditation classification (Crouch, 2014c). The parents who brought forth this lawsuit wanted their children to still participate in the transfer program. Ultimately, the student transfer law, as well as the political maneuvering associated with this law, will continue to influence the educational opportunities provided to students residing in the St. Louis area for years to come.

**Social Context**

During the time of *Brown v. Board of Education*, movements involving education focused on with the concept of providing equal access to a quality education for all students (Lubienski, 2005). A neoliberal shift in focus has occurred, and as a result, educational movements are now focused on allowing people to actualize their individualism through choice. In providing individuals with the opportunity to make choices that enable possessive individualism, it is important to understand the relationship between choice by mortgage and public education. To grasp this relationship, this section contains a review of the topics of income inequality and segregation, equity and achievement differences, and the impact of status ideologies on schools.

**Income Inequality and Segregation**

Individuals tend to live in neighborhoods with people who have a similar ethnicity and SES (Lareau & Goyette, 2014). Affluent families are able to choose where they reside, whereas families with limited resources have very few options when selecting a home. The current suburban landscape dictates that a relationship exists between housing trends and school districts’ demographics and resources. Spatial assimilation reflects the idea that SES among racial and ethnic minority groups is the most influential factor in shaping patterns of residential
segregation (Lareau, 2014). The trend of segregation by income is important to conceptualize, as it dictates a reality whereby higher-income families live in neighborhoods of concentrated wealth that provide high levels of goods and services. This high level of amenities carries over to the schools within these particular communities (Lareau, 2014). White families are better able to afford neighborhoods with higher quality services and amenities than are their minority counterparts (Clark, 2007). Additionally, White households with children are among the most segregated from their minority counterparts (Ellen, 2007; Iceland, Goyette, Nelson, & Chan, 2010; Logan, 2004).

Decisions regarding residential mobility and school choice among poor families are often predicated by a need for goods and services that differ from those needed by middle class families (Rhodes & DeLuca, 2014). Rhodes and DeLuca (2014) noted that the residential decisions made by low-income families are rarely driven by school consideration. The act of moving for low-income families often involves extraneous events that are unplanned and stressful. Searching for homes under distressed situations leaves families struggling to meet their basic needs, such as safety, proximity to child care, transportation, and housing amenities. Rhodes and DeLuca suggested low-income families separate the act of residing in a certain area from school choice. This decoupling occurs as the act of moving is often not a calculated process, but one of necessity. Additionally, financial constraints limit the ability of low-income families to flee disadvantaged neighborhoods. Affluent neighborhoods often have residential restrictions that prevent multifamily housing. Furthermore, rental properties in affluent areas have more stringent leasing requirements. The inability of low-income families to “vote with their feet” limits the school selection process and often predetermines a reality of lower performing schools.
Different Opportunities Provided to Students

Minority students residing in segregated neighborhoods typically attend lower quality schools that tend to have less qualified and less experienced teachers, which often leads to lower test scores (Bennett, 2011; Lareau & Goyette, 2014; Orfield et al., 2012). Additionally, schools in predominantly minority segregated areas typically have higher dropout rates and a smaller percentage of the student body attending 4-year, post-secondary schools. Research suggests students attending these schools have less access to information about college and appear to display lower educational expectations (Bennett, 2011; Bankston & Caldas, 2000; Lareau & Goyette, 2014).

Educational Equity

Current school funding equations represent an actualization of possessive individualism, as funding inequities affect student achievement outcomes. Findings suggest “school resources are systematically related to student achievement and that these relations are large enough to be educationally important” (Greenwald et al., 1996, p. 396). Public school funding in the United States comes from federal, state, and local sources. Across the nation, nearly half of those funds come from local property taxes (National Center for Education Statistics, 2000). Additionally, different funding structures exist among states, among school districts within each state, and even among schools within specific districts. This structure generates large funding differences between wealthy and impoverished communities. It is common for wealthy districts to decline federal dollars whenever possible as a means to avoid the regulations associated with the funding structure. In assessing funding inequities, it is important to understand that housing trends within a community can change the demographics as well as the resources of a particular school. Choice by mortgage affects the fiscal resources provided to schools, as local property tax is the primary
revenue source for schools. As a result of this reliance on local property tax, the quality of education has historically been dependent on the property wealth of the local community. The wide disparity in school funding becomes apparent when examining the amount of money each district spends on educating each child in its schools. For example, in 1998, the average per capita spending for educating every student in the state of Illinois was $5,734; during this same year, wealthy districts spent more than $20,000 educating each student in the district (Reynolds, 2008).

This variance in funding contributes to differences in teacher salaries, teacher experience, teacher–pupil ratios, and class size among school districts. Research suggests better funded schools are able to attract teachers with higher levels of education and experience who have a tendency to generate better achievement scores among students (Darling-Hammond & Post, 2000; Elliott, 1998; Ferguson, 1991; Ferguson & Ladd, 1996). Parent organizations within many wealthy school districts also contribute to variances in the level of goods and services provided to students. It is not uncommon for parent groups to conduct silent auctions and other fundraising activities. The money collected from these parent groups is sometimes used to purchase artificial turf for football stadiums, instructional resources and materials, and to build new libraries and media centers (Cody, 2009). Furthermore, variances in school funding contribute to the number of advanced placement (AP) classes high schools are able to provide students. Revenue streams to support vocational training programs are typically found in affluent schools, as this programming is expensive. Vocational programs require a significant amount of space within school buildings and the equipment to run the programs is expensive. Poorer school districts often have to cut extracurricular activities such as newspaper, yearbook, drama club, and elective offerings such as chorus or photography as a result of budget constraints (Mellnik & Cenziper,
Technology discrepancies are often apparent between wealthy and poor schools. Wealthy school districts are beginning to move to a one-to-one initiative where every student has an individual computer, while schools with limited resources are struggling to create enough computer labs with current equipment to meet the needs of their students.

In furthering the socioeconomic stratification associated with choice by mortgage, scholars theorize that wealthier families take steps to maintain their social status by distancing themselves from groups they perceive to be of lower standing (Saporito, 2003). With regard to education, this manifests as families make decisions to “vote with their feet” and purchase homes in residential areas where schools meet their expectations with regard to class composition. Another impact of choice by mortgage is that when families leave one community for another, the funds associated with income property tax become fluid and can no longer be counted on as a revenue stream for the school in question. This creates a dynamic whereby schools begin to compete against one another to attract families to purchase homes in their residential community (Tiebout, 1956). Additionally, the unofficial choice market where parents become the consumer and purchase educational services is further complicated by reliance on local property tax to fund schools, as Whites hold the majority of the wealth in the United States. The interrelationship between race and income unfolds as educational outcomes become unevenly distributed in geographic regions of racial homogeneity (Reardon, 2012). Ultimately, the private decisions associated with choice by mortgage have public consequences. Decisions associated with the unofficial choice market contradict an educational reality that supports the common good for society. Residential income segregation contributes to pervasive inequalities that create a dynamic of winners and losers in education.
Achievement Outcomes

Due to the relationship between school resources and student achievement, it becomes important to assess how the unofficial choice market influences this pattern. National achievement trends provided by the National Assessment of Educational Progress (NAEP) suggest overall achievement scores in the core academic subjects of reading and mathematics have increased in the last 2 decades. The achievement of Blacks and Hispanics in these subjects also has increased during this time period (Mullis et al., 1994). Despite these gains, an achievement gap by income has grown significantly in the last 25 years (Reardon, 2013). The examination of disparities in educational outcomes between poor and wealthy children provides an avenue to analyze the consequences of individuals consuming education by “voting with their feet.” In 2005, the gap between fourth grade minority students and their White counterparts in reading scaled scores was more than 26 points. Additionally, there was a 20-point gap in the mathematic scores of these students (Ladson-Billings, 2006). This gap in student achievement scores was also reflected in the scores of eighth grade students who were tested. There was more than a 23-point gap in the reading scores and more than a 26-point gap in the math scores when comparing the testing results of White students to those of their minority counterparts. In addition to standardized test scores, discrepancies in educational outcomes among minority students are reflected in high school dropout rates, enrollment in honors and AP classes, and admittance to college.

Socioeconomic characteristics of a family are the strongest predictors of student achievement (Reardon, 2013). In assessing this trend, Reardon compared the high-income families in the 90th percentile of income distribution to the low-income families in the 10th percentile of income distribution. When examining the reading achievement data of these
identified groups, Reardon (2013) determined that in the 1950s, 1960s, and early 1970s, the discrepancy in reading outcomes was about 0.9 of a standard deviation. When replicating this study with student achievement data from the 1990s, Reardon determined the gap in standardized test scores was roughly 1.25 standard deviations. Based on these data, Reardon claimed that the achievement gap between “high and low income families has grown by roughly 40 percent in the past twenty-five years” (Reardon, 2013, p. 1). Additionally, he assessed the standardized test scores, grades, high school graduation rates, and college enrollment and completion rates. Reardon found low-income students have underperformed high-income students in these measures of academic success.

In attempting to understand the trend in student achievement outcomes between low-income and high-income students, it is important to understand that in the 1950s and 1960s, racial inequality was higher than income inequality. During this time frame, economic inequality was at an all-time low (Piketty & Saez, 2003). According to Reardon (2013),

In 1970, a family with school-age children at the 90th percentile of the family income distribution earned 5 times as much as a family at the 10th percentile; today, the high-income family earns 11 times more than the low-income family. (p. 13)

According to Saez (2012), economic inequality reached historic highs in the early part of the 21st century. As a result, SES has become a more prevalent factor in assessing inequalities in educational achievement outcomes. The pattern of disparity between low-income and high-income students typifies Chubb and Moe’s (1988) position that public schools are subjected to larger societal influences that derail the intent of education.

**The Impact of Status Ideologies on Schools**

The current educational landscape operates as an unofficial choice market where high-income parents are able to purchase homes in residential areas as a means to gain access to high-quality schools. As a result, a school choice program unfolds within public education where
wealthy families are able to purchase a home worth hundreds of thousands or even millions of dollars for the purpose of paying real estate taxes in order to gain access to public schools that are typically located in suburban communities (Nathan, 1998). According to Holme (2002), such “status ideologies” dominate every aspect of the home purchasing process for parents. She contended that parents make decisions about choosing or rejecting particular schools based upon the socioeconomic demographic of the residential community. When interviewing families who actualized choice by mortgage to make educational decisions for their children, Holme found parents justified their actions by expressing concern about the values and behaviors of the students in the schools they considered unacceptable (Holme, 2002). Parents rationalized that their decision to select a specific school was based upon school quality rather than the race or SES of the school population. Educational research contradicts this understanding, as findings suggest the status ideologies of the dominant class significantly influence the unofficial choice market.

When determining what types of schools high-income parents choose and why, Holme (2002) concluded that parents’ school choices were based upon information from other parents in their social network, rather than on information associated with school quality or curricular opportunities provided by the various school districts. In reaching this conclusion, Holme interviewed 42 parents who had the financial means to “vote with their feet” and select an educational reality that matched their expectations. Through the interview process, Holme determined that 20 of the parents decided to leave one community for another as a result of their dissatisfaction associated with the area school. Of the 20 parents who chose to move, only one had visited the school that was deemed inadequate. Furthermore, only eight parents evaluated the test score data from the inferior school before making the decision to move. Finally, when
selecting a community, only 17 parents reviewed the test scores of the new school district when determining where to reside. Holme determined that the biggest factor in the school selection process was “the opinions of other parents who were considered to be of high status” (p. 180). Parents assumed that those schools serving high status students were superior and subsequently became coveted school districts. This reality denotes that status ideologies are intrinsically linked to the unofficial choice market. This dynamic unfolds as those in dominant status groups downplay the influence of SES as an influencing factor in deciding where to reside and, instead, justify the decision as it relates to “cultural explanations of success and failure” (Holme, 2002, p. 180). Fifteen of the 42 parents interviewed did acknowledge the influence of possessive individualism associated with maintaining a certain SES level when deciding where to purchase a home.

One parent reflected “that it was easier for her to recognize the inequality than to make an individual choice to counteract it” (Holme, 2002, p. 200). Ultimately, the majority of the parents interviewed failed to directly acknowledge that SES was the biggest influence when making decisions associated with choice by mortgage. Results of this study suggest decisions associated with “voting with one’s feet” are not predicated on knowledge, but conjecture of the dominant social class. The unofficial choice market occurring within education dictates a landscape where less affluent parents are unable to have the same access to quality schools that privileged parents with resources are able to seek (Holme, 2002).

**Understanding How Schools Respond to the Unofficial Choice Market**

Pressure to meet the expectations of individuals residing in the community, as well as the mandates set forth by the federal and state governments, significantly influence how school leaders respond to demographic changes occurring within the neighborhood (Wiley et al., 2012).
Some school districts respond to demographic changes occurring within the neighborhood by attempting to reconstruct attendance zones. Wiley et al. (2012) interviewed several stakeholders at the district office of one school district who were involved in the process of reconfiguring school attendance zones. District office staff shared that they had received numerous concerns from affluent families demanding assurances that the diversity would not reduce educational quality. Personnel within the district office, as well as building principals, reported spending a lot of time assuring affluent parents that their children would continue to be challenged academically and instructionally amid the demographic changes occurring within the individual school. In discussing the restructuring process, district office personnel described a “tipping point at which too many students of color cause white parents to be less attracted to a school” (Wiley et al., 2012, p. 155). This district’s communication with minority parents during this time frame primarily focused upon informational nights about various educational initiatives and school–community engagement opportunities occurring outside of the structured school day. Additionally, this district highlighted supplemental tutoring as well as the recruitment and retention of diverse faculty to further meet the needs of the diverse student population.

In responding to mandates regarding student achievement outcomes, a pattern has emerged whereby school districts are implementing educational initiatives for the purpose of increasing standardized testing outcomes. In supporting this focus, many colleges are using the number of AP classes offered, as well as the number of AP exams taken at a specific high school, to determine the academic preparedness of students. In an attempt to be responsive to the parental focus of preparing students to be competitive as well as successful in their post-secondary endeavors at 4-year universities, high schools are now implementing initiatives to increase student enrollment in AP classes as a means to demonstrate the quality of instruction
occurring within the school. Advanced placement represents a good that schools are able to use as a means to attract new families to the area. These classes also allow schools to compete with one another as a means to meet the expectations of their clientele.

School districts servicing students with a lower SES are also focusing on AP classes. Wiley et al. (2012) examined a school district that experienced a high level of demographic change in the state of Florida. This school district developed a relationship with the College Board in order to expand enrollment in AP and honors classes. The College Board is a private company that oversees the PSAT exam, the SAT exam, and AP exams. In addition to implementing a study skills class developed by the College Board, this particular school district administered the PSAT to every ninth, 10th, and 11th grade student at the start of each school year. The school district absorbed the $14 cost for each individual exam. The results are calculated by the district to determine which students display a propensity to perform well on AP exams. Proponents argue that the utilization of testing measures to determine student enrollment in AP classes denounces previous tracking measures that were inherently biased against minority students. An AP teacher within this district explained that as a result of this initiative, he “now sees more Hispanic and African American students in honors and AP classes. There is still room for growth, but that has changed tremendously” (Wiley et al., 2012, p. 150).

Critics of the AP initiative within the school district claim that the measures put in place target students who are already college bound and fail to address the students who need the most assistance. In an attempt to close the achievement gap, some school districts have implemented the Advancement Via Individual Determination (AVID) program as well as English Language Learner (ELL) services through the use of Title I funds to meet the needs of their struggling students (Wiley et al., 2012). The AVID program targets underperforming minority students who
have the capability to obtain academic success. A yearly site license for an individual grade level curriculum costs a school district roughly $20,000. To offset the financial burden of this program, often schools will utilize a formula grant entitled Title I from the federal government. One primary component in determining whether a school receives Title I funds is the number of students in the free and reduced lunch program who are located within a particular school district. The coordinator of Title I funds at this specific school district reported “there is a stigma associated with a school becoming Title I, and that school personnel must convince suburban parents that standards will not be lowered to meet the needs of lower-income students” (Wiley et al., 2012, p. 155). Additionally, schools use Title I funds to offset the costs of supports provided to ELL.

**Design of the Study**

Ultimately, the interaction between residential income segregation and the behaviors of schools as reflected in levels of services and educational outcomes was the central focus of this study. While a growing number of social scientists have attempted to explain this pattern of demographic change as it relates to segregation patterns, housing patterns, and the labor markets, there has been a limited amount of research as to how it affects public schools (Wells et al., 2012). The research conducted in this study began with a school district in a community that was the first in St. Louis County to offer Section 8 housing to families. Additional high schools selected for this study were adjacent to this school district and had experienced a pattern of demographic change within the time frame of 1995 to 2013. In utilizing an exploratory mixed methods design, this researcher was able to look more closely at the relationship between residential income segregation and the level of services provided by the school district, as it is an intricate social issue because the problem itself is multifaceted (Rogers, 2008). Through the
implementation of this design, the researcher was able to conduct qualitative interviews to obtain a deeper understanding of the quantitative findings. Additionally, this study was guided by a set of research questions designed to address both the quantitative and the qualitative nature of this methodology:

1. How has the relationship between residential income segregation and the level of services provided by the school district changed over time?
2. Is there a correlation between residential income segregation and student performance outcomes associated with various school districts? If so, how has this pattern changed over time?
3. As communities experience demographic change, how do real estate agents, school board members, and school building administrators respond and adjust to meet the preferences and needs of the community?

In order to answer these questions, the researcher focused on high schools located in St. Louis, Missouri, to provide insight into a much broader dialogue about the relationship between residential income segregation and schools. First, the suburban demographics of St. Louis resemble many midsized metropolitan areas in the United States. According to Gordon (2008), the demographic change occurring throughout the country is more visible in St. Louis, as this city represents some of the starkest racial dividing lines of any American city. Additionally, a pattern in St. Louis has manifested where Whites have chosen to segregate themselves in various suburban communities. Second, St. Louis was chosen for this study as several well-known researchers have conducted studies in the St. Louis area, as it provides a conduit for understanding the segregation, educational inequalities, and unequal boundary lines that are affecting cities across the country. Finally, the researcher chose to focus on St. Louis as the
happenings occurring in Ferguson, Missouri, represent the economic and political divisions that typify the racial tensions that are occurring across the country.

**Summary**

The extensive literature and conceptual framework described in Chapter 2 provided foundational support for this sequential, exploratory, mixed methods research study designed to explore the relationship between residential income segregation and schools. Additional research is needed to assess the consequences of these patterns. Assessing the dynamic between these variables could be helpful, as it may provide more insight into the potential causal relationship between income and achievement among higher-income families. Chapter 3 outlines Missouri’s attempts to provide equal educational opportunities to all students. Additionally, this chapter reviews the demographic change that has occurred within St. Louis as well as the demographic change occurring within the high schools selected for this study.
CHAPTER 3:

HISTORY OF ST. LOUIS

Public choice theory contends that people decide where to move based upon a cost–benefit analysis as a means to maximize their housing investment in relation to the other amenities provided by the town. Amenities such as distance to public transportation, the provision of public goods, the cost of taxes, and the quality of the schools are factors that influence people’s decisions on where to purchase a home (Tiebout, 1956). Through the action of individuals, a migration pattern has manifested whereby people are dispersed into residential areas that are separate and often unequal according to the variables of race/ethnicity, class, and social status (Wells et al., 2012). The interconnectedness between this possessive individualism and the act of deciding where to reside has created a dynamic where neighborhoods and racial change within schools often accompany each other (Goyette, 2014). Understanding the interaction between the movement of people and the educational opportunities provided to students is critical in explaining the ongoing racial/ethnic and social class segregation occurring within suburban schools across the country.

In an attempt to further examine the relationship between residential income segregation and the behaviors of schools as reflected in the services provided and educational outcomes, the focus of this study was on St. Louis, Missouri. St. Louis has a history of implementing various educational initiatives in an attempt to combat segregation and educational inequalities. Ultimately, these initiatives have failed to address the fundamental issue of separate and unequal boundary lines that define St. Louis. The accomplishments and shortcomings of the educational initiatives occurring within the St. Louis area provide insight into a much broader dialogue about residential income segregation as it relates to public education. This chapter outlines Missouri’s
attempts to provide equal educational opportunities to all students and reviews the demographic change that has occurred within St. Louis. Furthermore, the rationale for conducting research in the St. Louis area is explained. Additionally, Chapter 3 concludes by focusing on the demographic change occurring within the specific communities selected for this study as a means to provide a level of insight and understanding that is critical when conceptualizing the methodology associated with this research study.

**Providing Equal Access to Students in St. Louis**

St. Louis was founded by French fur trappers from New Orleans in 1764 (Wells & Crain, 1999). Due to its centralized location, St. Louis became a destination for many people of various ethnicities during the several migration waves that influenced demographic patterns across the country. In 1876, the State of Missouri held a constitutional convention for the purpose of addressing the unbalanced influence held by the City of St. Louis when making political decisions that affected individuals residing outside of the city’s boundary lines. In an attempt to equalize the political landscape, the decision was made to separate the City of St. Louis from St. Louis County. As a result of this decision, the municipalities became separate entities that were responsible for their own property assessment, police protection, and judicial decisions (Gordon, 2008). This fragmented urban planning model where municipalities are responsible for their own taxes, realty, zoning governance, and economic development created a dynamic in St. Louis where the city and the county are in competition with one another.

In the 1960s, the city’s north side experienced a pattern of “White flight” as families moved to the south side of the city. In the 1970s, these White families living in the south side of the city started to migrate toward south St. Louis (Wells & Crain, 1999). During this time frame, SLPS reconfigured school attendance boundaries to account for this demographic change.
Despite this effort, minority students were to be relegated to segregated schools. In an attempt to achieve racial integration, SLPS decided to bus students from the north side of town to the south side of town. Nearly 5,000 Black students residing in the city participated in this program in the 1960s (Wells & Crain, 1999). In an attempt to resolve the overcrowding issue in 1971, the school board sent letters to parents informing them that students were being reassigned to schools outside of their neighborhoods. This decision required Black students to attend schools in dilapidated buildings outside of their catchment areas. Additionally, the board mandated that White students residing in the south side of the city were to be bused to the north side of town. White families protested this decision, and the board rescinded this decision for only the White students. In protest, the Coalition of Concerned Parents filed a class action lawsuit, *Liddell v. Board of Education of the City of St. Louis, Missouri*, against SLPS. During this case, SLPS argued that they should not be held responsible for de facto segregation. In 1978, the 8th Circuit Court cited *Swann v. Charlotte-Mecklenburg* and held that the City of St. Louis was responsible and needed to take steps to create an integrated school system.

In an attempt to meet the mandates set forth by the 8th Circuit Court in St. Louis City, public schools faced another problem. By 1980, only 23% of students enrolled in schools in the City of St. Louis were White (Wells & Crain, 1999). As a result, a judicial decision was made in 1980 that ordered a second phase of desegregation between the schools in the City of St. Louis and St. Louis County. During the first year of this program, 125 Black students residing in the city were bused to participating schools in the county (La Pierre, 1987). This desegregation plan offered Black students living in the city the opportunity to transfer to 16 school districts located in St. Louis County. As a result of segregated catchment areas, these specific school districts in the county had the smallest number of Black students in attendance. According to Wells and
Crain (1999), in 1996, the state of Missouri spent $134 million on the St. Louis desegregation plan. As a result of these efforts, during the 1995-1996 school year,

12,700 black students from the city were enrolled in suburban schools, and almost 1,500 white students from the suburbs attended magnet schools in the city of St. Louis. The public schools of the St. Louis metropolitan area were far more desegregated than those of Detroit, Atlanta, Chicago, or most any other city. (Wells & Crain, 1999, p. 105)

As time progressed, the funding associated with this desegregation plan became heavily debated and ultimately led to the dissolution of the program. In 1999, an agreement was reached that ended the court ordered desegregation of SLPS. However, the settlement agreement associated with this decision required that the transfer program itself remained intact. Although this program remained, school districts in the county were no longer required to enroll the same percentage of transfer students each year. As a result, districts began reducing the number of seats available to transfer students by roughly 5% each year. Additionally, this resolution dictated that instead of the state of Missouri paying money to support the full scope of the transfer program, the state would pay approximately $96 million to SLPS for the purpose of dissolving its debt as a means to provide a quality education to students residing in the City of St. Louis (Crouch, 2011).

St. Louis continued its struggle to provide equal educational opportunities to all students as the creation of a transfer law dictated a new focus. In 1993, a law was written that provided students attending an unaccredited school district the opportunity to transfer to another school outside of their catchment area. This law mandated that the failing school district pay the tuition bill of the accepting school district as well as provide free transportation to another school in the same or adjoining county (Cooperman, 2014). The impact of this legislative decision is still being heavily debated in the St. Louis area.
Demographic Change

The conventional pattern of growth dictated the rapid residential development of St. Louis County. The various communities that comprise St. Louis County are referred to by their geographical location. These classifications include South St. Louis County, Central-West St. Louis County, and North St. Louis County. South St. Louis County houses many middle-class White residents who migrated from the city’s south side. The central-west corridor of St. Louis County is the most affluent part of town. Residents who live in this area are, on average, the wealthiest and most educated in the St. Louis County area. Additionally, the most desirable public schools are located in this area. North St. Louis County consists of the most predominantly Black suburbs. These suburbs border the northwestern part of the City of St. Louis (Wells & Crain, 1999).

In the decades surrounding World War II, subdivisions were created in various communities in North St. Louis County, as land was cheap and inhabitants were sparse. This suburbanization pattern created a landscape in North St. Louis County consisting of ranch style homes because they were cost-effective to build. During this same time frame, the city of St. Louis experienced a need for additional funding because the city’s tax base was moving to the county. As a result, the city accepted money from the federal government to build a large-scale housing project called Pruitt-Igoe (Wells & Crain, 1999). This housing project was constructed in the early 1950s in the northwest part of the City of St. Louis and consisted of 33 buildings containing 2,762 apartments. The Pruitt-Igoe development was built in this area because the majority of Blacks remained on the north side of the city where they resided in communities that were over 100 years old, which resulted from old farming communities where Blacks worked as
sharecroppers, hired farmhands, or house servants (Wells & Crain, 1999). As time progressed, the housing units became uninhabitable for a multitude of reasons and were leveled in 1976.

During a 1970 Civil Rights hearing on segregation in St. Louis, it was noted that “the suburbs are almost all white, while the city is almost 50% black. Within the city, two separate cities exist, one white and one black” (Wells & Crain, 1999, p. 45). In furthering this racial and socioeconomic stratification during this time frame, St. Louis County offered no public housing opportunities in 1970, whereas the City of St. Louis had 30,000 people living in public housing (Orfield, 1981). In the late 1960s, a developer attempted to build a public housing project in a city called Black Jack, which was located in an unincorporated area of North St. Louis County. In an attempt to block the development, the town approved an ordinance that prevented the construction of multiple-family dwellings (Hampel, 2012; Wells & Crain, 1999). The developer sued the city. In 1975, the 8th Circuit Court of Appeals struck down Black Jack’s zoning ordinance by ruling it violated the Fair Housing Act set forth by the Civil Rights Act of 1968. The decision opened the area of North St. Louis County to public housing.

During the 1970s, the Countryside Townhomes were built in a town called Spanish Lake. At the time in which these townhomes were built, this complex was the biggest Section 8 development in North St. Louis County. Spanish Lake is seven miles away from the City of St. Louis. According to Hampel (2012), in 1990, 17% of Spanish Lake’s residents were Black, whereas in 2010, 77% of the population residing in this area was Black. When discussing the demographic change of Spanish Lake, State Senator Tim Green, a democrat residing in the community, stated “a lot of people who left here for St. Charles County did so because they wanted something more than a 600-square-foot house with one bathroom. They wanted four-bedroom, four-bath homes with big yards and two- or three-car garages” (Hampel, 2012, para.
Due to several contributing factors, the inner-ring suburban communities located on the north side of St. Louis County have been transformed into segregated Black suburbs over the past 25 years (Wells & Crain, 1999).

Another county that has experienced socioeconomic and demographic change is St. Charles County, which borders the west side of North St. Louis County. The Missouri River acts as the boundary line between these two communities. For the past 30 years, St. Charles County has taken deliberate action to increase corporate development in the area. In the late 1960s, a 300-acre industrial park was created in the Wentzille area to attract new investments to the area (Gordon, 2008). This development eventually led to General Motors moving its plant to this area. In recent years, MasterCard has built a corporate office in St. Charles County. The influx of corporations to this area, in conjunction with other influences, has contributed to a housing boom in St. Charles County. According to the 1990 Census, demographic data reported that 49,591 people resided in St. Charles County. According to the 2010 Census, the population had risen to 360,485 individuals who now reside in this area (Missouri Census Data Center [MCDC], n.d.-b).

**Selecting St. Louis**

Spatial assimilation reflects the idea that differences in SES among racial and ethnic minority groups shape patterns of segregation (Charles, 2003). In understanding how change and patterns of segregation affect schools, it is important to understand that most Americans live in suburban communities (Frankenberg & Orfield, 2012). Across the country, statistics show high levels of segregation exist for Latino and Black students as they reside in suburban communities that border large cities. In response to this demographic change, a pattern has unfolded where White populations are moving to the outermost suburban communities (Frankenberg & Orfield, 2012). These demographic changes have occurred in St. Louis as well as in many other cities.
such as Chicago and Philadelphia, and are setting precedence as they are altering the makeup of inner-ring suburbs across the country (Belkin & Dolan, 2014).

According to Gordon (2008), in the 1970s, Blacks started to migrate from the city of St. Louis to older inner-ring suburbs located in North St. Louis County, as these communities allowed apartment buildings because they were built before restrictive zoning tactics were implemented. As Blacks began to move into North St. Louis County, a pattern began in the 1980s where White families began to flee these communities. Figure 2 illustrates this demographic change. The map in Figure 2 depicts 1990, 2000, and 2010 census data in a visual format for the purpose of understanding how these migratory patterns relate to the regions of the City of St. Louis, St. Louis County, North St. Louis County, and St. Charles County.

Housing trends can profoundly change the demographics and the resources of school districts. Additionally, the reputation of school districts can affect housing choices and neighborhoods. As a result, the demographic change occurring in St. Louis is an instrument for understanding how demographic shifts occurring within suburban communities across the country relates to the educational opportunities provided to minority students.

The focus of this study was on the St. Louis area to provide insight into a much broader dialogue about the relationship between residential income segregation and schools. First, the suburban demographics of St. Louis resemble those of many midsized metropolitan areas in the United States. A pattern in St. Louis has manifested where Whites have chosen to segregate themselves in various suburban communities. Second, St. Louis was chosen because several well-known researchers have conducted studies in the St. Louis area, as it provides a conduit for understanding the segregation, educational inequalities, and unequal boundaries lines that are affecting cites across the country.
For example, Wells and Crain (1999) conducted research exclusively in St. Louis for their book, *Stepping Over the Color Line: African-American Students in White Suburban Schools*. According to Wells and Crain, they selected St. Louis for their research study because the busing program across city–county lines illustrated how difficult it was for the educational system itself to be the sole instrument for repairing years of segregation and discrimination. Gordon, a professor at the University of Iowa, chose St. Louis for his 2008 book entitled *Mapping Decline: St. Louis and the Fate of the American City*, as it personified the pattern of White flight occurring across the country. Gordon (2008) contended that St. Louis is one of the most segregated cities in the United States and is setting the stage for a string of major legal challenges to local discrimination (Kovarik, 2008). Masse and Denton, in their book entitled *American Apartheid: Segregation and the Making of the Underclass*, focused on many cities in the United States, including St. Louis, as it has a long history of creating laws and practices that reinforced segregation and helped to create the underclass population described in the book (Kovarik, 2008).

Finally, this researcher chose to focus on St. Louis because the happenings occurring in Ferguson, Missouri, represent the economic and political divisions that typify the racial tensions that are occurring across the country. The current events occurring in Ferguson, Missouri, with regard to the shooting of Michael Brown represent economic and political divisions that typify racial tensions occurring across the country. Ferguson is a municipality located in North St. Louis County. In 1980, the town of Ferguson was 85% White and 14% Black; by 2010, Ferguson was 29% White and 69% Black. Two-thirds of the town’s 21,000 residents are now African American (Belkin & Dolan, 2014). During the time of the Michael Brown incident, the city council comprised five White members and one Black member. Clarissa Rile Hayward, a
professor at Washington University in St. Louis, suggested that Whites have remained in power in Ferguson because voter turnout among Blacks newly residing in the area is low. Whites residing in this community have lived in the neighborhood for a long time and typically are more active in the political arena (Belkin & Dolan, 2014).

Another issue of contention within Ferguson surrounds the fact that only three of the 53 police officers working in Ferguson at the time of the Michael Brown incident were Black. Prior to the incident involving the death of Michael Brown, the ArchCity Defenders, a legal aid organization representing indigent defendants in the St. Louis metropolitan area, spent 5 years analyzing traffic violations for various municipalities in the St. Louis area. A week after the shooting of Michael Brown, the ArchCity Defenders published a paper entitled Municipal Courts White Paper. In 2013, they determined that the city of Ferguson issued 32,975 arrest warrants for nonviolent offenses, consisting of mostly driving violations, in a city with a population of 21,135 residents. These violations provided the city of Ferguson with $2.6 million in revenue, which is the city’s second-largest source of income (T. Harvey, McAnnar, Voss, Conn, Janda, & Keskey, 2014). Additionally, the paper highlighted that in Ferguson, 86% of vehicle stops:

- Involved a black motorist, although blacks make up just 67 percent of the population. In addition, blacks stopped in Ferguson are almost twice as likely as whites to be searched (12.1 percent versus 6.9 percent) and twice as likely to be arrested (10.4 percent versus 5.2 percent). (T. Harvey et al., 2014, p. 14)

Furthermore, the ArchCity Defenders found that in Ferguson, police officers discovered contraband 21.7% of the time when searching Black individuals. Despite the fact that Whites were pulled over less in Ferguson, contraband was recovered 34% of the time from White individuals. The happenings in Ferguson helped to highlight why St. Louis was chosen for this research study. Ferguson and North St. Louis County represent many integrated communities
across the country that are vulnerable to a certain type of instability based on expectations, tolerance, class, and the pace of a city’s demographic change (Belkin & Dolan, 2014).

**Selected Communities**

Based on the information provided by Wells and Crain (1999), the identified population of this study was schools located in North St. Louis County and St. Charles County, as several regions within these communities have been described as having experienced demographic change. North St. Louis County consists of the most predominantly Black suburbs, and St. Charles County borders the west side of North St. Louis County. The Missouri River acts as the boundary line between these two communities. Within North St. Louis County, the current study included five communities: Florissant, Hazelwood, Bridgeton, Maryland Heights, and Overland. All of the communities except for Overland are considered second ring suburbs; Overland is defined as a first ring suburb. First ring suburbs are defined as municipalities that border the limits of a metropolitan area, while second ring suburbs denote towns that are twice removed from the city boundary lines as they border the precincts of the first suburban community (Frankenberg & Orfield, 2012). With regard to communities located in St. Charles County, the current study included the municipalities of St. Peters, O’Fallon, and Wentzville. These communities are defined as third ring suburbs as they have experienced a considerable amount of growth in the past 20 years as highlighted by U.S. Census Bureau data. Third ring suburbs describe a community that is twice removed from the city boundary lines as it shares the boundaries of a second ring suburban community (Frankenberg & Orfield, 2012).

To illustrate the various trends occurring in the chosen school districts, the researcher incorporated maps generated from the Census Reporter (n.d.-a, n.d.-b, n.d.-c) that depict census data in a visual format. The maps depict data associated with racial demographics, mean
household income, and the value of the homes in these communities. When population maps were reviewed, this researcher explored the racial ethnicities of exclusively White and Black populations as they represented the largest demographic fraction in these communities. Figure 3 presents data from the 1990, 2000, and 2010 U.S. Census Bureau for the purpose of highlighting pertinent information to provide an overview and comparison of racial composition, property values, and income levels as these were the variables explored in this study.

By studying residential income segregation through an analysis of school districts and boundary lines, the goal of this study was to understand how it relates to the behaviors of schools as reflected in levels of services and educational outcomes. To accomplish this goal, this researcher conducted a mixed methods study. The focus of the quantitative portion of this study was on census data, school demographic data, and outcome data to help illustrate the relationship between residential income segregation and the level of services provided by the school district. Additionally, the quantitative data analysis determined whether there was a correlation between residential income segregation and student performance outcomes. The qualitative portion of the study was conducted to explore how real estate agents, school board members, and school building administrators have responded and adjusted to meet the preferences and needs of various communities that have experienced demographic change. The following chapter outlines the methodology for this research study by reviewing the principles employed to complete this analysis. Chapter 4 defines the procedures and processes associated with conducting the research necessary to complete this mixed methods study.
CHAPTER 4:
METHODOLOGY

The focus of Chapter 3 was on the selection of St. Louis, Missouri, as the site for this research study because the city itself provides insight into a much broader dialogue about the relationship between residential income segregation and schools. The previous chapter outlined Missouri’s attempts to provide equal educational opportunities to all students, the demographic change that has occurred within St. Louis, and the specific communities and school districts that were selected for this study. Understanding the history of St. Louis is a critical component to conceptualizing the methodology associated with this research study. In an attempt to explore the pattern of residential income segregation occurring in St. Louis in relation to the behaviors of schools over time, this study involved the use of an exploratory mixed methods approach. This methodological approach was ideal as it allowed the researcher to collect and analyze both quantitative and qualitative data as a means to further explain the relationship between these components.

Exploratory Mixed Methods Research Design

Residential income segregation is an intricate social issue that requires multiple investigative tools because the cause of the problem itself is multifaceted (Rogers, 2008). The social phenomenon of this complex issue is unable to be understood through the exclusive use of a quantitative or a qualitative approach. A mixed methods approach provided a more complete and comprehensive understanding of the relationship between residential income segregation and the level of services provided by the school district. In an attempt to investigate the research questions of this study, the decision was made to utilize an exploratory methodology as it
allowed the researcher to expand on the quantitative findings by conducting qualitative interviews for the purpose of obtaining a deeper understanding.

The implementation of this methodology dictated that the qualitative data collected focused on further explaining the mechanisms underlying the quantitative results. This study involved quantitative data analysis to assess possible trends between residential income segregation, the level of services provided by the school district, and student performance outcomes over time. The qualitative data analysis focused on interviewing real estate agents, school board members, and school building administrators who were located in communities that had experienced demographic change. The purpose of these interviews was to understand why the changes identified through quantitative analysis occurred as well as understand how these stakeholders adjusted to meet the preferences and needs of a changing community.

The first phase of this study involved a quantitative approach using data collected from the U.S. Census Bureau and the DESE for the years of 1990, 1995, 1996, 1999, 2000, 2005, 2010, and 2013. Additionally, data were collected from each high school’s individual webpage. The goal of the quantitative phase was to identify potential trends in the selected variables that depicted how school resources and educational outcomes were affected by residential income segregation. In the second phase of this study, a qualitative approach was utilized to collect data through individual semi-structured interviews to help further explore this relationship. The purpose of the qualitative portion of the study was to identify what changes have occurred and continue to occur in districts as residential housing patterns change.
Phase 1: Quantitative Methodology

Target Population and Sample

Based on the information provided by Wells and Crain (1999), the researcher chose Campbell School District as the initial focal point of this research study because the catchment area for this school district was the first community in St. Louis County to offer Section 8 housing to families. Additional high schools selected for this study were adjacent to Campbell School District and had experienced a pattern of demographic changes within the time frame of 1995 to 2013. The identified population of this study was schools located in North St. Louis County and St. Charles County. Within the counties, six school districts were selected that had either experienced demographic change or population growth for the years examined in the study. The selected districts were the target population of the study.

This study included four school districts in St. Louis County: the Campbell School District, the Forsyth School District, the Fulton School District, and the Wilson School District. The first district selected for this study was the Campbell School District, a K-12 district that covers 78 square miles and is located in North St. Louis County. This district includes three high schools. According to the DESE (n.d.), the minority population of this district in 1995 was 35%; however, by 2013, that number had grown such that 72% of the district’s population was minority students. Although comparisons from 1995 to 2013 were not possible for free and reduced lunch (FRL) data, 57% of the student population at this district qualified for the FRL program in 2013. The average expenditure per student (XPS) rate in 2013 was $10,430 for the Campbell School District (DESE, n.d.). According to the 1990 Census, the catchment area for this district consisted of 18% minority residents. However, by the 2010 Census, the percentage of minority residents had increased to 53% (DESE, n.d.).
The second school district examined was the Forsyth School District, a K-12 district that covers 27 square miles. According to the DESE, the minority population of this district in 1995 was 24.9%. In 2013, 39.3% of the district’s population was minority students and 47.2% of its student population qualified for the FRL program (DESE, n.d.). There is one high school within the district and it was ranked as one of the best high schools by *U.S. News and World Report* in 2013. The average XPS rate for the Forsyth School District in 2013 was $14,406, the highest for any district in this study. According to the 1990 Census, the catchment area for this district consisted of 6% minority residents. The 2010 Census classified the catchment area as having a minority population of 23% (DESE, n.d.).

The third school district examined was the Fulton School District, a K-12 district that covers 10 miles and contains one high school. The minority population of this district in 1995 was 26.67%. However, in 2013, 53.6% of the district’s population was minority students (DESE, n.d.). In 2013, 77.1% of the students attending this district qualified for FRL status. Additionally, the average XPS rate at Fulton School District was $9,609 in 2013. According to the 1990 Census, the catchment area for this district consisted of 11% minority residents. The 2010 Census classified the catchment area as having a minority population of 32% (DESE, n.d.).

The fourth district examined was the Wilson School District. This large district serves eight municipalities and includes four high schools. According to the DESE, the minority population of this district in 1995 was 18.87%. In 2013, 26.3% of the district’s population was minority students. According to the 1990 Census, the catchment area for this district consisted of 6% minority residents. The 2010 Census classified the catchment area as having a minority population of 16% (DESE, n.d.). Throughout the entire district, 20.3% of the student population qualified for FRL status in 2013. The average XPS at this school district for 2013 was $12,120.
Only one high school within this district met the demographic change criteria for inclusion in this study. The minority population of this high school in 1995 was 25%. In 2013, 38% of the high school’s population was minority students and 24.9% of its population qualified for FRL status (DESE, n.d.). In understanding the demographic change of this high school, it is important to know that in 1995 this specific high school was participating in the busing program. The percentage of minorities for 1995 did include students bussed from the city. Because the busing program ended in the late 1990s, the minority population for 2013 reflected individuals living in the community.

Additionally, this study included two school districts in St. Charles County: the Whitfield School District and the Rossman School District. These two school districts were selected because of their growth in population as well as their geographical location. Whitfield School District is a K-12 district that covers roughly 150 miles and contains three high schools. According to the U.S. Census Bureau, the catchment area for this district consisted of 75,386 residents and 4.2% of this population was minority in 1990 (DESE, n.d.). However, by 2010, this district had 113,553 residents residing in its catchment area and 8% of this population was classified as minority (MCDC, n.d.-b). In 2013, 7.3% of the district’s population was minority students. The average XPS for the Whitfield School District in 2013 was $9,830 and 18.6% of the student population qualified for the FRL program in 2013 (DESE, n.d.).

The final school district examined was the Rossman School District, a K-12 district that covers roughly 122 miles and contains four high schools. According to the U.S. Census Bureau, the catchment area for this district consisted of 53,355 residents and 3.2% of this population was minority in 1990. In 2010, this district had 111,105 residents residing in its catchment area and 6.8% of this population was classified as minority (MCDC, n.d.-b). The population of this area
doubled over a 20 year time period. In 2013, 5.5% of the district’s population was minority students. The average XPS for the Rossman School District is $9,783 and 22.7% of the student population qualified to receive FRL in 2013 (DESE, n.d.).

Thirteen high schools within the six districts were selected for this research study (Creswell, 2008). St. Louis County comprises 23 school districts while St. Charles County has six school districts. This study omitted 20 districts from St. Louis County and four districts from St. Charles County because they were either not adjacent to the Campbell School District or they did not enable inferences about the nature of demographic change for the time period reviewed in the study. Table 1 outlines school characteristic data from the DESE for 2013 for the 13 high schools selected for this study (See Appendix D). Table 2 provides a depiction of the selected high schools at a given point in time from 2013. The data examined in the table include student demographic information, number of FRL students, graduation rate, average expenditure per student, and ACT results.

**Data Sources**

Information from the U.S. Census Bureau was gathered from the MCDC website (http://mcdc.missouri.edu/). This center is operated by the Office of Social and Economic Data Analysis (OSEDA) at the University of Missouri, which has a reciprocal agreement with the U.S. Bureau of the Census and the Office of the Secretary of the State to ensure accurate information is being reported. One aim of this department is to provide resources and tools to gain further understanding about the data provided by the U.S. Census Bureau. OSEDA outlines census data that are specifically tailored to the catchment areas of various school districts. From this department, U.S. Census Bureau data on residential income segregation were gathered for the years of 1990, 2000, and 2010. The data encompassed information pertaining to ethnicity,
household income, and home prices of the catchment areas for the school districts examined in the study.

Missouri Department of Education (DESE) data were obtained through an online request. Following the online submission of the application, the principal investigator was asked to provide feedback regarding the intended use of the data. The DESE then provided a spreadsheet that contained enrollment numbers, demographic information, FRL, graduation percentage, graduates attending 4-year schools, graduates attending 2-year schools, graduates entering the workforce, ACT above the national average, ACT composite scores, ACT English scores, ACT math scores, ACT reading scores, and ACT science scores from the years 1999, 2000, 2005, 2010, and 2013 for the high schools examined in this study. Additionally, the researcher obtained data regarding XPS and AP courses. The DESE started collecting FRL data on students in 1996 and ACT data in 1999. Furthermore, the DESE did not start gathering information on AP courses until 2003. As a result, this study included AP data only for the 2012-2013 school year for the purpose of providing a current reflection of what was occurring within the various high schools.

Information regarding the types of services and programs offered at each individual high school and district was collected by visiting their specific websites. Historical data regarding the types of services and programs being offered to students do not exist as the DESE does not collect this information. As a result, obtaining information regarding these variables dictated a data collection process that focused on exploring opportunities currently being provided to students rather than exploring records over a period of time.

**Variables**

The variables of income levels, housing segregation, and racial segregation functioned as the independent variables in this study as they reflect the residential income segregation patterns
that exist in the districts (Krathwohl, 1993). Patterns of segregation have been measured in a variety of ways, but the most common calculation is the Index of Dissimilarity (ID; Jargowsky, 2014). The ID is the most commonly used measure of segregation between two groups as it reflects their relative distributions across neighborhoods within a city or metropolitan area. In attempting to assess this trend, the researcher utilized the framework set forth by Jargowsky (2014) to measure segregation by race and class. Jargowsky measured residential segregation with the ID equation. In order to complete this calculation, Jargowsky broke down the variables of income and household income into various categories. For example, he classified income into the categories of poor and nonpoor and then calculated the ID between them. Next, Jargowsky divided households into four categories of low-income, working-class, middle-class, and affluent for the purpose of calculating the ID for each group. The categorical variables associated with this calculation provide the necessary data to assess whether a possible correlation exists.

Further, applying the ID calculation to disparate measures like income, housing price, ethnicity, and FRL rates transforms variables into a common metric (i.e., ratio) for meaningful comparison.

In this study the researcher used the ID to simplify a complex set of variables for the 13 chosen schools to generate useful comparisons. The ID equation is shown below:

\[
D = 0.5 \sum \left| \frac{N_{ia}}{N_a} - \frac{N_{ib}}{N_b} \right|
\]

The ID is equal to “one-half the absolute value (ABS), of the difference between the ratios of local and general populations” (Lawhorn-Sanchez, 2014, p. 1). For example, when applying the ID to racial segregation, the number of non-White students in a particular school \(N_{ia}\) is divided by the total number of non-White individuals residing in the catchment area of that school district \(N_a\). Next, the number of White students in a particular school \(N_{ib}\) is divided by the
total number of White individuals residing in the catchment area of that school district \((N_b)\). The absolute value of the difference of these two ratios is multiplied by .5 to obtain a final ID score. The ID outcome outlines “the percentage of a group’s population that would have to change residences in order to have each neighborhood equal the overall population” (Lawhorn-Sanchez, 2014, p. 1). The values for the denominator differed depending on which data were used. For data collected from school district websites, the total numbers were for the districts. For census data, total numbers were for the county.

**Independent variables – Levels of segregation.** The researcher utilized the ID equation to calculate dissimilarities between the variables of income segregation, housing segregation, and racial segregation among the districts selected for this study. According to Jargowsky (2014), utilization of the ID equation dictates that all variables must be categorized for the purpose of remaining as a ratio variable, not as a categorical variable. While some information is lost in converting a continuous measure to a categorical measure, the creation of categories helps to explore the relationship between variables. This process allowed the researcher to show how the variables of income segregation, housing segregation, and racial segregation are related as it creates consistent units of measurement. The coding of these categories is described below.

**Income segregation.** Income segregation was measured in two ways to reflect the amount of segregation within the district. First, the researcher examined FRL data obtained from the DESE. For the ID equation to be completed, the researcher collected FRL data for the 13 high schools selected for this study as well as for the school districts for the years of 1996, 2000, 2005, 2010, and 2013. FRL was coded into the groups of Yes, students who qualified for FRL, and No, students who did not qualify for FRL.
Second, the researcher explored the average household income designated by the U.S. Census Bureau for the years of 1990, 2000, and 2010 as it pertained to the catchment area of each designated school district as well as the county in which the school district was located. The researcher utilized the 2010 poverty line defined by the federal government to code income into three levels: low income (2 times the poverty line), middle income, and high income (4 times the poverty line). The researcher categorized low income as individuals earning $44,630 or below. Individuals earning $44,631 to $89,259 represented the middle income group. Individuals earning $89,260 or above were considered to be in the high income group for this study.

**Housing segregation.** Housing segregation was measured by the median home value obtained from the U.S. Census Bureau for the years of 1990, 2000, and 2010 as it focused on the catchment area of each school district as well as the county in which the school district was located. For the purpose of calculating the ID, this variable was coded into the two groups of $100,000 or less and $100,000 or above.

**Racial segregation.** Finally, the researcher examined racial segregation. The researcher collected demographic data from the DESE pertaining to the 13 high schools selected for this study. Additionally, demographic data for each school district’s catchment area were obtained. The data collection for both of the categories covered the years of 1995, 2000, 2005, 2010, and 2013. This variable was categorized into two groups: White and Black.

**Dependent variables – Level of services and educational outcomes.** The dependent variables reflected the level of services provided to students and the educational outcomes of students within the districts. These data were obtained from the DESE and the individual school districts.
**Level of services.** Level of services provided to students was measured using the following variables: expenditure per student (XPS) at each school district, the number of AP courses, the number of athletic opportunities, and the number of extracurricular opportunities. The XPS data were obtained from the DESE for each school district for the years of 2000, 2005, 2010, 2013, and 2014. This was the amount in dollars spent per student in a given year. The total number of AP courses was obtained for each school from the DESE for the 2013 school year only. The number of athletic opportunities and the number of extracurricular opportunities were collected for the 2014 school year by visiting school and district websites.

**Educational outcomes.** Educational outcomes of students were measured using ACT composite scores, the number of graduates attending a 4-year school, and the number of graduates entering the workforce from each specific high school. Data associated with these three variables were obtained from the DESE. ACT data were gathered for 1999, 2000, 2005, 2010, and 2013 and included the percentage of students above the national average as well as the average composite score of each high school. Data for the percentage of students graduating, total number of students attending a 4-year school, and total number of students entering the workforce after graduation for each specific high school were obtained for the years of 1995, 2000, 2005, 2010, and 2013. Table 3 provides information for all of the variables examined by the research questions of the study. Additionally, the table includes the years for which all data were available.

**Data Analysis and Interpretation**

The focus of RQ1 involved describing residential income segregation through the utilization of the ID equation for the school districts and high schools selected for this study. In an attempt to describe residential income segregation, this researcher focused on describing the
pattern of segregation for each district for each variable of income segregation, housing segregation, and race segregation. When conducting the data analysis associated with RQ1, this study was modeled on the work of Jargowsky to assess residential income segregation as defined by FRL numbers, average household income, median home value, and demographic data. Utilization of the ID equation requires that data used in the denominator to reflect the values for a larger area. As a result, FRL calculations involved high school level data and district level catchment data. Calculations associated with the average household income required data from the school district as well as from the county in which the district was located. Housing segregation associated with the median home values incorporated data from the school districts as well as from the county in which the school districts were located. Racial segregation as it pertained to demographic data included information from individual high schools as well as from the various school districts. Calculations were completed for every year examined in the study, which resulted in every high school receiving a single sum score that measured their level of disparity. An ID score of 1 denoted complete segregation and an ID score of 0 described perfect integration. In order to describe a pattern of segregation for each variable, the researcher incorporated bar charts for each high school to show the pattern of ID across each of the years. Next in addressing RQ1, this researcher utilized Pearson’s correlations to determine the possible relationships between the varying levels of ID with the level of services provided at each high school (i.e., XPS at each school district, the number of AP courses, the number of athletic opportunities, and the number of extracurricular opportunities).

In addressing RQ2, the researcher utilized Pearson’s correlations to determine the possible relationships between the varying levels of ID ascertained in RQ1 to the educational outcomes achieved at each high school (i.e., ACT composite scores, the number of graduates
attending a 4-year school, and the number of graduates entering the workforce). Correlations were conducted for all years in which data were available. Separate correlations were conducted for every year. Correlations between IDs and the level of services and education outcomes were conducted for data collected within the same year and in any subsequent year. Linear regression between each independent and dependent variable was conducted. In these calculations, an ID value equal to 1 reflected complete segregation, while a value equal to 0 reflected complete integration. Therefore, the interpretation of the data would dictate that a negative correlation would reflect as the ID increased toward 1 (became more segregated) fewer level of services were provided to students.

**Theory**

The tenets advanced in PCT suggest that education as a public good is in fact being consumed as a private good, as individuals are able to utilize the exit option by “voting with their feet” to select their preferred provider (Hirschman, 1970; Tiebout, 1956). When individuals “vote with their feet,” they assume the role of the consumer and an assumption is made that individuals are primarily concerned with their own self-interests (Niskanen, 1971). The argument is that consumers with the financial means will sort themselves into “preference clusters,” thereby creating homogenous populations defined by common interests (Chubb & Moe, 1990). PC theorists suggest that this market reality where individuals become the consumer and are able to pursue their own preferences is advantageous as they are able to dictate their own reality (Lubienski, 2006). Chubb and Moe (1988) stated that “this process of selection promotes a match between what educational consumers want and what their schools supply” (p. 1068). In Friedman’s (1955) idea of education, parents are able to choose an educational landscape that aligns with their personal beliefs. Scholars theorize that “white and wealthier students will seek
to maintain their social status by distancing themselves from groups they perceive to be of lower standing” (Sohoni & Saporito, 2009, p. 570). Lareau and Goyette (2014) suggested that residential income segregation leads to greater inequality in school resources and educational outcomes. In aligning with the neoliberal agenda, the federal government has continued to reduce its influence in education since Brown v. Board of Education. As a result, the impact of the individual as a consumer has increased.

Limitations

According to Creswell (2008), researchers must address the reliability of the data utilized in a study. For this study, validity refers to the consistency with which the U.S. Census Bureau, DESE, and individual high schools measured what they intended to analyze. The U.S. Census Bureau utilized statistical sampling for the purpose selecting a subset of individuals from within a statistical population to estimate characteristics of the whole population. When utilizing deviations of surveys to estimate true values, it becomes important to address the impact of non-sampling errors. Non-sampling errors occur when people complete a survey they do not understand with specific questions or intentionally choose to answer a question inaccurately. Additionally, non-sampling errors occur when specific sample groupings associated with the target population are accidentally omitted. These factors could potentially undermine the reliability of the census data, but to an unknown degree.

When reviewing the validity of the data gathered by the DESE as well as the data collected at the high school level, one must address the inter-rater reliability of the measurements used to collect data. Inter-rater reliability addresses the degree of agreement among raters, in this case individual school districts. Parent completion of enrollment forms may have introduced inter-rater reliability problems into the DESE data in several ways. For example, the districts in
this study adopted coding of “bi-racial” in different years, potentially creating differences in recording racial data between districts. Parents may also have introduced reliability problems through response bias, such as reporting “two or more races” when not strictly appropriate. Further, districts may have introduced reliability problems by choosing different criteria to categorize various activities (used in measuring “level of services” in this study); for example, one district may classify cheerleading as a sport while another classifies it as an extracurricular activity. Also, the timeline used for updating information on websites to ensure the materials displayed are accurate and current appeared to have no commonly accepted standard across the various websites accessed for data collection. Inconsistency in the data reflected on websites may have existed among the high schools selected for this study.

Another reliability issue associated with the data collected from the DESE surrounded the state’s decision to utilize a different equation in 2007 to calculate XPS. In 2007, Missouri started to measure XPS using the average daily attendance rate instead of the eligible pupil rate. The eligible pupil rate includes the average daily attendance rate plus the doubled number of students attending summer school. After contacting the DESE, it was determined unfeasible to remove the doubled number of students attending summer school for the purpose of creating consistency. It is important to note that the equation utilized to assess the value of the property for the purpose of obtaining taxes for the school districts remained the same for the years explored in the research study.

**Phase 2: Qualitative Methodology**

The second component of this study encompassed the qualitative phase of the research. This methodology was used to address RQ3 and focused on understanding what occurs within districts and schools as they adjust the level of goods provided as a means to meet the desires of
the community. The purpose of this portion of the research was to: (a) gain information about influential factors that guide people’s decisions when purchasing a home, (b) ascertain the relationship between the socioeconomic composition of the community and the decision-making process occurring within the high school, and (c) discover what policies and procedures have occurred at the district level in response to the pattern of residential income segregation. To answer these questions, the researcher implemented a structure of convenience sampling by visiting real estate offices in North St. Louis County and St. Charles County. Additionally, the researcher contacted every superintendent of each identified school district for the purpose of determining high school administrators and school board members who were willing to participate in the study. Through this process, the researcher completed interviews with three real estate agents, four building administrators, and two school board members. Interviews were not conducted at all of the 13 high schools or six school districts reviewed in the study.

With regard to the participation rate of this study, the researcher visited three real estate offices in North St. Louis County and three real estate offices in St. Charles County. One individual from real estate office in St. Louis County and two real estate offices in St. Charles County expressed a willingness to participate in the study. Additionally, the participation rate of the schools explored in the study varied from district to district. Of the six school districts examined in the study, two superintendents denied the researcher’s request to conduct research and prohibited interviews with building administrators and school board members. Superintendents in two other school districts approved the request to conduct research and contacted both building administrators and school board members about their willingness to participate in the study. Despite the superintendents approaching prospective participants, no individual expressed a willingness to participate in the study within these two districts. The
superintendent of the fifth school district explored in the study approved the request to conduct research and contacted both building administrators and school board members about their willingness to participate in the study. In this district, only building administrators expressed a willingness to participate in the study. School board members were not willing to be interviewed. Finally, the superintendent of the sixth school district explored in this study approved the researcher’s request to conduct research and contacted both building administrators and school board members about their willingness to participate in the study. In this district, both building administrators and school board members expressed a willingness to be interviewed for the study.

**Target Population and Sampling**

The population framework of this study was schools located in North St. Louis County and St. Charles County as these communities were described as having experienced demographic change (Wells & Crain, 1999). The target population was the six school districts examined in the quantitative phase of the research. Additionally, the sample component of this methodology encompassed the 13 high schools previously examined in the study. When a sampling plan is developed, researchers select a small number of representative samples that will enable reliable inferences to be made about the nature of the population affected by change (Krathwohl, 1993). In addressing this notion, the representative sample of this study included real estate agents who both worked and resided in either North St. Louis County or St. Charles County, building administrators at each high school examined in the study, and Board of Education members of the six selected school districts.

Through the process of convenience sampling, the researcher selected real estate offices within these two areas and visited each office for the purpose of finding agents who were willing
to participate in the study. A semi-structured interview protocol was utilized to conduct 30 to 40 minute interviews for the purpose of gathering data (See Appendix B). Furthermore, through the process of convenience sampling, every superintendent of each identified school district was contacted to submit a request to conduct research. In the initial request to conduct research, the researcher asked to interview any willing high school administrators and any willing school board members. After communicating with the willing participants who agreed to an interview (See Appendix B & Appendix C), a semi-structured interview procedure was utilized to collect data as a means to further understand certain external and internal factors.

**Instrument, Reliability, Validity**

In a qualitative study, researchers become a key component of the process as they are charged with the task of gathering information (Creswell, 2008). The role of the researcher was further enhanced as the researcher generated the instruments for collecting the data. Before interviewing participants, specific questions were generated to create an interview protocol in order to organize the conversations. The questions themselves became the instrument for this study as they guided the data collection process. Individual interviews were either conducted in a face-to-face manner or over the telephone. The interview protocols included 10 to 12 open-ended questions. The content of the protocol questions was influenced by the relationships between the participant group and their connection to the school districts. Debriefing with the participants was conducted to obtain information on the clarity of the interview questions and their relevance to the study aim. The participants received the interview questions prior to the scheduled calling time and were informed that the interview would be tape-recorded and transcribed verbatim. The data collection and analysis utilized in this study involved coding, describing, and developing the data into a variety of themes for the purpose of generating an understanding of what occurred
within a district or school as they adjusted the level of goods provided to meet the desires of the community.

To ensure the findings are reliable and valid, it is important for researchers to indicate the procedures that are consistently implemented as a means to confirm the findings (Creswell, 2008; Yin, 2003). This researcher implemented numerous procedures to check for accuracy and credibility in the findings. First, the interviews were read in their entirety. Next, the interviews were grouped by various codes. Each code denoted a descriptive idea and title. Throughout the process, the researcher compared each new chunk of data with the previous documents as a means to ensure correct coding. Additionally, a coding scheme was developed for each participant group.

With regard to the real estate interviews, the focus of the questions was on what factors homebuyers are looking for when purchasing homes, changes in demographics within the community, and any resultant changes in the communities. The codes associated with these factors encompassed location, cost, and amenities. The building administrator and school board member interview questions addressed the factors of how schools adapted to demographics shifts, how related services relates to the housing boom/shift, and how change in the communities is interconnected to student support. The codes associated with these factors encompassed curriculum focus, changes to the building, changes to the services provided, funding at school, ability to attract and retain qualified teachers, number of AP classes, and one-to-one computer initiatives. Furthermore, the school board member interview questions addressed how the community has changed over time as well as reasons for the demographic shift. The codes associated with these questions centered on demographics, economics, and school policies/practices/courses. After the coding was complete, the codes were grouped into
similar themes (Creswell, 2008). Classical content analysis was utilized as a means to answer the research question. Furthermore, the researcher used rich and thick description to convey the results of the data, which enhanced the validity of the findings. Providing readers with an account of the study as well as describing the shared experiences that occurred during the interview process helps the results become more realistic (Creswell, 2008).

**Variables in the Study**

Qualitative research emphasizes the importance of looking at variables in the natural setting in which they are found and noting the interactions between variables. Qualitative analysis often examines numerous variables in the same study as it typically considers multiple realities and perspectives of individuals. The researcher created a protocol for determining each nominal variable examined in the study. Nominal variables were only measured in terms of whether the individuals belonged to the distinct categories. Nominal data have no order, which prevented the researcher from quantifying or ranking the categories in order of preference. This study involved an exploration of the variables of geographical location, distinctiveness of the communities, school district characteristics, high school characteristics, and the occupation of participants. Through the exploration of perception over time, interviewees were asked questions that focused on their perceptions of change associated with the selected variables as well as how the variables have influenced the various levels of services and outcomes provided by the school districts.

**Data Analysis and Interpretation**

The goal of data analysis and interpretation involved making sense out of text as a means to move to a deeper understanding of the relationship (Creswell, 2008). The primary technique implemented by this researcher was individual interviews with three real estate agents, four
building administrators, and two school board members. When completing the qualitative analysis, data collection and interpretation occurred simultaneously (Merriam, 1998). The data analysis of this study consisted of examining interview transcripts. The steps in this qualitative analysis included: (a) preliminary exploration of the data by reading through the transcripts, (b) coding the data by segmenting and labeling the text, (c) using codes to develop themes by aggregating similar codes together, (d) connecting and interrelating themes, and (e) constructing a narrative (Creswell, 2008). To augment this idea, the visual data display in Figure 4 shows the evolving conceptual framework this researcher implemented to further understand the factors and the relationships in the data (Creswell, 2008). Figure 4 outlines Creswell’s (2008) steps for qualitative analysis.

When completing this analysis, the researcher situated the case within its context to ensure the descriptions and themes were related to the specific situations involved in this study (Creswell & Maietta, 2002). It is important that any analysis be rich in the context or in the setting in which the study presents itself (Merriam, 1998). As a result, this researcher provided a thorough narration of the participants’ perspectives as a means to interconnect the themes. In the final phase, the researcher interpreted the meaning of the themes to report the “lessons learned” (Lincoln & Guba, 1985). The purpose of the qualitative data was to identify what changes have occurred and continue to occur in districts as residential housing patterns change.

**Summary**

This exploratory mixed methods study involved combining both quantitative and qualitative approaches for the purpose of addressing the complex issue of residential income segregation as it relates to schools. The first phase of this study incorporated quantitative measures to examine variables associated with residential housing patterns, the level of services
provided by schools, and educational outcomes are connected to residential income segregation. A qualitative approach was utilized in the second phase of this study for the purpose of collecting data through individual semi-structured interviews. Last, the data and results from the quantitative phase were further contextualized through the qualitative findings.

In selecting variables and units of analysis, Chapter 5 focuses on explaining both the process and the product associated with this complex issue (Krathwohl, 1993). In connecting quantitative and qualitative research methodologies, in Chapter 5 the researcher provides the most accurate and authentic picture of how residential income segregation relates to schools. Chapter 6 concludes with research recommendations, considerations, and future areas of study regarding the relationship between residential income segregation and schools.
CHAPTER 5: FINDINGS

The focus of this exploratory mixed methods study was the complex issue of residential income segregation and its influence on schools. To this end, this chapter begins with an explanation of the quantitative results in an attempt to describe the pattern of residential income segregation. The first section outlines the results associated with the ID equation as well as percentage data as they pertained to the independent variables used to define income segregation, housing segregation, and race segregation. The second segment of the quantitative results details the use of Pearson’s correlations to investigate how the variables of income segregation, housing segregation, and race segregation related to the level of services provided by schools as well as the educational outcomes obtained by students.

The next section of the chapter contains a summary of the second phase of this study in which the researcher conducted qualitative interviews with three real estate agents, four building administrators, and two school board members. The purpose of this portion of the research was: (a) to gain information about influential factors that guide people’s decisions when purchasing a home, (b) to discover what policies and procedures have occurred at the district level in response to the pattern of residential income segregation, and (c) to ascertain how the socioeconomic composition of the community affects the decision-making process occurring within the high school. Finally, the chapter concludes by highlighting the level of interplay that exists between the quantitative results and the qualitative findings.
Phase 1: Quantitative Results

Segment 1: Residential Income Segregation

In the first data analysis component of this study, the researcher utilized numbers from participating districts and high schools as a means to describe residential income segregation. In an attempt to describe this relationship, the ID equation was used to calculate dissimilarities between the independent variables of income segregation, housing segregation, and racial segregation. Due to the small sample size, the numerator and the denominator associated with the calculations of ID were influenced by one another as the changes in the data correlated conversely. A converse correlation is atypical as the variables in the current study (e.g., White students and Black students) typically have an inverse correlation with one another. For example, it is commonplace when examining changes in White and Black student populations for researchers to notice that as the White student population decreases in a school, the Black student population increases. This fluctuation indicates the White and Black data sets correlate inversely. In the current study, the ID calculations for White and Black students correlated conversely as the results showed growth for both populations when compared to the average changes in the student population of the district.

The utilization of absolute values to complete the calculations of ID was problematic as it dictates that data outcomes are solely focused on determining changes that deviate away from the average (Jargowsky, 2014). For example, an ID score closer to 1 denotes complete segregation while an ID score closer to 0 describes perfect integration in comparison to its sample. Because the results of the ID equation only indicate a variation, the researcher included percentage graphs for the independent variables as it provided data sets inversely correlated. This was helpful in highlighting the contrary relationship between the data sets as percentage variables move in
opposite directions. The exploration of percentage data associated with the independent variables afforded an additional level of understanding as to how the communities and schools changed over time.

**Income segregation.** For the purpose of describing residential income segregation, this study included data for students who qualified for Free and Reduced Lunch (FRL) at each high school, the FRL data for each school district, the average household income for each school district, and the average household income for the county in which each district is located. The structure of ID dictates a comparison between one data point as it relates to the whole in which it is located. In broad terms, ID compares a child to its parent. As a result, the researcher gathered FRL data from each high school and compared them to FRL data for the district to assess trends at the building level. Because this involved comparing each high school to its district, the FRL computation was organized in a manner that collectively explored each high school along with its district for the purpose of explaining how things changed each year. To further understand the district level impact, the researcher evaluated the average household income for each school district against the average household income for the county in which the district was located. Because all of the districts were compared to the same county matrix in which they were located, the household income computations were organized in a manner that described the districts over the years and then compared the districts with each other within the years explored in the study.

**Building level computations.** The FRL totals for each high school were compared to the FRL total for the entire school district for the years of 2000, 2005, 2010, and 2013.

**Campbell school district.** The Campbell School District (CSD) has three high schools: Campbell High School A (CHS-A), Campbell High School B (CHS-B), and Campbell High School C (CHS-C). For the years explored in this study, the ID results for CHS-B were the most
similar to the district (See Figures 5 and 6 in Appendix A). As time progressed, CHS-A and CHS-C fluctuated in a manner that caused their FRL ID results to become more aligned to the district. The FRL percentages at all three high schools increased for every year examined in this study. CHS-B experienced the largest amount of growth in comparison to the other high schools as its FRL student population grew by 40% (DESE, n.d.). Additionally, during this 13-year time span, the FRL percentages of CHS-A and CHS-C more than doubled.

Forsyth school district. Forsyth High School is the only high school within this district. As a result, the ID findings for this high school were not that dissimilar from the district average (See Figures 7 and 8). The largest variance occurred in 2005 when the district had an FRL student population of 32.4% and the high school had an FRL percentage of 22.1% (DESE, n.d.). For the years explored in this study, the FRL student population at the high school grew by 15.2% (DESE, n.d.).

Fulton school district. Fulton High School is the only high school within this district. The largest discrepancy occurred in 2010 when the high school had the closest value to 1 (See Figures 9 and 10). The ID results indicated that Fulton High School did not significantly vary from the district average for the years explored in the study. Despite the lack of variance in the ID results, the FRL student population at the high school increased by 30% (DESE, n.d.). Fulton High School had the largest percentage of FRL students enrolled compared to the other high schools explored in the study.

Wilson school district. This district has four high schools; however, only one high school was examined in this study as it was the only one that met the criteria. In 2013, the ID results indicated this high school was the most dissimilar when compared to the district (See Figures 11 and 12). However, while most dissimilar in 2013, it is important to understand that the ID value
of .006 indicates minimal dissimilarity. During the time frame of this study, the FRL percentage at the high school doubled.

**Rossman school district.** This district has four high schools: Rossman High School A (RHS-A), Rossman High School B (RHS-B), Rossman High School C (RHS-C), and Rossman High School D (RHS-D). The FRL ID indicated a change in the pattern occurred from 2005 to 2010 as the high schools became more similar to the district (See Figures 13 and 14). During this 5-year period, the FRL population at RHS-B increased by roughly 10% (DESE, n.d.). Additionally, from the years of 2005 to 2010, the percentage of FRL students attending RHS-C increased by 6.8% and at RHS-D the FRL population increased by 5.12% (DESE, n.d.). When reviewing the FRL percentages for RSD, at a minimum, each high school doubled its FRL percentage for the years examined in the study. This district saw the most growth in the FRL percentages from 2005 to 2010. Despite this growth, the FRL percentages remained relatively low as RHS-A had the largest number of FRL students with 23.3% in 2013 (DESE, n.d.).

**Whitfield school district.** This district has three high schools: Whitfield High School A (WHS-A), Whitfield High School B (WHS-B), and Whitfield High School C (WHS-C). In 2000 and 2005, all three high schools had ID results that were similar as little variation occurred (See Figures 15 and 16). Between 2005 and 2010, the ID results indicated a change as WHS-A and WHS-C decreased while WHS-B increased. The increase in the ID results for WHS-B indicates this high school had fewer FRL students in comparison to the other high schools and the district. When reviewing the data for the district across the years of the study, FRL percentages for each high school grew. The largest increase occurred at WHS-A as the FRL population at this school increased by 14.3% during the years explored in this study (DESE, n.d.). Despite this increase,
the FRL growth experienced within this school district was negligible as it represented a low number of students receiving FRL.

**District level computations.** In further defining residential income segregation, the researcher also completed ID computations at the district level. The district level computations were necessary because household income data only existed at the school district level and did not exist for each high school explored in the study. As a result, ID calculations were used to compare the household income data for the six school districts to the average household income for the county in which each school district was located (See Figures 17, 18, and 19). The years explored were 1990, 2000, and 2010 as dictated by the census. Comparisons were made across three income levels: low, middle, and high. In addition to the ID calculations, the study included percentages associated with this district level analysis as a means to provide a further understanding of household income (See Figures 20, 21, and 22).

**Campbell school district.** When examining the ID results for the CSD as they pertained to household income, the data showed that the middle income group fluctuated the most for the years explored in this study. In 1990, the number of middle income residents living in CSD was dissimilar to the number of middle income residents living in St. Louis County, whereas in 2010, the middle income group shifted and became closely aligned to the county (See Figures 23 and 24). When reviewing the percentage data for this district, the trends reflected that the low income group grew most with an increase of 20%, whereas the middle income group decreased by 16% and the high income group decreased by 3.8% (DESE, n.d.).

**Forsyth school district.** When examining the ID results for the Forsyth School District as they pertained to household income, the data showed that the middle income group fluctuated the most for the years explored in this study (See Figures 25 and 26). During the years explored in
this study, the number of middle income residents living in this district became more aligned to the number of middle income residents living in St. Louis County. When reviewing the percentage data for this district, the trends reflected that the low income group grew by 15.3% while the middle income group decreased by 12.7%. The percentage of high income residents living in this district remained relatively low throughout the years included in the study. In 1990, the high income group represented 14.7% of the population, while in 2010 the number of high income residents decreased to 12.1% (DESE, n.d.).

*Fulton school district.* For all years explored in this study, the ID trends reflected that the low income group and the high income group were most dissimilar to St. Louis County when compared to the district’s middle income group. The number of middle income residents living in this district remained closely aligned to the number of middle income residents living in St. Louis County (See Figures 27 and 28). The percentage data showed that the low income group increased by 9.5%. In 2010, 65% of the residents living in this district were classified as low income. Additionally, the middle income group decreased by 10.3% as this group represented 31.1% of the residents living in this district in 2010 (DESE, n.d.).

*Wilson school district.* The household income ID results indicated the middle income group was the most similar and the high income group was the most dissimilar when compared to the other groups in St. Louis County (See Figures 29 and 30). During the time frame explored in this study, the percentage of low income residents increased, while the percentage of middle and high income residents decreased. The percentage data showed that all three income groups fluctuated in a manner that caused a level of alignment. In 2010, the Wilson School District comprised 31% low income residents, 30.6% middle income residents, and 38.1% high income residents (DESE, n.d.).
Rossman school district. The ID trends reflected that the middle income group and the high income group fluctuated in a manner that caused them to be aligned more to St. Charles County for the years explored in this study (See Figures 31 and 32). The percentage data showed that all three income groups fluctuated in a manner that caused a level of alignment in 2010. During the years explored in this study, the middle income group decreased by 18.7% and the high income group increased by 15.8%. In 2010, the Rossman School District comprised 33.8% low income residents, 36.7% middle income residents, and 29.6% high income residents (DESE, n.d.).

Whitfield school district. In 1990, the ID trends indicated that the high income group was the most similar to St. Charles County, whereas in 2010 the high income group was the most dissimilar when compared to the county (See Figures 33 and 34). Once again, the percentage data showed that all three income groups fluctuated in a manner that caused a level of alignment in 2010. For the years explored in the study, the middle income group decreased by 17.1% and the high income group increased by 6.8%. In 2010, the Whitfield School District comprised 34.1% low income residents, 34.6% middle income residents, and 31.3% high income residents (DESE, n.d.).

Summary of household income. When examining the household income percentages for 1990, 2000, and 2010, the CSD experienced the largest increase in the percentage of low income residents living in this district as this population grew by 20%. The high income group increased the most in the RSD as the number of residents living in this school district grew by 10%. During the years explored in this study, all of the school districts located in St. Louis County experienced an increase in their low income group and a decrease in their middle income group. However, the school districts in St. Charles County experienced an increase in their high income
group and a decrease in their middle income group. The data indicate second ring school districts in St. Louis County experienced an increase in the number of low income students attending their schools, whereas the third ring school districts located in St. Charles County experienced an increase in the number of high income students attending their schools.

**Housing segregation.** The researcher also completed ID computations for the values of the homes located within the six school districts to further understand the pattern of residential income segregation. Housing data only existed at the school district level and not for individual high schools. As a result, the ID calculations for this study occurred at the district level to compare the home value data for the districts to the home values for the county in which each school district was located (See Figures 35, 36, and 37). Because all of the districts were compared to the same county matrix in which they were located, the household income computations were organized in a manner that described the districts over the years and then compared the districts with each other within the years explored in the study (i.e., 1990, 2000, 2010). In addition to the ID results, this study included the percent of houses valued at less than $100,000 located within the six school districts as a means to gain further insight into these communities (See Figures 38, 39, and 40).

All monetary figures associated were adjusted to 2010 dollars to ensure reliable results. The researcher set out to compare two housing value groups: below and above $100,000. Due to the size of these categories, the calculations associated with the classifications of houses less than $100,000 and houses above $100,000 did not provide enough variation. As a result, when completing the data computations as they pertained to house values, this study only used the category of houses valued at less than $100,000 as the sample.
**Campbell school district.** The ID results indicated the home values for the school district became more aligned to St. Louis County as time progressed (See Figures 41 and 42). During the years explored in this study, the number of homes located in this district that were $100,000 or less declined by 28.8% (DESE, n.d.).

**Forsyth school district.** In 2000, the ID results for homes valued at $100,000 or less were most aligned with St. Louis County (See Figures 43 and 44). In 2010, this school district’s alignment with St. Louis County grew more dissimilar as the results grew by .0028. During a 20-year time span, the number of homes located in this district that were $100,000 or less declined by 29.4% (DESE, n.d.).

**Fulton school district.** The ID results indicated the home values for the school district became more aligned to St. Louis County as time progressed (See Figures 45 and 46). In 2000, this district had its largest percentage of houses valued at $100,000 or less as 98.7% of the homes located in this district fell into this category (DESE, n.d.). In 2010, this percentage decreased by 20.5% as 78.2% of the homes in this community were valued at $100,000 or less.

**Wilson school district.** The ID results for homes valued at $100,000 or less indicated this school district began to become more dissimilar to St. Louis County (See Figures 47 and 48). For the years explored in this study, the number of houses valued at $100,000 or less within this district decreased by 9.1% (DESE, n.d.).

**Rossman school district.** A fluctuation in the ID results occurred between 1990 and 2000 (See Figures 49 and 50). During this time frame, this school district became more aligned with St. Charles County as the ID results declined by .2188. In 1990, 65.6% of the homes located within this district were valued at $100,000 or less, whereas in 2000, only 29.6% of the homes fell into this group (DESE, n.d.).
**Whitfield school district.** During the years explored in the study, the ID results for this district remained stagnant as houses valued at $100,000 or less only decreased by .0396 (See Figures 51 and 52). The percentage data for the houses valued at $100,000 or less consistently fluctuated in this district. From 1990 to 2000, the percentage of houses that fell into this group increased by 16.7%. However, in 2010 this percentage decreased as 8.7% of the homes located in the district were valued at $100,000 or less (DESE, n.d.).

**Summary of houses valued at $100,000 or less.** For the years explored in this study, Fulton School District had the largest percentage of houses falling into this category. In 2010, 78.2% of the homes located within this district fell into this category. In 1990, the Whitfield School District had the lowest percentage of homes valued at $100,000 or less with 3.8%. However, in 2000 and 2010, the Wilson School District had the lowest percentage of homes within this group. One potential reason for the increase in the percentage of homes valued at $100,000 or less within the Whitfield School District could be the increase in the number of Baby Boomers retiring and putting their homes on the market. Within this county, there is an area called “Old St. Charles” that was developed before the housing boom. Currently, these homes are being sold at the lowest price point in the county and many residents from North St. Louis County who are unable to afford the expensive homes in St. Charles County are choosing to purchase homes in this particular area. In 2010, 8.7% of the homes in the Whitfield School District were valued at $100,000 or less. Next, in comparison to the other school districts explored in the study, the Rossman School District experienced the most significant change in the percentage of houses valued at $100,000 or less. For the years explored in this study, the percentage of homes within this range decreased by 54.4% (DESE, n.d.). During the 10-year time span from 2000 to 2010, this district built two new high schools. The decrease in the
percentage of houses valued at $100,000 or less would indicate the new homes built in this area were more expensive than the homes that were previously built in this school district.

Additionally, from 2000 to 2010, all of the school districts explored in this study experienced a decrease in the number of homes classified as $100,000 or less. One possible explanation for this occurrence surrounds the notion that the data gathered by the 2010 Census may have failed to adjust for the economic failure that occurred with the recession of 2007-2008. In 2013, the U.S. Census Bureau conducted an analysis for the purpose of determining the value of houses during the recession and post-recession for all of the states in the country. The U.S. Census Bureau compared the 3-year periods of 2007-2009 to 2010-2012 to determine how home values were affected. In completing this data analysis, the U.S. Census Bureau determined that home values for the state of Missouri declined from $139,700 to $137,100 during this time frame (Flanagan & Wilson, 2013, p. 4).

Racial segregation. After completing the computations associated with home values, the researcher then focused on evaluating racial segregation as defined by White and Black student populations as a means to further understand the relationship between residential income segregation and the research questions. To this end, ID computations for White and Black student populations were computed and Pearson’s correlations were conducted to assess the potential relationship between the different student populations and the variables explored in this study. As these results involved comparing each high school to its district, the race computations were organized in a manner that collectively explored each high school along with its district for the purpose of describing how things changed each year. Race data were examined for the years of 1995, 2000, 2005, 2010, and 2013. As the results of the ID equation only indicate a variation,
percentage graphs of the racial data assessed in this study were included as a means to provide further understanding.

**Campbell school district.** For the CSD, the White student enrollment declined by 42% and the Black student enrollment increased by 40% for the years explored in this study (DESE, n.d.). Additionally, at all three high schools, the White student population declined and the Black student population increased. When examining the ID results for the White and Black students, CHS-A was the most aligned and CHS-C was the most discrepant when compared to the district (See Figures 54 and 54). Within the district, CHS-A experienced the largest decrease in its White student enrollment numbers with a decline of 61.4%. Additionally, Black student enrollment increased the most at CHS-A as the population grew by 60% (DESE, n.d.).

In 2013, CHS-C had the largest number of White students enrolled in the district with a population percentage of 50.3%, and CHS-B had the largest number of Black students enrolled with a population percentage of 97% (DESE, n.d.). When assessing trends for CSD for the years explored in this study, CHS-A experienced the most racial change. The racial demographics at CHS-B fluctuated the least when compared to the other high schools in the district. The racial demographics at CHS-C remained the most dissimilar when compared to the other high schools and the district as this school had the largest number of White students (See Figures 55 and 56).

**Forsyth school district.** During the time frame explored in this study, the White student population at Forsyth High School declined by 16% and the Black student population increased by 7.5% (See Figures 57 and 58). In 2000, the ID results showed the population of White students at Forsyth High School was the closest to the White student population within the district such that 71.7% of the students attending this high school were White while 71.3% of the students within the entire district were White (DESE, n.d.). For the Black students enrolled at
Forsyth High School, the ID results indicated that in 2005, this student population was the most aligned to the district averages (See Figures 59 and 60). In 2005, the Black student enrollment was 24%, and at the district level, the Black student enrollment was 24.1%. In 2013, Forsyth High School had a White student population of 61.2% and a Black student population of 29% (DESE, n.d.).

**Fulton school district.** During the time frame explored in this study, the White student population at Fulton High School declined by 31% and the Black student population increased by 15%. In 2005, the ID results for the White student population at Fulton High School were the most dissimilar from that of the district (See Figures 61 and 62). In 2005, the high school had a White student population of 61.1% whereas the district had a White student enrollment of 56.5% (DESE, n.d.). The Black student enrollment data indicated Fulton High School was the most dissimilar from the district’s race data in 2013 (See Figures 63 and 64). In 2013, this high school had a Black student population of 42.1%, while at the district level, 39% of the students enrolled in the district were Black. Ultimately, the student populations at the high school were closely aligned with those of the district every year of the study as all the ID values were less than .03. In 2013, Fulton High School had a White student population of 41% and a Black student population of 42% (DESE, n.d.).

**Wilson school district.** In 2013, the ID results for the White students and the Black students enrolled at this high school trended away from the district, which indicated a level of dissimilarity when compared to the entire district (See Figures 65 and 66). In 2013, the White student enrollment was 53.4% at the high school and 64.8% at the district level. The Black student enrollment was 29% at Wilson High School, whereas at the district level, 15% of the
students enrolled were classified as Black (DESE, n.d.). Once again, despite minor fluctuations that occurred, this high school was also similar to the district.

At both the district and building level, the White student population decreased (See Figures 67 and 68). However, the population of Black students decreased at the district level and increased at the building level. The district’s reduced participation in the voluntary interdistrict transfer program could be one explanation for the decreased Black student enrollment numbers at the district level. At Wilson High School, the White student population declined by 14% and the Black student population increased by 5% for the years explored in this study (DESE, n.d.).

**Rossman school district.** The ID results for both White and Black students fluctuated in the same manner for the years explored in this study (See Figures 69 and 70). The ID values and the percentage values indicated that all of the high schools closely mirrored the pattern of the district. Despite the population growth experienced in this district, the race demographics remained relatively constant over the years explored in this study. The largest variance that occurred in the district took place at RHS-C for both White and Black students. From 1995 to 2013, RHS-C saw a 7% decline in its White student population and a 4% increase in its Black student population (DESE, n.d.).

For the RSD, White student enrollment declined by 12% and Black student enrollment increased by 3% for the years explored in this study (DESE, n.d.). Additionally, at all four high schools, the White student population decreased and the Black student population increased (See Figures 71 and 72). In comparison to the other years of this study, Black students had the largest enrollment percentage in the district and all four high schools in 2010. However, in 2013, the district, along with the high schools, experienced a decline in the Black student enrollment. For
2013, RHS-D had the largest number of White students with 86.2% and RHS-A had the largest number of Black students with an enrollment total of 6.7% (DESE, n.d.).

**Whitfield school district.** The ID results for both the White and Black student enrollment were examined for three high schools. For both White and Black students, ID results were below .05, which suggested a high level of similarity between the high school and the district (See Figures 73 and 74). For the WSD, White student enrollment declined by 12% and Black student enrollment increased by 5% for the years explored in this study (DESE, n.d.). Additionally, at all three high schools, the White student population declined and the Black student population increased. The ID results for WHS-B for both White and Black students were the most dissimilar from those of the district (See Figures 75 and 76). From 1995 to 2013, the White student population at WHS-B decreased from 98% to 91%, while in 2013, 85% of the students enrolled in the WSD were classified as White (DESE, n.d.). In 2013, 5% of the students enrolled at WHS-B were classified as Black, while the overall district had a Black student enrollment percentage of 7%. WHS-B had the largest number of White students with 91%, and WHS-A had the largest number of Black students with an enrollment total of 8% in 2013 (DESE, n.d.).

**Summary.** When reviewing the patterns for the ID results and the percentage data as they pertained to the independent variables of income segregation, housing segregation, and race segregation, the results showed that both the building level computations and the district level computations were fairly similar to the larger district or county from which they were drawn. The only ID results that were found to be significant pertained to the variable of household income, as it was used to describe income segregation. In 1990, the ID score for the high income group in the Fulton School District was .6273. In 2000, the high income group for this district had an ID score of .5247. In 2010, the ID results for the high income group for the Fulton School
District was .5152. These ID results show a pattern whereby the Fulton School District had significantly fewer residents within its catchment area who were classified into the high income group when compared to St. Louis County for all every year explored in this study. Additionally, in 2010, the high income group for the Wilson School District had an ID score of .5267, which indicated the district had significantly more residents who were classified into the high income group when compared to St. Louis County.

Despite the alignment of percentage data to the district or the county from which they were drawn, some noteworthy patterns were found pertaining to the independent variables of income segregation, housing segregation, and race segregation. Related to income segregation, some of the high schools experienced a considerable increase in their FRL student populations. When assessing trends for CSD for the years explored in this study, it is important to note that the FRL percentage of CHS-A increased by 32%, CHS-B increased by 40.1%, and CHS-C increased by 32% (DESE, n.d.). Additionally, the FRL student population at Fulton High School was notable as 36.2% of the student population qualified for FRL in 2000, while 66% of the student population qualified for FRL in 2013. In 2013, this district had the largest percentage of FRL students enrolled at 77.1% when compared to the other high schools explored in this study (DESE, n.d.).

In reviewing the percentage data associated with household income, as this variable helped to define residential income segregation, two notable patterns were found. First, the low income group residing within the boundaries of the Campbell School District increased by 20% from 1990 to 2010 (DESE, n.d.). Second, the Rossman School District experienced a prominent shift in the SES of residents living in its catchment area during the years explored in this study. Within a 10-year time span, the number of low-income residents increased by 6%, middle
income residents decreased by 19%, and high income residents increased by 23% (DESE, n.d.). This information is helpful in understanding the pattern of residential income segregation as it indicates that individuals most likely residing in the city of St. Louis were moving into Campbell School District, which is a first ring suburb located in North St. Louis County. Additionally, this information shows that residents with the financial means living in North St. Louis County decided to purchase homes in St. Charles County. Another notable pattern was found for housing segregation in the RSD, specifically for homes valued at $100,000 or less. From 1990 to 2000, the RSD experienced a decrease of 54.3% in the number of homes located within its catchment area that were classified as $100,000 or less (DESE, n.d.). The findings associated with household income and home values for the RSD suggested that as new residents moved into this school district, the SES of the student population increased.

Finally, when reviewing the percentage data for the White and Black student populations, as this variable defined racial segregation, noteworthy patterns were found within the Campbell School District and the Fulton School District. During the years explored in this study, the CSD experienced a large amount of demographic change. In 1995, CHS-B was the only high school to have a White student enrollment total under 50%. Within 18 years, CHS-C had the largest White student population with an enrollment total of 50% (DESE, n.d.). In 2013, 9.5% of the students at CHS-A and 2.2% of the students at CHS-B were White. Additionally, as another first ring suburb, Fulton High School experienced a noticeable level of demographic change. In this high school, the White student population declined by 31% and the Black student population increased by 15% (DESE, n.d.). In conclusion, the results associated with understanding how income, housing, and racial segregation interact with the various school districts provided insight into the pattern of residential income segregation. The findings suggest that individuals with a
lower SES are moving to the first ring suburbs located in North St. Louis County and individuals with more financial means are moving to second ring and third ring suburban communities located in St. Charles County.

**Segment 2: Correlation Results**

This segment of the research was designed in an attempt to understand the relationship between residential income segregation and the level of services provided by schools as well as the educational outcomes achieved by students. The researcher utilized Pearson’s correlations to examine the relationships between income, housing, and racial segregation, and the level of services (i.e., expenditure per student [XPS] at each school district, the number of AP courses, the number of athletic opportunities, and the number of extracurricular opportunities) and educational outcomes (i.e., ACT composite scores, the number of graduates attending a 4-year school, and the number of graduates entering the workforce) at each high school.

Calculations were not completed for the 13 individual high schools explored in the study as the sample size was too small and there was not enough variation to conduct meaningful correlations. The researcher combined the data from all of the high schools and pooled the results into a collective unit for the purpose of completing these computations. In creating these data, the FRL percentages and White and Black student populations for each specific high school were combined separately for the purpose of creating a sampling pool. As the data pertained to each specific high school, the researcher classified the data as a building level figure. Also, the data for household income and home values were combined separately for the purpose of creating a sampling pool, as data regarding household income and home values at the district level were not available for each specific school. As a result, the researcher classified the data as a district level figure. It is important to note that the DESE began collecting the information reviewed in this
study at different points in time. For the purpose of obtaining consistent results, all of the analyses start with the year 2000.

**Level of services (RQ1).** Results revealed no significant correlations between the variables used to define income, housing, and racial segregation and the variables used to define the level of services. Ultimately, this suggests there was no relationship between income, housing, and racial segregation and the level of services provided in the schools or districts for the measures used.

**Educational outcomes (RQ2).** Results revealed significant correlations between the variables used to define income segregation, household income, housing segregation, and racial segregation and the variables used to define educational outcomes.

**Income segregation.** In assessing the relationship between FRL and educational outcomes, statistically significant relationships were found for data pertaining to the ACT (See Tables 4 and 5 in Appendix D). In 2000, the relationship between the percentage of FRL students and the percentage of students in the district taking the ACT was statistically significant ($r = - .731, p = .011$). This negative correlation denotes that FRL students who were graduating high school were less likely to take the ACT. Additionally, in 2005, the relationship between the percentage of FRL students and the percentage of students in the district scoring over the ACT national average was statistically significant ($r = -.731, p = .007$). This negative correlation suggests FRL students were less likely to achieve ACT scores that were above the national average. Finally, the correlation between FRL and the weighted average ACT composite score of the district in 2005 was statistically significant ($r = -.702, p = .011$). All three of these results had a fairly strong negative correlation. This negative correlation denotes that FRL students were less
likely to achieve an ACT score that matched the average ACT score of the school district in which they were enrolled.

Similar to the findings in 2000 and in 2005, negative relationships were found in 2010 between FRL and the percentage over the ACT national average \( (r = -0.924, p < .001) \), the weighted average ACT composite score \( (r = -0.907, p < .001) \), and the percentage of students in the district taking the ACT \( (r = -0.786, p = .001) \). These negative correlations indicate FRL students were less likely to obtain an ACT score that was over the national average or to obtain a score that met the average ACT composite score of the district. Additionally, FRL students were less likely to take the ACT in 2010.

Comparable to results in 2010, negative relationships were found in 2013 between FRL students and the percentage over the ACT national average \( (r = -0.925, p < .001) \) and the weighted average ACT composite score \( (r = -0.910, p < .001) \). These negative correlations indicate FRL students were less likely to obtain an ACT score that was over the national average or to obtain an ACT score that met the ACT composite score of the district.

Results showed the educational achievement level on the ACT declined when examining the ACT performance outcome data of FRL students. Additionally, Pearson’s correlation results increased in magnitude for the years explored, which suggests the relationship between FRL students and low performance outcomes on the ACT grew stronger.

When assessing the remaining components of educational outcomes related to the percentage of students going to a 4-year college and the percentage of students going on to employment, Pearson’s correlations varied for every year explored in the study. Only one statistically significant relationship was found between these variables. In 2013, a negative correlation was found between FRL students and the percentage of students attending a 4-year
college \( r = -0.584, p = 0.036 \). This correlation showed that as the percentage of FRL students increased, the percentage of students attending a 4-year college decreased.

**Household income.** When evaluating educational outcomes and household income, statistically significant relationships were only found in the low income and high income groups for the district percentage over the ACT national average, weighted average ACT composite score, and the percentage of the district taking the ACT for both the low income and the high income categories (See Table 6). In 2000, the low income group was negatively correlated with percentage over ACT national average \( r = -0.864, p = 0.026 \), ACT composite score \( r = -0.719, p < 0.107 \), and the percentage of the district taking the ACT \( r = -0.953, p = 0.003 \). The correlation results between the low household income group and the educational performance benchmarks on the ACT indicated that as the percentage of households with a low income increased, the level of educational outcomes obtained on the ACT benchmarks decreased. In contrast, the high income group had positive correlations with percentage over the ACT national average \( r = 0.982, p < 0.001 \), ACT composite score \( r = 0.887, p = 0.019 \), and the percentage of the district taking the ACT \( r = -0.957, p = 0.003 \) in 2000. These findings showed that as the high income group increased, educational outcomes as measured by the ACT also increased.

In 2010, the low income group had negative correlations with percentage over ACT national average \( r = -0.920, p = 0.009 \), ACT composite score \( r = -0.861, p = 0.027 \), and the percentage of the district taking the ACT \( r = -0.962, p = 0.002 \). The opposite pattern of results was found for the high income household group such that strong positive correlations were found between income and educational outcomes. The high income group had positive correlations with percentage of over ACT national average \( r = 0.951, p = 0.004 \), ACT composite score \( r = 0.899, p = 0.015 \), and percentage of the district taking the ACT \( r = 0.975, p = 0.001 \). As a result, the
negative findings between low household income and educational outcomes on the ACT indicated that as low-income households increased, the ACT scores tended to go down. The opposite was found to be true for the high income group, such that as the income variable increased, the educational benchmarks associated with the ACT increased. When assessing the remaining components of educational outcomes (i.e., the percentage of students going to a 4-year college and the percentage of students going to employment), no statistically significant relationships were found for any of the income groups.

In general, over the years explored in this study, measures of income segregation and educational outcomes were found to be correlated. Statistically significant relationships were found to exist between FRL students and all of the variables used to define household income. Negative correlations existed between FRL students and ACT composite scores, FRL students and the number of graduates attending a 4-year school, and FRL students and the number of graduates entering the workforce.

**Housing segregation.** In determining whether houses costing $100,000 or less related to educational outcomes, statistically significant relationships were found to exist for all of the educational outcomes (See Table 7). First, in 2000 and 2010, homes valued under $100,000 had a negative correlation with scores over the ACT national average \((r = -.930, p = .007\) and \(r = -.894, p = .016\) for 2000 and 2010, respectively). This negative correlation shows that as the percentage of houses under $100,000 or less increased, the number of students who obtained ACT scores over the national average decreased. Second, statistically significant negative correlations were found for the average ACT composite score in both 2000 and 2010 \((r = -.883, p = .020\) and \(r = -.845, p = .034\), respectively). These correlation results show that as the percentage of houses under $100,000 or less increased, the number of students who obtained an
ACT composite score that aligned with the district average decreased. Next, the correlation results for 2000 and 2010 between the percentage of houses under $100,000 and the percentage of the district taking the ACT were negatively correlated for both years \( (r = -.883, p = .020 \) and \( r = -.970, p = .001 \), respectively). Once again, these data reflect that as the percentage of houses valued under $100,000 or less increased, the percentage of the district taking the ACT decreased.

Overall, the results show that as the district became lower income, represented by an increase in the percentage of the district residing in less costly homes, the number of students meeting achievement outcomes on the ACT and attending 4-year colleges went down. Furthermore, as the district became lower income, an increase occurred for those entering the workforce. This indicates lower income communities tended to have more students entering the workforce than pursuing further education.

**Racial segregation.** In examining the relationship between the race percentages of White and Black students and educational outcomes, statistically significant relationships were found to exist for data pertaining to the ACT for both student populations. In 2000, the relationship between Black students and the district percentage over the ACT national average was statistically significant \( (r = -.640, p = .034) \). This suggests that as the Black student population increased, the percentage of students obtaining an ACT score that aligned with the national average decreased. Additionally, the correlation between Black students and the ACT composite score of the district was statistically significant \( (r = -.644, p = .032) \) in 2000. This finding shows that as the Black student population increased, the ACT composite score of the district decreased.

The opposite pattern was found for White students. In 2005, White students had a positive correlation with the ACT national average and the ACT composite score of the district
(\(r = .654, p = .021\) and \(r = .762, p = .004\), respectively). This suggests that as the White student population increased, the percentage of students obtaining ACT scores that met the national average as well as the ACT composite score of the district increased. In 2005, the percentage of Black students was negatively correlated with the ACT national average (\(r = -.708, p = .010\)) and the ACT composite score of the district (\(r = -.810, p = .001\)). These correlation results show that as the percentage of Black students increased, the percentage of students obtaining ACT scores that met the national average as well as the ACT composite score of the district decreased.

In 2010 and 2013, the correlation results were once again statistically significant as the data replicated the same outcomes that occurred in 2005. The percentage of White students was positively correlated while the percentage of Black students was negatively correlated with the ACT national average and the ACT composite score of the district. In 2010, positive correlations were found between White students and the ACT national average (\(r = .789, p = .001\)) and the ACT composite score of the district (\(r = .825, p = .001\)). For the Black students in 2010, correlations were found for the ACT national average (\(r = -.798, p = .001\)) and for the ACT composite score of the district (\(r = -.845, p < .001\)). In 2013, positive correlations were found between the White students and the ACT national average (\(r = .820, p = .001\)) and for the ACT composite score of the district (\(r = .930, p < .001\)). For the Black students, correlations were found with the ACT national average (\(r = -.830, p < .001\)) and the ACT composite score of the district (\(r = -.937, p < .001\)). Ultimately, the findings associated with the relationship between racial segregation and educational outcomes showed that as the percentage of White students increased, the ACT results also increased. In contrast, results for the Black students showed that as this population increased, the ACT results decreased.
When assessing the remaining relationships with educational outcomes as they pertained to the percentage of students going into a 4-year college and the percentage of students going into employment, the results varied for all of the years explored in this study. Two statistically significant relationships were found between these variables. In 2010, a negative correlation was found between the percentage of White students and the percentage of students attending a 4-year college ($r = -.665, p = .018$). In contrast, in 2010, the percentage of Black students was positively correlated with the number of students attending a 4-year college ($r = .659, p = .02$). This trend did not replicate for 2013 as no statistically significant correlations were found between the number of students attending a 4-year college and the percentage of White students ($r = .276, p = .362$) or Black students ($r = -.315, p = .294$). These results showed that in 2010, as the percentage of White students increased, the number of students attending a 4-year college decreased. However, as the percentage of Black students increased, the number of students attending a 4-year college also increased.

**Summary.** In answering RQ1, no significant correlations were found to exist between income, housing, or racial segregation and the level of services. To this end, the researcher concluded that there was no relationship between these measures as defined by this study. In contrast, the findings associated with educational outcomes (e.g., the ACT, the number of graduates attending a 4-year college, and the number of graduates entering the workforce) revealed statistically significant relationships between income, housing, and racial segregation. First, in evaluating income segregation, results revealed statistically significant relationships as achievement outcomes on the ACT decreased for students designated as FRL as well as students whose household incomes were categorized in the low income group.
Next, the data computations for housing segregation revealed that the variable of students residing in houses valued under $100,000 had the largest relationship with student performance outcomes as it pertained to educational achievement. As the number of students residing in these homes increased, the level of performance on the various ACT benchmarks explored in the study decreased. Additionally, the results revealed statistically significant relationships among students residing in homes under $100,000 and attending a 4-year college as well as entering the workforce after high school. The students explored in this study who were residing in homes under $100,000 were, in fact, less likely to attend a 4-year college and were more likely to enter the workforce when graduating high school.

Finally, when examining racial segregation as it pertained to White and Black students, results showed that as the White student population increased, the achievement outcomes related to the ACT also increased. Ultimately, a pervasive theme unfolded when assessing Pearson’s computations associated with income, housing, and racial segregation as related to the variables explored in RQ2. The findings showed that educational performance levels on the ACT were related to income segregation, housing segregation, and race segregation. In answering RQ2, residential income segregation was found to be correlated with educational outcomes. The findings suggest this relationship does not diminish over time.

**Phase 2: Qualitative Results**

To answer RQ3, the researcher completed interviews with three real estate agents, two school board members, and four high school building administrators. The purpose of this portion of the research was to: (a) gain information about influential factors that guide people’s decisions when purchasing a home, (b) discover what policies and procedures have occurred at the district level in response to the pattern of residential income segregation, and (c) ascertain how the
socioeconomic composition of the community influences the decision-making process occurring within the high school. Through the coding process, different themes emerged for each group. Due to the varying job roles and perspectives of the participants, the descriptions below outline the themes as they pertain to each specific group.

**Results for Real Estate Agents**

Three themes arose from these interviews: (a) reasons for purchasing a home, (b) changes in the community demographics, and (c) changes the communities have experienced.

**Reasons for purchasing a home.** When discussing what influenced the decision to purchase a home in a particular region, all three real estate agents discussed different factors and reasons for purchasing homes. The first real estate agent primarily sold homes in North St. Louis County where houses are at a low price point and require a minimal down payment because they are cheap. The realtor explained that “individuals looking to purchase a home in this area are typically first-time home buyers or people who have been through bankruptcy and are interested in restoring their credit” (Realtor A, personal communication, June 2, 2015). Most buyers who are interested in living in this community do not have children and see the home as an investment property as they are no longer wasting money on rent. These buyers are typically only concerned with the quality of schools as it influences the potential resale value of the home. According to Realtor A, comments about schools in the area are usually centered on clients stating, “Well, I don’t want to look at homes in Neighborhood A because I won’t be able to sell my house since the school district is unaccredited.”

To further attract first-time home owners, leaders in one municipality located in North St. Louis County created an incentive program to attract new buyers to the community such that if an individual brings $3,500 cash to the closing table, the municipality will match the down
payment. As a result, individuals now have $7,000 for a down payment on a house. This municipality will match up to $6,000 as well as forgiving this loan amount if residents stay in the home for a minimum of 5 years (Realtor A, personal communication, June 2, 2015).

Unlike in North St. Louis County, Realtor B, who worked and lived in St. Charles County, stated that better schools and lower crime rates attract home buyers to the area, reporting:

We have a lot of movement from North St. Louis County because people want to get to the better schools. A lot of people move to St. Charles County for better schools and to get away from the crime. Let’s face it . . . this is just a much better situation to raise a family in because you don’t need to worry about things out here. We are not getting the drive-bys, we are not getting the crime, and we are not getting the shootouts. (Realtor B, personal communication, June 2, 2015)

Additionally, Realtor B explained that the cost of homes influences the migration of individuals moving from North St. Louis County to St. Charles County. North St. Louis County comprises ranch style subdivisions that were built after WWII. Potential home buyers living in North St. Louis County who are interested in purchasing two-story homes with more square footage find St. Charles County appealing as it offers a level of comparative pricing. Developers are building subdivisions with identical homes in various locations throughout the St. Louis area. Identical houses built by the same developer are $20,000 cheaper in St. Charles County when compared to the houses built in South County. The abundance of farmland in St. Charles County decreased the value of the land, which increased the profit margin for many developers.

Realtor C also worked and resided in St. Charles County and similarly reported that individuals are interested in moving to St. Charles County for financial and employment reasons.
Realtor C explained that taxes are lower when compared to St. Louis County, so buyers can purchase bigger homes for less money in St. Charles County. According to Realtor C, the ability to purchase a bigger home is an influential factor for individuals with children. Clients with children often consider the number of bedrooms a home offers, the size of the backyard, and whether or not the basement provides a living space when purchasing a home. The desire for extra living space makes homes in St. Charles County more appealing to families as the subdivision developers had plenty of land on which to build spacious homes. Realtor C also stated that a second reason St. Charles County was more appealing was the influx of businesses located in the area and the resulting increase in the number of job opportunities.

In the 1980s, General Motors (GM) moved into St. Charles County because of the tax incentives. Additionally, MasterCard moved one of its corporate offices to this area in 2005. As a result of these new jobs, the housing market grew in St. Charles County. People with families did not want a long commute, they wanted to get off of work and return home at a reasonable hour to enjoy time with their families. As more jobs were created, this area became attractive to home buyers as the proximity to their employment reduced the length of the commute. With regard to how schools relate to peoples’ decisions about where to purchase a home, Realtor C reported that the only issue affecting the schools in the area pertained to the acceptance of students who are living in areas that have unaccredited schools. This comment referred to Missouri’s transfer law whereby students attending an unaccredited school have the opportunity to transfer to an accredited school outside of their catchment area. When these transfers occur, the failing district pays tuition to the receiving school. As a result of this transfer law, students residing in North St. Louis County were attending schools in St. Charles County. In further discussing this issue,
Realtor C reported, “I think this has been a problem” (personal communication, June 4, 2015). However, this real estate agent did not elaborate as to why this was problematic.

Overall, the results from the three real estate agents indicated financial opportunities, better schools, the cost of the homes, and job opportunities were some factors that guided peoples’ decisions to reside in the areas explored in this study.

**Changes in the community demographics.** All three real estate agents discussed the demographic changes that have unfolded in their various communities. They reflected on the changes that both North St. Louis County and St. Charles County have experienced in the past 20 years. According to the U.S. Census Bureau, from 1990 to 2010, the number of White residents living in North St. Louis County declined by 58,140 (MCDC, n.d.-a, n.d.-b). During this same time frame, St. Charles County experienced a total population increase as it had 148,695 more residents (MCDC, n.d.-a, n.d.-b). According to Realtor A, the demographics in North St. Louis County have changed because:

People are moving to St. Charles County. As people move out of the area, this community has experienced a decline in the number of White residents, an increase in the number of Black residents, and a growing percentage of Latino residents.

Realtor A further explained that this demographic change has affected the housing market. In North St. Louis County, so many individuals are listing their homes that it is flooding the market and driving down the cost of houses in the area. There are more houses for sale than there are buyers. As a result, North St. Louis County now has an abundance of cheaper homes, which is attracting home buyers with a lower SES. Previously, these individuals were unable to afford homes in this area. Additionally, the decreased value of homes located in North St. Louis County has created a new dynamic whereby a large number of investors are purchasing cheap homes in the community for the purpose of turning them into rental properties.
Realtor B explained that the demographic changes in North St. Louis County created an influx of people moving past the Missouri River into St. Charles County. The abundance of cheap land in St. Charles County aided the housing boom as developers had tons of land available for expansion. The influx of new residents caused the school district in the community to build two new high schools in the past 15 years. Despite the influx of new residents, Realtor B reported that St. Charles County has remained racially homogenous, stating that St. Charles County is “basically all White.”

Despite the racial homogeneity, a socioeconomic division has unfolded in St. Charles County. The older homes in St. Charles County that were built before the housing boom are now the most affordable homes in the area and are often for sale as the residents are usually at retirement age. Realtor C stated that these houses are closest to the Missouri River and are the first homes individuals see when driving over the bridge into St. Charles County. Families with high school students who reside in these older homes attend a high school in the Rossman School District, which has the highest percentage of FRL students. Additionally, a significant amount of growth has occurred in the areas surrounding the GM plant. All of the high schools that educate students living around this plant have an FRL population of 20% (DESE, n.d.). Both the older homes in St. Charles County and the GM plant are accessible via Highway 70, which connects North St. Louis County to St. Charles County. According to Realtor C, affluent individuals tend to reside off Highway 40, which connects West County to St. Charles County. MasterCard has its corporate office situated off Highway 40. Students residing in this specific location attend a high school in the Rossman School District that has the lowest percentage of FRL students. Interestingly, all of the wealthiest communities in the St. Louis area are situated off Highway 40.
The information communicated by the real estate agents revealed a pattern of socioeconomic growth within St. Charles County that mirrored the trends occurring within St. Louis County. In the 1980s, North St. Louis County was a working class community. Individuals who previously resided in this community are now purchasing homes 30 miles west alongside the same highway. Additionally, wealthy residents in St. Charles County are residing along Highway 40, which replicates the socioeconomic trends in St. Louis County as the wealthiest communities are accessible via this same highway.

Changes the communities have experienced. All three real estate agents discussed changes in the level of services provided to community members. The feedback from the real estate agents focused on the subtopics of loss of industry and traffic congestion.

Loss of industry. Realtor A noted that the loss of industry and businesses negatively affected North St. Louis County. The Ford plant located in Hazelwood closed in 2002, and as a result, many of the plant workers moved out of the area. Additionally, one of the two large malls in the area closed. Recently, the remaining shopping center was unable to afford its gas bill, and the decision was made to permanently close this mall. As a result of these mall closures, Walmart and Sam’s Club are the only two places where people living in North St. Louis County can shop for items. Otherwise, residents must travel to either Richmond Heights or St. Charles County for other shopping options. The lack of amenities within this community may be another factor influencing peoples’ decisions to purchase homes in other areas of St. Louis. In contrast, St. Charles County has an abundance of commercial businesses that are easy for residents to access. Additionally, housing developers in St. Charles County are increasing the number of amenities offered to families as a means to attract new buyers. According to Realtor B, the
developers who are constructing subdivisions are building communities with swimming pools, bicycling paths, and hiking trails within their developments to attract potential buyers.

**Traffic congestion.** Realtor B explained that the influx of residents increased the traffic congestion in St. Charles County. Because this area was originally undeveloped farmland, the municipalities in this community did not have the road infrastructure to handle all of the new drivers who moved into the area. As a result, new highways and roads had to be built to reduce the amount of traffic congestion. According to Realtor B, the completion of the 364 helped minimize traffic congestion as it provided another way to travel across the Missouri River. In further attempting to address the traffic congestion in the area, conversations have occurred about extending the Metrolink into St. Charles County. Currently, the Metrolink is a transit system that has stops in the City of St. Louis and St. Louis County. The expansion of the Metrolink would provide another thoroughfare between North St. Louis County and St. Charles County. Local governments have been asked to fund the extension project as the residents living in St. Charles County have refused to use their tax dollars for this purpose. As a result, the Metrolink does not go beyond the airport and the only way to travel to St. Charles County is by car.

**Summary.** In attempting to understand what influences peoples’ decisions to purchase a home in North St. Louis County or in St. Charles County, the real estate agents interviewed provided insight into guiding factors. From their perspectives, the home buyers with whom they had worked purchased homes in these particular areas for financial gain, to gain access to better schools, and to live in a community that had job opportunities. Additionally, the realtors spoke about the migration of White residents leaving North St. Louis County and moving into St. Charles County. Further, they explained how this shift in the housing trend influenced their
communities as businesses and revenue streams in North St. County diminished and housing developments, schools, and roads expanded in St. Charles County.

**Results for School Board Members**

Two school board members from a district in North St. Louis County were interviewed. The following themes emerged from their interviews: (a) changes in the community demographics, (b) school adaptations for demographic shifts, and the (c) relationship of community change to student support.

**Changes in the community demographics.** Both school board members noted race/ethnicity and income changes as they pertained to the residents living in their community. When reflecting on the demographic changes within the community, School Board Member A explained, “I graduated in 1977 from this community’s high school. I had roughly 900 students in my graduating class, and I could probably count the number of Black students on two hands. Now, this community is roughly half Black” (personal communication, May 5, 2015). The development of St. Charles County affected this community because developers were building subdivisions comprising homes that targeted individuals with varying levels of income. As a result, individuals left this community and purchased homes in St. Charles County (School Board Member A, personal communication, May 5, 2015). Further, this school board member explained that this migration created a surplus of vacant homes, which decreased the value of the homes in the community. As a result, this community is seeing an influx of residents who previously lived in the City of St. Louis as they are now able to afford homes in this community, which is a new migratory pattern for the community. Additionally, the proximity of this municipality to the City of St. Louis as well as other school districts that have lost their
accreditation is contributing to the influx of new residents (School Board Member A, personal communication, May 5, 2015).

In discussing the demographic changes this community has experienced, School Board Member A explained:

When I was a student in this district in the late 1970s, I’m sure that we were like 95% White and maybe 5% Black. When I got elected to the School Board in 2000, the Free and Reduced Lunch population was probably in the 30s or the low 40s in terms of percentage. Now this population is in the high 70s. So I guess you can say that the level of income affluence in the community has gone down. We probably have more single-parent families. This community has changed in the past 35 years; however, the most significant change has occurred in the last 15 years. (Personal communication, May 5, 2015)

During the time frame of 1995 to 2010, the percentage of FRL students enrolled in the school district increased by 42% (DESE, n.d.). When further reflecting on the socioeconomic changes occurring within the community as they relate to the school district, School Board Member A stated the income of the parents residing in the community is such that they have to work strange hours. Further, School Board Member A explained that varying work schedules affect parents’ ability to volunteer at the school. The decline in parent participation at the school along with a decrease in the number of parents with post-secondary experiences has had a negative impact on students as they do not receive help at home with school work.

**School adaptations for demographic shifts.** In 2010, more than half of the homes located in this district’s catchment area were worth $100,000 or less. The funding structure of this school district is such that the majority of funding comes from the state, which indicates the
revenue the district receives from local property tax falls below what the state of Missouri considers to be an adequate amount of funding needed to educate children. The socio-economic changes in the community have changed the amount of funding this district receives as the value of homes have decreased in the community. The decline in this district’s revenue streams has caused the school board to operate under the guise of a tight budget as it is operating with a $2.5 million deficit (School Board Member A, personal communication, May 5, 2015). The lack of fiscal resources has created a reality where the school board must be creative and implement programs that yield positive results.

In explaining how the demographic change in the community influenced the happenings at the school level, School Board Member B reflected:

When you have a bunch of Hispanic and African Americans living in the community, it is helpful to realize their background and their cultural differences, so that you can teach better. As a result, the School Board has certainly put enough hours and dollars into professional development to help our teachers deal with the change in the demographics.

(Personal communication, May 12, 2015)

Additionally, the district hired more counselors and social workers to help students deal with the increased number of problems they face outside of the school day. Many of the families living in this district struggle to pay their electric bills, water bills, and rent or mortgage. Additionally, some students are not being raised in emotionally stable homes and many students do not have adequate levels of supervision at home. School Board Member B contended that a relationship existed between lack of supervision and the number of teenage pregnancies as well as involvement with the judicial system. To this end, the social workers in the district spend much time focusing on attendance issues. Focusing on attendance-related issues is beneficial as it is
usually the first indicator of a larger problem. Also, reducing the number of students who miss school is important as the funding the district receives from the state increases incrementally with an improved attendance percentage.

This focus on attendance as one potential way to increase the revenue speaks to the fiscal constraints this district is experiencing. In general, increased attendance percentages do not equate to a plethora of additional funding from the state. Due to the district’s tight budget, the school board actively seeks to make decisions that are the most cost effective. To this end, School Board Member A explained that he received feedback that the teachers needed new computers. Instead of discarding the old computers, the school board made the decision to reimage the old computers for the purpose of converting them into student computers for the various elementary schools. According to School Board Member A, “At our district, when we say it’s time to get rid of a computer, you can be rest assured that we have gotten the most out of that computer” (Personal communication, May 5, 2015).

In further explaining how the demographic changes occurring in the community influenced the decisions made by the district, School Board Member A explained that the board had to look at alternative funding sources as a means to gain additional revenue. Because this community does not have a lot of businesses in the area, one board member explained that the district decided to accept roughly 60 to 70 students from an unaccredited school district as a means to obtain additional revenue. The state paid $7,200 for each student who enrolled in the district. In discussing the events associated with accepting students from an unaccredited school district, Board Member A explained that they had to “step up helping these kids with more social problems” (Personal communication, May 5, 2015), which required additional funds that extended beyond the $7,200 that the district received per student. Additionally, School Board
Member A explained that accepting students from the unaccredited school district was a complicated matter for a number of reasons. First, it pulls funding away from the sending school district, which financially impedes its ability to regain accreditation. Second, this board member expressed a level of concern regarding the academic performance of the transfer students on standardized exams as they had the potential to “bring the scores of the district down.” Lower student achievement levels on standardized exams pose a problem for this district as it is on the cusp of losing state accreditation. The DESE uses student achievement outcomes on standardized exams as one measure in determining a district’s accreditation status. As a result of this complex dynamic, leaders of this school district, along with those of several other school districts in the St. Louis area, have made the decision to forgo this additional funding and are now attempting to maneuver the legal system in a manner that allows them to not accept transfer students from unaccredited school districts.

**Relationship of community change to student support.** In addressing the challenges of a student body where 70% of the students qualify for FRL, the school board members discussed the creation and implementation of social programs that extend beyond the classroom. To this end, the district implemented various models of support, such as providing free clothes to children, offering free meals over the summer to FRL students, and giving families access to a food pantry to ensure individuals in the community were not going without food.

When reflecting on the relationship of demographic change as it related to the level of student support provided by the school district, one school board member stated:

It came to our attention that a brother and a sister who attended an elementary school in our district were skipping school because they were ashamed of their clothes. When the school board heard about this issue, we decided to stop donating our lost and found
clothes to the St. Louis City Public Schools. Now all of the lost and found clothes for our district go to one location and we give the clothes away to our families. (School Board Member A, personal communication, May 5, 2015)

Furthermore, School Board Member A explained that several parents in the community approached the district and inquired about how their children would eat over the summer as the food provided by the school was their children’s primary source of nutrition. In an attempt to support these students, the school district partnered with several churches in the community and decided to open its doors during the summer to provide breakfast and lunch to students who need meals over the summer. Finally, due to the demographic changes that occurred in the community, the school board created a food pantry at the district office where families residing in the community could pick up food any time a need arises.

**Summary.** The interviews with the board members were helpful in understanding what policies and procedures one school district implemented as a means to respond to the pattern of residential income segregation occurring in the community. Along with shifts in the demographics of their districts, the needs of schools and students changed, which resulted in changes in the provision of services. Notably, this district hired additional social workers to assist with issues occurring outside of the classroom. In an attempt to make fiscally sound decisions, this district reimaged teachers’ computers and gave them to students at the elementary schools as a means to assist student learning. Finally, the school board members discussed the implementation of programs designed to support the needs of their children outside of the school day through the creation of programs to provide free clothes, free food over the summer, and free food for families that is accessible every day of the calendar year.
Results for High School Building Administrators

Four high school administrators were interviewed to ascertain the relationship between the socioeconomic composition of the community and the decision-making process occurring within the high schools. Three themes emerged based on the experiences of the high school administrators: (a) changes in the housing market and its impact on schools, (b) changes in the housing market and its impact on parental focus, and (c) level of services provided to meet the expectations of various stakeholders.

Changes in the housing market and its impact on schools. When reflecting on the changes in the housing market as they related to their particular school district, one administrator reflected that availability of resources was an issue more so than race. He stated:

The community where I work has experienced flight. However, the motives to leave the community were not necessarily because of race, but rather because individuals wanted better opportunities and better housing. The residents of this community are comfortable with race. However, people in my district are not necessarily comfortable with parting with resources. (Building Administrator C, personal communication, April 29, 2015)

In response to the increased number of inexpensive homes for sale, new residents were moving into this area, and as a result, this particular school district was becoming more diverse. Despite the acceptance of diversity in the community, a new dynamic formed where the common voice was not represented in decisions occurring within the district. Building Administrator C explained that the lack of a common voice was tricky as board members residing in the community sometimes made decisions and allocated resources in a manner that was self-serving in nature. Further, Building Administrator C explained, “If we are not careful, a dynamic unfolds where different members in the community stop working together as partners and begin to
compete against each other for district resources that benefit their child specifically” (Personal communication, April 29, 2015). The information provided by this building administrator revealed a power dynamic that manifested through the iteration of possessive individualism.

According to Building Administrator D (personal communication, May 6, 2015), the housing market of his school’s catchment area changed significantly when Section 8 housing was built in Spanish Lake. During the 1970s, the Countryside Townhomes were built in this community. At the time in which these townhomes were built, this complex was the biggest Section 8 development in North St. Louis County. According to Hampel (2012), in 1990, 17% of Spanish Lake’s residents were Black, whereas in 2010 this number had increased such that 77% of the population residing in this area was Black. In discussing the housing trends of Spanish Lake, this administrator commented that since retiring, he volunteered on the local bank board. Through his experiences at the bank, he reported that when non-subsidized houses in Spanish Lake hit the market, investors quickly purchased these properties and converted them to Section 8 housing. Further, this building administrator explained that the changes occurring in the housing market increased the number of transient students enrolled at the building level. In his experience, transient students often had gaps in their educational achievement levels and were frequently dealing with significant issues outside of the school day. As a result of these complex dynamics, transient students often needed additional resources and support to achieve success at the school level.

When reflecting on how the housing market related to the fiscal resources of the school district, Building Administrator D explained that during his tenure, the district received the majority of its funding from taxable commercial property, which provided a stable source of revenue. Due to the structure of this particular school district, any changes in the fiscal resources
were divided among the four high schools. As a result, any financial impact of residential income segregation on the housing market during this building administrator’s tenure was mitigated. On the other hand, Building Administrator D explained that the catchment area of his previous school district was beginning to lose commercial businesses. At present, this administrator was not able to speak to the loss of business as it related to the district’s funding because he retired from education. In further explaining the interdependence between the housing market and the fiscal resources of school districts, Building Administrator D explained that in his tenure, the surrounding school districts that lacked industries experienced a financial crisis when the demographics of the community changed. When this dynamic unfolded, the school districts that lacked additional revenue streams were unable to mitigate the depreciation of home values, which decreased their operating budget. These school districts had to make significant budgetary cuts to stay fiscally solvent.

Additionally, in discussing the changes in the housing market that related to the school, Building Administrator D reported that during a 10-year period of time, the Black student population increased by roughly 50%. In facing a similar situation that occurred at Normandy High School when the balance shifted from White to Black during the Civil Rights Movement, Building Administrator D realized that the success of his school hinged on creating a unified sense of pride for all stakeholders that did not focus on the race of the students. To this end, this administrator focused on the creation of a common goal that met the needs of all of students. He explained that a common goal united all of the stakeholders and helped to foster a sense of pride for the learning occurring within the building. For the entirety of this administrator’s tenure, he focused on the following three goals: (a) the improvement of all student achievement, (b) the reduction of failing grades, and (c) the creation of a positive school climate. At the start of the
school year, this administrator would meet with students at each grade level to review these goals. He would also explain to the students and staff members what steps were occurring to help facilitate the goals. According to Building Administrator D, seniors were able to recite these goals verbatim when asked.

Building Administrator D reported that a major component in creating a positive school climate involved making sure that the building facilities were inviting and clean. In explaining this importance, he stated:

Within 5 seconds of walking into a school building, you can feel school climate. A failure to address unsightly imperfections sends a message to people that no one cares about the school. When unsightly imperfections are not addressed, individuals walk away with the message that nobody cares the mirrors in the bathroom are broken or there was graffiti on the walls when you entered the high school. As the building leader, I wanted everyone to know that I cared. (Building Administrator D, personal communication, May 6, 2015)

To this end, this administrator walked through the entire school every single morning to make sure that the building was clean and well maintained. The custodians working in the building understood that they needed to take immediate action to remedy any imperfections. This administrator told his custodians, “If you cannot wipe the mark off; then you need to paint over it immediately. If there is a broken mirror in the bathroom, it needs to replaced” (Building Administrator D, personal communication, May 6, 2015).

By maintaining the facilities of the school building, Building Administrator D attempted to send the message to various stakeholders that he cared about the school and the level of education provided to students. This level of care is why this administrator became livid when a parent who was a real estate agent in the community told him that her colleagues were telling
clients that “the kids at my school were bad, that the teachers were inferior, and that the high school was a war zone” (Building Administrator D, personal communication, May 6, 2015). Building Administrator D explained that the real estate agents in the community were trying the same blockbusting tactics that occurred in the early 1970s by attempting to frighten people into listing their homes. In responding to this information, the building administrator sent out 10 handwritten personal invitations to the real estate agents in the area inviting them to a luncheon at the school. According to the invitation, the purpose of the luncheon was to recognize the distinguished real estate agents working in the community. This luncheon was hosted in the spring right before the housing market started to pick back up. When recalling this event, this building administrator explained:

Before serving the food, I told all of them we were going to take a tour of the building that they called a “war zone.” Boy, I was so mad! I directed them to walk into the boys and the girls bathrooms and count the broken mirrors. Further, I said to them, “I want you to look at all of the graffiti in those bathrooms and look at how dirty the floors are.” I was getting sarcastic with the real estate agents. At the end of the tour, I asked them, “How many broken mirrors did they see?” Well, they responded, “we didn’t see any.” I asked, “What about the graffiti that’s in there?” They responded by saying “no.” Well, I said “Then where is that war zone that you guys are talking about?” I explained to the realtors that I never wanted to hear that again. (Building Administrator D, personal communication, May 6, 2015)

Ultimately, this building administrator’s interactions with the real estate agents provided a level of insight into how changes in the demographics of the housing market directly relate to schools. This experience speaks to the perception that as the demographics of the community change, the
quality of the education provided at the school declines. In this example, the real estate agents fostered as well as capitalized on this conceptualization as it caused individuals to sell their homes.

In conclusion, the data collected from the building administrators provided insight into the interplay between changes in the housing market and schools. As the socioeconomic composition of a community changed, one administrator explained that the district leaders faced a new challenge in understanding the power allegiances that dictated how money was spent and determined which children benefited from these decisions. Another administrator explained that the Section 8 housing built in his school’s catchment area significantly changed the demographics of the students attending the school. Over a 40-year period, the incorporation of Section 8 housing into this community caused a domino effect whereby an increasing number of families made the decision to sell their homes to reside in St. Charles County (Building Administrator D, personal communication, May 6, 2015). Furthermore, this building administrator outlined the actions he took to confront the negative perceptions that real estate agents were conveying to potential buyers about his particular high school.

**Changes in the housing market and its impact on parental expectations.** As the socioeconomic levels of the residents living in the community changed, the school administrators interviewed for this study noted that parental expectations concerning post-secondary planning, extracurricular activities, and educational outcomes occurring within the school also changed. When reflecting on the new businesses and higher priced residential homes being built in St. Charles County, one building administrator reported that the increase in the socioeconomic level of the residents living in the community amplified the level of parental expectations surrounding students obtaining 4-year college degrees. To this end, this building administrator explained:
Before the new housing developments, the parents residing in this area worked in trades jobs. Twenty years ago, when I talked to parents about their child having a 4-year college experience, parents would respond by explaining that “college is not an option because they are going into the trade job.” (Building Administrator A, personal communication, April 20, 2015)

This building administrator explained that now the majority of the parents residing in the school’s catchment area wanted their children to obtain a 4-year college degree rather than entering a trade job after high school. Another building administrator working in St. Charles County explained that almost 100% of the parents in his school wanted their children to attend college (Building Administrator B, personal communication, April 22, 2015). Further, this administrator reflected that the parents in his community had the expectation that not only would their student be college ready, but he or she would succeed in a post-secondary environment.

In contrast, another building administrator reflected that as the socioeconomics of his school catchment area declined, he noticed fewer students attending 4-year colleges. Additionally, parents had become increasingly less involved and had lower educational expectations for their students (Building Administrator D, personal communication, May 6, 2015). In addressing parents becoming less involved, Building Administrator D shared a story regarding a conversation he had with a Black family who sent their child to his school. In recounting this conversation, the building administrator reflected:

I worked with many fabulous families in my tenure as a building principal. In particular, one of my favorite families was a Black family that was very involved in the PTA and attended every event at the school. This family had high educational expectations for both their children and the school. After their last child graduated, I approached the parents
and asked them, “Are you guys going to return to the PTA in the fall and continue to support the high school?” The parents responded. “No. We are moving to St. Charles. We see what is moving into the community.” (Building Administrator D, personal communication, May 6, 2015)

This building administrator noted that he was surprised by this feedback. This conversation provided a new level of understanding for this administrator that the decline in SES rather than the race of the new residents moving into the area was perhaps a bigger contributing factor in this family’s decision to sell their home and move to St. Charles.

In further discussing parental expectations within the community as they pertained to educational outcomes, another building administrator explained that parents who resided in his school district’s catchment area were working class. According to Building Administrator C, there was a college graduate living in less than half of the homes in his district’s catchment area. Further, he explained that despite the lack of a college education, parents in his community were passionate about their children’s education. However, his parents’ lack of understanding associated with how schools function affected their ability to question and request specific educational outcomes for their children. This building administrator explained that his parents were constantly informing teachers that they wanted their children to be successful and graduate from high school. Yet, during these conversations, he noted that parents were not discussing specific outcomes like increased literacy and critical thinking skills (Building Administrator C, personal communication, April 29, 2015).

In reviewing the responses of the administrators, a pattern unfolded whereby building administrators who worked in a community with an increased SES reported that parental expectations associated with the attainment of a 4-year college degree increased. In contrast, the
administrators who worked in districts that experienced a decrease in the SES of the residents denoted that parents became less involved at the school and did not speak about specific skill sets they wanted their children to obtain as a means to be college ready.

**Level of services provided by the school.** In meeting parental expectations associated with academic achievement, two different themes emerged. First, some of the administrators spoke about AP initiatives they implemented to meet the expectations of their parents. Another administrator discussed the need for teachers to be aware of the struggles that students are facing outside of the classroom as they directly relate to achievement levels on AP exams.

In discussing the relationship between the increase in the SES of his students and more parents expecting that their children would attend a 4-year college, Building Administrator A explained that the increase in the number of AP classes offered assisted him in meeting the parental expectations of the community as these courses helped students become college ready. To this end, the building administrator joked:

> It is kind of like, “What came first? The chicken or the egg?” Ten years ago, we offered some AP classes and dual credit classes. I would not say that they were large programs, but they did exist. Since this time, we have started to move toward increasing our AP class offerings because we want our students to get college credit while they are in high school. I would say that 10 years ago we gave about 50 AP exams at our building. Last year we administered 625 AP exams. (Building Administrator A, personal communication, April 20, 2015)

To increase the number of students enrolled in AP classes, this building administrator spoke to the utilization of the AP Potential Matrix to increase parental and student awareness of the benefits of taking an AP class. The AP Potential Matrix involves analyzing the standardized
achievement scores of students in conjunction with recommendations from teachers to determine unidentified students who possess the aptitude needed to succeed in these rigorous courses. The high school sends letters home to the parents of these students for the purpose of explaining that their child possesses the aptitude necessary to succeed in an AP course and should consider taking an AP course. This building administrator expressed an interest in expanding the AP program at his building as some high schools located in St. Louis County administered 1,000 AP exams during the testing season.

Building Administrator B was asked whether his high school implemented curricular initiatives to meet parental expectations associated with the attainment of a 4-year college degree. In responding to this question, the administrator stated, “Oh yeah, absolutely!” To increase the number of students enrolled in AP classes, this high school did not send out an AP potential letter to parents. Rather, leaders implemented an open student enrollment structure for all the AP classes offered at the building. As a result of this open student enrollment structure, this high school increased its AP course offerings, the number of students enrolled in AP classes, and the number of students who take the AP exam. In addition to an expanding AP program, Building Administrator B explained that his school had an increased number of students scoring 3 or higher on the AP exams.

In contrast, Building Administrator C, who worked in a community that experienced the pattern of residential income flight, reflected on the AP focus occurring at his high school as well as the subsequent decrease in AP exam scores. Building Administrator C explained that his district had focused on increasing the number of minority students enrolled in AP classes. Over the past 3 years, the AP enrollment numbers had doubled at this particular high school. With this increase in the number of students taking AP classes, the high school experienced a significant
drop in student scores on AP exams. Last year, this high school had four different AP classes where over 80% of the students enrolled in the class obtained the lowest score of 1 on the AP exam (Building Administrator C, personal communication, April 29, 2015). When the administrative team looked over these results, the question was raised, “Are we as a building being culturally responsive in our teaching approach?” The building administrator further explained:

At my high school, 71% of the student population qualifies for Free and Reduced Lunch. Real life consequences come with this percentage. We have students who are working two jobs, students missing school to take care of their siblings, and students who cannot do their homework because they have to help their parents with immigration paperwork to avoid deportation. In understanding the reality facing our students, the next step at the building level is to look at our instructional practice to determine what we need to do to ensure that our brightest kids are succeeding in these AP courses. (Building Administrator C, personal communication, April 29, 2015)

Further, Building Administrator C explained that the student population at his high school dictated the reality whereby AP teachers must not only account for a rigorous curriculum, but must structure the class in a manner that supports many factors occurring outside of the classroom. As a result, the AP teachers in the building began discussing the amount of homework assigned in these classes for the purpose of assessing whether the work itself was pertinent and contributed to students’ understanding of the content.

Summary. In conclusion, the building administrators interviewed provided insight into their perceptions of how the socioeconomic composition of the community related to the schools explored in this study. Building administrators working in communities with a higher SES
discussed an increased level of parental expectations. Furthermore, these administrators outlined the actions they took to increase their AP programs as a means to meet these expectations. Building administrators who worked in communities with a lower SES discussed the housing market as it related to the residents living in the district as well as the students attending their schools. Additionally, an administrator noted that his parents cared about their children succeeding in school despite lacking the knowledge to request specific educational outcomes. Another administrator explained that with the decrease in the SES of his community members, he noticed that fewer parents were volunteering at the school. Finally, administrators and teachers working in the community with a lower SES had to recognize that curricular modifications needed to occur in AP classes because of the struggles students faced outside of the classroom.

**Summary of Qualitative Findings**

The information gathered from the interviews showed that districts and schools did adjust the level of services they provided to students as a means to meet the desires of the community. In understanding how school leaders adjusted the level of services provided to their students, it is important to understand how the SES of the individuals residing in the community influenced decisions occurring at the building level. Realtors provided insight as to reasons for purchasing homes. Home buyers in North St. Louis County were either first-time home buyers wanting to build their credit score or individuals who wanted to rebuild their bad credit, whereas buyers in St. Charles County were seeking job opportunities and access to better schools.

School board members and building administrators provided insight into how residential income segregation influenced the decision-making processes occurring in schools. With the migration of residents moving to St. Charles County, this community saw an influx of residents
moving into that area who previously lived in the City of St. Louis. In addressing this demographic change, the school board members talked about making fiscally sound decisions as well as attempting to obtain additional revenue. Furthermore, they spoke about the social service programs the district implemented to meet the needs of their community.

With regard to the decision-making process occurring within a high school, the information and perspectives gathered from the building administrators varied depending on the community in which the school administrators worked. The building administrators working in more affluent areas noted that changes in sociodemographics tended to influence decision-making as it related to the expansion of their school’s AP program as a means to meet the demands of parents. Decreased levels in the sociodemographics of the community influenced how teachers delivered their AP curriculum to students as they faced many challenges both in and out of the classroom.

Mixed Method Results

The qualitative interviews provided further insight into the relationship between residential income segregation and the educational outcomes of school districts. As previously outlined, the quantitative results showed that as the independent variables of FRL, household income (low income category), house value (houses valued at $100,000 or less), and Black student populations increased, the dependent variables of ACT composite scores and the number of graduates attending a 4-year school decreased. Additionally, high levels of household income and an increased number of White students correlated to higher achievement levels on the ACT. For the high schools explored in the study, in 2013, the average ACT composite score was 19.4 for the schools located in North St. Louis County, whereas in St. Charles County the average ACT composite score was 22.7 (DESE, n.d.). When assessing the quantitative results associated
with the decrease in ACT composite scores along with the decrease in the number of graduates attending a 4-year college, the qualitative results provided insight into mitigating factors that potentially influenced lower educational outcomes. The qualitative findings reflected that as individuals with financial means moved out of particular communities, both the school districts and students were left addressing real life consequences that related to their achievement level in school (Building Administrator C, personal communication, April 29, 2015).

In expounding on this concept of real life consequences, the school board members and building administrators interviewed reported that some students were living in homes where parents were working multiple jobs to pay the bills. Parents had reported to the school district that they did not have the financial means to feed their children over the summer. Students skipped school because they were ashamed of their clothes (School Board Member A, personal communication, May 5, 2015). Many students in this community experienced their electricity and water being shut off. This level of financial hardship often caused families to move frequently. According to Building Administrator D, transient students usually had gaps in their educational achievement levels and were frequently dealing with significant issues that occurred outside of the school day. In some cases, the students themselves were working two jobs to help their families. According to School Board Member B, many students lacked adequate supervision at home, which increased the number of teenage pregnancies at the school as well as the number of students involved in the judicial system. Ultimately, there was a relationship between the struggle these families and students faced in acquiring basic needs and students’ ability to succeed in school.

According to Building Administrator C, the ability to complete school work both in and out of the classroom was negatively affected by these real life consequences that students were
forced to address. To this end, one high school experienced a decline in AP exam scores after increasing the number of FRL students enrolled in AP courses. Last year, this high school had four different AP classes where over 80% of the students enrolled in the class received a 1 on the AP exam (Building Administrator C, personal communication, April 29, 2015). These qualitative findings suggest students with a lower SES are often dealing with real life consequences that disrupt their learning.

When assessing the quantitative results that showed the number of graduates attending a 4-year college decreased when the SES of the community declined, the qualitative findings provided insight into a community where parents viewed graduating high school as the milestone of educational success. According to Building Administrator C, very few parents living within his district’s catchment area had a 4-year college degree. The findings showed this lack of post-secondary experience may have deterred parents in this particular community from requesting specific educational outcomes that are necessary for students to succeed at a 4-year college (Building Administrator C, personal communication, April 29, 2015). In contextualizing the quantitative findings as they pertained to lower ACT composite scores as well as the decreased number of students attending a 4-year college, the qualitative findings provided a level of insight into factors occurring within the community and how this related to schools.

In communities where income and the number of White students increased, the quantitative findings reflected that the opposite pattern occurred as these factors correlated to higher achievement levels on the ACT. The interviews provided insight into how an increase in the socioeconomic level of residents changed parental expectations associated with their children being accepted at 4-year colleges. Before new business developments and the increase in the number of higher priced residential homes in St. Charles County, the parents residing in
this area worked in trade jobs. During this time frame, parents communicated to the school that their children would be entering trade jobs after high school and, as a result, educational efforts focused on attending a 4-year college were done in vain (Building Administrator A, personal communication, April 20, 2015). As the housing market changed in a manner that increased the SES of the students attending this particular high school, the same building administrator reflected that now the majority of his parents wanted their children to obtain a 4-year college degree rather than entering trade jobs (Building Administrator A, personal communication, April 20, 2015). Building administrators working in this area reflected that roughly all the parents residing in their district’s catchment area expected their children to attend college.

The qualitative findings provided a level of insight into the dynamic whereby building administrators noticed that expectations associated with students attending a 4-year college increased when the SES of the parents living in the community increased. This parental expectation associated with students attending a 4-year college expounded on the quantitative findings. These findings indicated that increased levels of income and the number of White students correlated with higher ACT scores, as the ACT is used as an entrance exam at countless colleges across the country. Ultimately, both the quantitative and the qualitative findings of this study provided a level of insight into several contributing factors that support the complexity of residential income segregation and its interaction with schools and students. Chapter 6 concludes with research recommendations, considerations, and future areas of study regarding the relationship between residential income segregation and schools.
CHAPTER 6: CONCLUSION

A new pattern of socioeconomic stratification and multiculturalism is occurring whereby lower middle class communities are drawing minorities from the city to the suburbs (Orfield et al., 2012). Suburban rings that are adjacent to city boundary lines are becoming more economically and racially diversified. As a result, a trend is emerging where White populations are moving to the outermost suburban rings and leaving many communities and their schools behind (Frankenberg & Orfield, 2012). When selecting new homes, middle class families balance the quality of schools with the cost of housing, as school resources and educational outcomes often reflect the economic circumstances of local residents. People typically live in neighborhoods with individuals who are socioeconomically and racially similar (Lareau & Goyette, 2014).

This migratory trend created a pattern of residential income segregation as affluent families are choosing to reside in particular communities for the purpose of gaining access to good schools (Holme, 2002). The act of purchasing a home to gain access to better schools is called the unofficial choice market. Over time, the actualization of choice by mortgage has influenced the educational opportunities provided to students. As a result, it is important to gain additional understanding regarding the trend of residential income segregation as it relates to greater inequalities in schools. To this end, the purpose of this exploratory mixed methods study was to further understand the complex issue of residential income segregation and its relationship to schools. The focus of Chapter 6 is on reviewing and summarizing the results of the three research questions as a means to understand the theoretical significance of the findings.
Furthermore, this chapter contains a discussion of the limitations of the study and concludes by outlining future implications.

**Findings Related to the Level of Services Provided**

The purpose of RQ1 was to examine whether a correlation existed between residential income segregation and the level of services provided by the school district, and if so, whether this pattern changed over time. The findings indicated there was no relationship between residential income segregation and the level of services provided by the school district. The findings associated with RQ1 were not surprising. When the levels of services provided by schools were discussed within other studies, they were usually referenced anecdotally. To this end, Piketty (2014) noted that little attention has been given to how extracurricular activities are affected in schools beyond the fact that they replicate a structure of inequality occurring in society.

During the 2009-2010 school year, Putnam (2015) found that high schools with 75% poverty or more offered one-third the number of AP courses when compared to wealthy districts. Anecdotal data gathered for this research study indicated the Whitfield School District located in St. Charles County offered an average of 21 AP classes to students whereas school districts located in North St. Louis County offered an average of 12 AP classes to students. Furthermore, Putnam found that high schools with wealthy students offered twice the number of team sports when compared to schools that served mainly low-income students. Studies have shown that upper-middle class students are more involved in school sports and clubs when compared to students who are being raised in a working class family (Putnam, Frederick, & Snellman, 2012). Although results of this study did not enable the researcher to state that a statistically significant relationship existed, the belief remains that a level of interplay does in fact occur between the
level of services provided by a school in relation to the pattern of income segregation, housing segregation, and racial segregation.

**Findings Related to Educational Outcomes**

The findings of this study indicated there was a relationship between residential income segregation and the educational outcomes obtained by students. All of the high schools reflected in this study independently contracted with ACT to administer this exam to their junior students. The results pertaining to RQ2 indicated that as the variables of FRL, household income (low income category), home value (houses valued at $100,000 or less), and Black student population increased, the ACT composite scores and the number of graduates attending a 4-year college decreased. Additionally, as the high income category and the White student population increased, so did ACT scores. The results reflect that there was a correlation between the pattern of residential income segregation and student performance outcomes on the ACT as it related to the school districts explored in this study.

When comparing these findings to the results of other studies, similar patterns were found. When assessing standardized test scores, grades, high school graduation rates, and college enrollment and completion rates, Reardon (2013) found that low-income students underperformed high-income students. In addition to standardized test scores, Ladson-Billings (2006) noted discrepancies in educational outcomes among minority students existed when examining high school dropout rates, enrollment in honors and AP classes, and admittance to college. These studies once again substantiate that a relationship between race and income exists as educational outcomes become unevenly distributed in geographic regions of racial homogeneity (Reardon, 2012).
Community Response to Demographic Change

The qualitative findings pertaining to RQ3 indicated districts and schools adjusted the level of services provided to students as a means to meet the desires of the community. A building administrator who worked within St. Charles County explained that the parental expectations associated with obtaining a 4-year college degree increased as the SES of the individuals residing in the area also increased. In further attempting to meet parental expectations associated with their child’s attainment of a 4-year college degree, the building administrators working in this community discussed their focus on AP classes. The information gathered from these administrators aligned with the work of Wiley et al. (2012), who found that high schools, in an attempt to be responsive to the parental focus of preparing students to be competitive and successful in their post-secondary endeavors at 4-year universities, are implementing initiatives to increase student enrollment in AP classes. This came about as a means to demonstrate the quality of instruction occurring within the school.

In contrast, when discussing how they adjusted the services provided to students, school board members and school building administrators living and working in communities that experienced a flight of wealthier residents spoke about the burgeoning need to create and implement social initiatives outside the classroom to meet the needs of their community. One school district partnered with several churches in the community and decided to open its doors during the summer to provide breakfast and lunch to students who needed meals over the summer. When discussing AP classes, a building administrator explained that a student’s ability to complete the work associated with these classes was hampered when he or she was helping parents complete the immigration paperwork necessary for them to remain in the country.
Another administrator explained that he witnessed a decline in parental expectations and involvement at the school when the SES of the community decreased.

The qualitative findings of this study helped to conceptualize the interplay in the socioeconomic composition of a community and the organizational behavior of districts and schools. Ultimately, the pattern of residential income segregation hampers the ability of low-income students to gain access to the resources that are often located in affluent White neighborhoods (Jargowsky, 2014). The findings of this study support those of other studies that suggested the socioeconomic characteristics of a family are the strongest predictors of student achievement (Reardon, 2013).

**Summary of Findings**

The findings of this study provide insight into the dynamic whereby public education is a consumable good that is influenced by the pattern of residential income segregation. Results indicated that as the pattern of residential income segregation unfolds, the students who remain in the communities vacated by wealthier residents experience a decrease in their level of achievement on standardized exams. Since this was a non-experimental study, the findings can only speak in terms of correlation and not in causation. As a result, it is unknown whether this decrease is because the students who remain are lower achieving (and the high achievers left) or because the change in resources available after the other students have left and/or the lack of motivation/challenge provided by these higher achieving students. Due to the correlational nature of this study, one is unable to know for sure which of these is at work, or if both factors are at play.

The quantitative findings of the study help explain how the educational outcomes achieved at high schools are impacted by the pattern of residential income segregation. The
The qualitative findings of this study provide insight into the dynamic of education being a consumable good that changes to meet the desires of the consumer. These results indicate that as the pattern of residential income segregation manifested through an increase in the variables of FRL, household income (low income category), house value (houses valued at $100,000 or less), and Black student populations, the ACT composite scores and the number of graduates attending a 4-year school decreased. Additionally, as high levels of household income and the number of White students increased this study found that higher obtainment levels were achieved on the ACT. The qualitative findings helped to conceptualize the interplay in the socioeconomic composition of a community and the organizational behavior of districts and schools. Real estate agents explained that home buyers are leaving North St. Louis County and deliberately moving to St. Charles County because they were in search of better schools. In explaining the impact of this migratory pattern, school board members and school building administrators working in communities that experienced a flight of wealthier residents, spoke about the burgeoning need to create and implement social initiatives outside of the classroom in an attempt to increase the academic achievement levels of the students still living in the community. Ultimately, the findings highlight the relationship between choice by mortgage and educational inequities. Increased levels of educational inequities resulting from residential income segregation as indicated in this study are not unique to the St. Louis area.

According to Fry and Taylor (2012), the pattern of residential income segregation from 1980 to 2010 increased in 27 of the nation’s 30 largest major metropolitan areas. With 73% of children attending their neighborhood schools, studies have shown that in conjunction with the increase in residential income segregation, the achievement gap between students has also grown. When comparing children born in 2001 to children born in 1975, the achievement gap
increased by roughly 40% between students with income in the top 10% and students with income in the bottom 10% (Lareau & Goyette, 2014; Reardon, 2012). A contributory relationship exists between the governmental actions that occurred in the late 20th century and the expansion of residential income segregation and its impact on schools (Frankenberg & Orfield, 2012).

The U.S. Supreme Court’s decisions in Milliken v. Bradley and Parents Involved in Community Schools v. Seattle School District No. 1 helped to shape the current pattern of residential income segregation that is dictating an educational landscape of inequities. In Milliken v. Bradley in 1974, the U.S. Supreme Court ruled that if residential boundaries were not intentionally created to segregate, then the racial divisions within schools were permissible. In Parents Involved in Community Schools v. Seattle School District No. 1 in 2007, the U.S. Supreme Court decided that school districts attempting to remediate de facto segregation in their schools could not create desegregation plans that used race as the sole determining factor for assigning students to various schools. Additionally, the court explained that the desegregation plan was not a valid enough reason to violate the protections set forth by the U.S. Constitution to prevent racial discrimination. Due to the inextricable relationship between race and income, these decisions aided in creating a pattern of residential income segregation as individuals are able to purchase homes and economically isolate themselves without restriction. Ultimately, the pattern of residential income segregation is unfettered. The relationship between residential income segregation and the educational opportunities provided to children will continue to develop as federal, state, and local governments are not taking the necessary steps to address this obstacle.
Theoretical Significance of the Findings

This research study was designed to further the understanding of the unofficial choice market whereby high-income parents choose to purchase homes in certain areas as a means to gain access to high-quality public schools (Holme, 2002). The findings showed that people with the financial means are leaving North St. Louis County and purchasing homes in St. Charles County to gain access to better schools. As a result of this migratory pattern of residential income segregation, the students remaining in North St. Louis County are poorer and their educational achievement levels on the ACT as well as the number of students attending a 4-year college subsequently decreased. Ultimately, this pattern of residential income segregation that unfolded contributed to educational inequities for the students remaining in North St. Louis County.

The pattern of residential income segregation explored in this study highlights that self-interested individuals with financial means bought homes for the purpose of consuming education in a manner that was detrimental to the common good of society. According to PC theorists, the educational inequalities that are resulting from the unofficial choice market are taking place because not all consumers of education are able to “vote with their feet” (Tiebout, 1956). Specifically, families without the financial means are not able to purchase homes in specific areas in order to gain access to better schools. Chubb and Moe (1990) suggested creating charter schools and voucher programs to incorporate market influences into education for the purpose of ameliorating inequalities. They contended that a structure in which all individuals are allowed to select the educational opportunities provided to their children will create an educational landscape that meets the needs of its consumers. Despite the conceptualization that choice will improve the educational opportunities provided to all students, there is research to
suggest that the same patterns of inequities occurring in public schools are also transpiring in charter schools across the country.

In examining the patterns occurring in charter schools, Frankenberg and Lee (2003) reported that “charter schools are largely more segregated than public schools” (p. 3). Additionally, when reviewing standardized testing results from charter school and public school students in Michigan, Bettinger (2005) found that the test scores of charter school students did not improve and may have actually declined in relation to their public school counterparts. With regard to the 27 charter schools located in the City of St. Louis, only three of these charter schools are obtaining test scores that are commensurate with schools in St. Louis County and in St. Charles County (Goodman, 2013). The results for the remaining charter schools in the City of St. Louis vary significantly. Results on standardized achievement exams indicate students in some charter schools are outperforming students attending SLPS schools whereas other charter schools are underperforming their public counterparts located in the city. Interestingly, research shows that regardless of the choice decision, either selecting a charter school or actualizing choice by mortgage, parents are guided by the same influential factors when making educational decisions for their children. Parents are influenced by “location, convenience, information on school programs, quality, and social and racial composition derived from (segregated) social networks” when selecting a school for their child (Lubienski, Gulosino, & Weitzel, 2009, p. 612). Ultimately, the restructuring of education in a manner that provides everyone with the ability to choose will not remedy inequities as the model itself is predicated upon the decisions of individuals who act in a manner to maximize their own self-interests.

In addressing these educational inequities, leaders in St. Louis have designed various initiatives to help remediate this problem. The accomplishments and shortcomings of the
initiatives occurring within the St. Louis area provide insight into the continued importance of addressing the educational inequities provided to students. During the 1993-1994 school year, 13,500 students living in the City of St. Louis were bused to schools located in St. Louis County and St. Charles County (Singer 2012b). In 1993, Missouri Attorney General, Jay Nixon, filed a motion in U.S. District Court to end the busing program. In 1999, an agreement was reached that ended the court mandate to desegregate SLPS. However, in this agreement the court stipulated that the voluntary interdistrict transfer program itself could not be terminated. As a result, in the years since this decision, the number of available seats for students at the various schools participating in this program has declined.

For the 2012-2013 school year, the voluntary interdistrict transfer program enrolled 5,100 students. For the upcoming school year, the director of the voluntary interdistrict transfer program indicated they have accepted roughly 3,000 applications for roughly 750 available seats (Singer, 2012a). Despite the decline in enrollment, the standardized achievement scores from students still participating in this program support the value of integration as they are outperforming students attending SLPS (Singer, 2013b). Additionally, students enrolled in this program had higher graduation rates and higher attendance rates than students attending SLPS (Singer, 2013b). These educational outcomes along with the continued desire of parents living in the city who want their children to attend better schools in the county indicates that continued efforts to address educational inequities are noteworthy and crucial in supporting the common good for society.

**Limitations**

In order to synthesize the findings of this study, it becomes important to understand the limitations that affected the analyses. First, the study was designed to evaluate and complete
correlations between data sets that used different matrices as both district level and individual high school building level data were gathered. This use of two different data sets dictated that certain correlations could not be completed, which limited the scope of understanding. For example, XPS was a data set that only existed at the district level. This value was averaged for all of the buildings in the district; therefore, middle schools and elementary schools were factored into this variable. Some of the districts explored in this study educate over 60,000 kids. On the other hand, data pertaining to FRL and White and Black students were obtained for each high school explored in the study. The researcher chose to use building level data within these variables as fluctuations within these demographics would be more noticeable than if averaged across 60,000 students district wide. As a result of these different data sets, correlations between XPS and FRL as well as correlations between XPS and White and Black students were not completed because it would have required comparing two different data sets that were not aligned as one existed at the district level and the other existed at the building level.

The use of the ID equation was not helpful in providing additional insight into the pattern of residential income segregation because the data sets used in this study limited the scope of this equation. The utilization of this equation dictates the need for a large sample size to adequately measure the evenness of groups across neighborhoods. When attempting to define neighborhood segregation and its influence on schools, Jargowsky (2014) used data from the U.S. Census Summary and the American Community Survey as they pertained to the 384 metropolitan areas in the United States to complete his ID calculations. Ultimately, the smaller sample size of the current study limited the scope of the ID findings. For example, the current study involved looking at White and Black student populations. These groups had a small number of members, and as a result, the ID findings for these student populations were often directly proportional. For
example, the 2013 ID results for the White and Black student populations at CHS-C indicated a score of .090 for the White students and a score of .080 for the Black students. These results reflect that these populations were both dissimilar to the average of the district. This information is not necessarily informative as it pertains to understanding the pattern of residential income segregation occurring in the high schools that make up this school district. In the future, as the Hispanic population grows in St. Louis, a third data set could be added to the group, which would make the use of the ID equation more meaningful.

According to Reardon, Firebaugh, O’Sullivan, and Matthews (2006), the most common method used to measure income segregation in existing research is to divide a population into two categories based on a chosen threshold. After the categories are assigned, the ID equation or another equation with the same functionality can be used to compute a two-group segregation measure to assess the level of segregation between the two groups. Examples of this approach can be found in the literature in the field of sociology (Fong & Shibuya, 2000; Massey, 1996; Massey & Eggers, 1993; Massey & Fisher, 2003). Despite the commonalities of this approach as it pertains to measuring residential income segregation, little research exists with regard to using these metrics to assess income segregation as it pertains to home values and housing trends. When implementing the methodology associated with the use of ID to assess home values, the findings of the current study were not necessarily helpful in providing an additional level of insight. When evaluating home values, the researcher created the cutoff of homes valued at $100,000 or less. In some instances, this became a false dichotomy between “poor” and “not poor” when comparisons actually may have been comparing very poor to everyone else. On the other hand, when looking at the Fulton School District, nearly all homes were below $100,000.
As a result, it would have been helpful to use a graded scale instead of a yes or no binary condition that is dictated by the ID equation.

Furthermore, when assessing the findings as they pertained to home values, many of the houses in the explored catchment areas appreciated in appraised or reported value while household income values remained stagnant. This was particularly true in the early 2000s. As a result, comparing home values for the decennial years (i.e., 1990, 2000, 2010) may have been problematic as home values may not have been the best proxy for income status. Results of this study showed FRL and household income figures to be more accurate or more indicative of actual poverty status.

**Conclusion**

This study was designed to further examine the relationship between the unofficial choice market, whereby individuals actualize choice through the residential home selection process, and schools. The current unofficial choice dynamic creates disparities in education. Furthermore, it occurs in an indirect manner and operates outside of the realm of legislative mandates. A concern for school quality for all students as it relates to the common good is not often considered when parents actualize their preferences for goods and services in attempting to access the best educational opportunities for their children (Goyette, 2014). This current consumer-based reality dictates that some citizens may be better served than others with regard to educational outcomes (Lareau & Goyette, 2014). The growth pattern of the unofficial choice market is transforming the interrelationship between race and income as educational outcomes, resources, and services are becoming unevenly distributed in geographic regions of racial homogeneity (Reardon, 2012).

At the present time, this pattern unfolds and manifests in an indirect manner that makes it hard to define, conceptualize, and measure. To this end, the researcher attempted to quantify
residential income segregation through the use of ID and percentage data. The findings yielded an understanding of the migratory pattern of residential income segregation that affected two counties in St. Louis, Missouri. First, the researcher was unable to determine causation between the pattern of residential income segregation and the level of services provided to students. A greater degree of difficulty occurred when attempting to measure this potential relationship as it would require comparing categorical variables to continuous variables. Anecdotal data gathered for this research study indicated that discrepancies for these variables existed between the schools located in North St. Louis County and St. Charles County. For example, results showed the Whitfield School District, located in St. Charles County, offered an average of 21 AP classes to students while school districts located in North St. Louis County offered an average of 12 AP classes to students. Despite the fact that consistent relationships were not found between residential income segregation and the level of services provided, the researcher still holds the belief that a level of interplay does in fact occur between these variables.

Next, the quantitative findings of this study confirmed the results of other studies in which relationships were found between income and the level of achievement on standardized testing measures (Reardon, 2012). The results indicated standardized achievement outcomes increased when wealthier residents moved into the community and when high schools experienced an increase in their White student enrollment numbers. Additionally, as wealthier White residents moved out of North St. Louis County, the students remaining in these communities were poorer and their educational achievement levels on standardized exams as well as the number of students attending a 4-year college decreased. Finally, the qualitative findings provided insight into how the level of services provided to students was adjusted to meet the preferences of the community. Building administrators who worked in wealthier
communities discussed curricular measures occurring within the classroom to meet the demands of the community. In contrast, stakeholders residing or working in communities with a lower SES discussed initiatives occurring outside the classroom to positively affect student learning while attempting to meet the needs of their community members. Ultimately, conceptualizing the scope as well as defining the effect of residential income segregation on schools is an integral component in remediating the landscape of educational inequities as change will not occur if people do not fully understand the scope of this problem.
REFERENCES


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schools, neighborhoods, and communities: Toward civic responsibility (pp. 125-151).
Lanham, MD: Rowman & Littlefield.


APPENDIX A:

FIGURES

Figure 1. Pattern of White populations moving to outermost suburban rings.
Figure 2. 1990, 2000, and 2010 Census Data
Figure 3. Demographic Data of St. Louis
Figure 4. Creswell’s (2008) procedures for qualitative analysis.
Figure 5. Campbell free & reduced lunch indices of dissimilarity.

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<td>0.0313</td>
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Figure 6. Campbell free & reduced lunch (percentage).
Figure 7. Forsyth free & reduced lunch indices of dissimilarity.
Figure 8. Forsyth free & reduced lunch (percentage).
Figure 9. Fulton free & reduced lunch indices of dissimilarity.
**Figure 10.** Fulton free & reduced lunch (percentage).

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Figure 11. Wilson free & reduced lunch indices of dissimilarity.
Figure 12. Wilson free & reduced lunch (percentage).
Figure 13. Rossman free & reduced lunch indices of dissimilarity.
Figure 14. Rossman free & reduced lunch (percentage).
Figure 15. Whitfield free & reduced lunch indices of dissimilarity.
Figure 16. Whitfield free & reduced lunch (percentage).
Figure 17. 1990 household income indices of dissimilarity.
Figure 18. 2000 household income indices of dissimilarity.
Figure 19. 2010 household income indices of dissimilarity.
Figure 20. 1990 household income (percentage).

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Figure 21. 2000 household income (percentage).
Figure 22. 2010 household income (percentage).
Figure 23. Household income indices of dissimilarity for Campbell School District.

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<td>0.1615</td>
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Figure 24. Household income (percentage) for Campbell School District.
Figure 25. Household income indices of dissimilarity for Forsyth School District.
Figure 26. Household income (percentage) for Forsyth School District.
Figure 27. Household income indices of dissimilarity for Fulton School District.
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**Figure 30.** Household income (percentage) for Wilson School District.
Figure 31. Household income indices of dissimilarity for Rossman School District.
Figure 32. Household income (percentage) for Rossman School District.
Figure 33. Household income indices of dissimilarity for Whitfield School District.

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Figure 34. Household income (percentage) for Whitfield School District.
Figure 35. 1990 house value indices of dissimilarity.
Figure 36. 2000 house value indices of dissimilarity.
Figure 37. 2010 house value indices of dissimilarity.
Figure 38. 1990 house value (percent of houses less than $100K).
Figure 39. 2000 house value (percent of houses less than $100K).
Figure 40. 2010 house value (percent of houses less than $100K).
Figure 41. House value indices of dissimilarity for Campbell School District.
Figure 42. House value (percent of houses $100,00 or less) for Campbell School District.
Figure 43. House value indices of dissimilarity for Forsyth School District.
Figure 44. House value (percentage of houses $100,000 or less) for Forsyth School District.

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<td>pct. House below $100K</td>
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<td>48.0%</td>
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Figure 45. House value indices of dissimilarity for Fulton School District.
Figure 46. House value (percent of houses $100,000 or less) for Fulton School District.
Figure 47. House value indices of dissimilarity for Wilson School District.
Figure 48. House value (percent of houses $100,000 or less) for Wilson School District.
Figure 49. House value indices of dissimilarity for Rossman School District.
Figure 50. House value (percent of houses $100,000 or less) for Rossman School District.
Figure 51. House value indices of dissimilarity for Whitfield School District.
Figure 52. House value (percent of houses $100,000 or less) for Whitfield School District.
Figure 53. Campbell White student enrollment indices of dissimilarity.
Figure 54. Campbell Black student enrollment indices of dissimilarity.
Figure 55. Campbell White student enrollment (percentage).
**Figure 56.** Campbell Black student enrollment (percentage).

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<td>87.84%</td>
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Figure 57. Forsyth White student enrollment indices of dissimilarity.
Figure 58. Forsyth Black student enrollment indices of dissimilarity.
Figure 59. Forsyth White student enrollment (percentage).
Figure 60. Forsyth Black student enrollment (percentage).
Figure 61. Fulton White student enrollment indices of dissimilarity.

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Figure 62. Fulton Black student enrollment indices of dissimilarity.
Figure 63. Fulton White student enrollment (percentage).
Figure 64. Fulton Black student enrollment (percentage).

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<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>27.30%</td>
<td>27.20%</td>
</tr>
<tr>
<td>2000</td>
<td>28.16%</td>
<td>30.00%</td>
</tr>
<tr>
<td>2005</td>
<td>32.97%</td>
<td>34.40%</td>
</tr>
<tr>
<td>2010</td>
<td>40.91%</td>
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</tr>
<tr>
<td>2013</td>
<td>42.13%</td>
<td>39.00%</td>
</tr>
</tbody>
</table>
Figure 65. Wilson White student enrollment indices of dissimilarity.
Figure 66. Wilson Black student enrollment indices of dissimilarity.
Figure 67. Wilson White student enrollment (percentage).
Figure 68. Wilson Black student enrollment (percentage).

<table>
<thead>
<tr>
<th>Year</th>
<th>Wilson</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>24.47%</td>
<td>18.70%</td>
</tr>
<tr>
<td>2000</td>
<td>19.25%</td>
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</tr>
<tr>
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</tr>
<tr>
<td>2010</td>
<td>27.72%</td>
<td>15.90%</td>
</tr>
<tr>
<td>2013</td>
<td>29.03%</td>
<td>14.90%</td>
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</table>
Figure 69. Rossman White student enrollment indices of dissimilarity.

<table>
<thead>
<tr>
<th>Year</th>
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<th>RHS - B</th>
<th>RHS - C</th>
<th>RHS - D</th>
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<td>1995</td>
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<td>2000</td>
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<td>0.0037</td>
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<td>2010</td>
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<td>0.0053</td>
<td>0.0053</td>
<td>0.0094</td>
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</table>
Figure 70. Rossman Black student enrollment indices of dissimilarity.
Figure 71. Rossman White student enrollment (percentage).

<table>
<thead>
<tr>
<th>Year</th>
<th>RHS-A</th>
<th>RHS-B</th>
<th>RHS-C</th>
<th>RHS-D</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td></td>
<td>94.62%</td>
<td>95.73%</td>
<td>95.47%</td>
<td>95.80%</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>97.04%</td>
<td>95.13%</td>
<td>95.77%</td>
<td>95.70%</td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>92.95%</td>
<td>92.54%</td>
<td>92.00%</td>
<td>92.20%</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>89.95%</td>
<td>87.67%</td>
<td>89.08%</td>
<td>88.20%</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td>82.24%</td>
<td>88.10%</td>
<td>86.42%</td>
<td>84.20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
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<th>RHS-B</th>
<th>RHS-C</th>
<th>RHS-D</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>89.36%</td>
<td>89.95%</td>
<td>87.67%</td>
<td>89.08%</td>
<td>88.20%</td>
</tr>
<tr>
<td>2013</td>
<td>82.24%</td>
<td>88.10%</td>
<td>86.42%</td>
<td>84.20%</td>
<td></td>
</tr>
</tbody>
</table>
Figure 72. Rossman Black student enrollment (percentage).
Figure 73. Whitfield White student enrollment indices of dissimilarity.
Figure 74. Whitfield Black student enrollment indices of dissimilarity.
Figure 75. Whitfield White student enrollment (percentage).
Figure 76. Whitfield Black student enrollment (percentage).
APPENDIX B:
INTERVIEW QUESTIONS

Semi-Structured Real Estate Interview Questions
Relationship between the unofficial choice market and its impact on public education.

Date:__________________________________________________________

School:_______________________________________________________

Interviewee (Title and Pseudo-Name):______________________________

Interviewer:__________________________________________________

Documents Obtained:___________________________________________

_______________________________________________________________

Post-Interview Commends/Leads/Notes:_____________________________

Introductory
To facilitate note taking, I would like to audio record our conversation today. Please sign the release form. For your information, only researchers on the project will be privy to the recordings, which will be eventually destroyed after they are transcribed. In addition, you must sign a form developed to meet our human subject requirements. Essentially, this document states that, (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) I do not intend to inflict any harm. Thank you for agreeing to participate!

I have planned for this interview to last no longer than 45-60 minutes. During this time, I have several questions that I would like to explore. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.

Introduction

You have been selected to speak with me today because you have experienced how change in the socio-economic composition of a community has impacted public education. Through this experience, you have a great deal of information to share about the effect of this change. My research project as a whole focuses on understanding the impact of change in the socio-economic composition of a community on the organizational behavior of districts/schools. Specifically, I am interested in studying how those impacting the field of education actually understand and respond to this educational landscape. My study does not aim to evaluate your
thoughts, experiences or leadership techniques; rather, I am hopeful that this study will ultimately lead to a broader and improved understanding of the current educational landscape.

A. Interviewee Background

1. How long have you been . . .
   ________ in your present position?
   ________ Do you reside in the community where you work?
   ________ How long have you lived in the community?
   ________ Why did you decide to purchase a home in the community?

B. Interview Question Starters

2. What influences people to purchase homes within this community?

   Probes:
   a) What is the most influential factor in guiding people’s decision to purchase homes within this particular community?
      a. Cost?
      b. Social Network?
      c. Socio-economic demographics of the community?
      d. Level of education provided to students residing in the community?
      e. Police protection? Fire Services?
      f. Parks?
   b) Is there a specific part of town that is desirable for parents with children to purchase homes in?
      a. Why do parents express interest in residing in this particular area?
      b. Good schools?
         i. According to the parents, why are they good schools?

3. Briefly describe the demographic changes that have occurred within the community

   Probes:
   a) What caused this pattern of socio-economic change within the community?
   b) How has this change impacted the preferences for goods and services in the community?
   c) Have subsequent patterns of choice by mortgage manifested in the community as a result of this demographic change?

4. Briefly describe how the demographic changes have impacted the schools within the community?

   Probes:
d) Are the schools adjusting opportunities they provide students to meet the demands of the community?
   a. If so, how?
   b. What changes have occurred?

e) What is the community’s perception about the schools within the area?

f) Has the perception regarding the schools changed over time as the socio-economic composition of the community has changed?

5. How has the change in fiscal resources impacted the community?

Probes:
   a) Community members?
   b) Schools?
   c) Other public agencies? Police? Fire Department?

6. How do you feel about the change in the socio-economic composition of the community?

7. What are some of the major challenges the community has faced or currently faces in attempting to address this socio-economic change?

Probes:
   a) Opportunities?
   b) Building?
   c) District?
   d) Broader community?

8. What predictions would you make about the future of the community?

C. Post-Interview Comments/Observations
Semi-Structured BOE Member Interview Questions

Relationship between the unofficial choice market and its impact on public education.

Date: ____________________________________________

School: __________________________________________

Interviewee (Title and Pseudo-Name): ____________________________

Interviewer: __________________________________________

Documents Obtained: _______________________________________

Post-Interview Comments/Leads/Notes: _______________________

Introductory

To facilitate note taking, I would like to audio record our conversation today. Please sign the release form. For your information, only researchers on the project will be privy to the recordings, which will be eventually destroyed after they are transcribed. In addition, you must sign a form developed to meet our human subject requirements. Essentially, this document states that, (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) I do not intend to inflict any harm. Thank you for agreeing to participate!

I have planned for this interview to last no longer than 45-60 minutes. During this time, I have several questions that I would like to explore. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.

Introduction

You have been selected to speak with me today because you have experienced how change in the socio-economic composition of a community has impacted public education. Through this experience, you have a great deal of information to share about the effect of this change. My research project as a whole focuses on understanding the impact of change in the socio-economic composition of a community on the organizational behavior of districts/schools. Specifically, I am interested in studying how those impacting the field of education actually understand and respond to this educational landscape. My study does not aim to evaluate your thoughts, experiences or leadership techniques; rather, I am hopeful that this study will ultimately lead to a broader and improved understanding of the current educational landscape.

A. Interviewee Background

1. How long have you been . . .
_______ in your present position?
_______ how long have you lived in the community?

B. Interview Question Starters

2. Briefly describe why you decided to become a member of the Board of Education?

Probes:
    g) What educational initiatives are of importance to you? Why?
    h) In representing the community, what do you view as your primary role as a BOE member?

3. Briefly describe the demographic changes that have occurred within the community

Probes:
    a) What caused this pattern of socio-economic change within the community?
    i) How has this change impacted the preferences for goods and services in the community?
    j) Do different stakeholder groups within the community have different expectations for schooling?
       a. If so, what are the differing expectations?
       b. As a BOE member, how do you meet the expectation of the various stakeholder groups?

4. How has the demographic change impacted schools within the community?

Probes:
    c) How has this change impacted your work as a BOE member within the district?
    d) What are the areas of educational importance for parents and students attending your school within your district?
    e) What changes has the district faced in attempting to meet the demands of the community members?

5. Who creates the zoning structure for the district?

Probes:
    a) What influences zoning decisions within the district?
    b) Have zoning changes occurred within the district? If so, what changes were made? Why were the changes made?
    c) Have these changes been positively accepted by various stakeholders? (Parents, staff, and community members?)

6. How has the demographic change impacted the resources available to the school?
Probes:
a) Have the fiscal resources of the school increased or decreased?
b) If they increased, what additional supports have been added to the school?
c) If they decreased, what initiatives have been cut in order to maintain fiscal stability?

7. How has the change in fiscal resources impacted the following stakeholders?

Probes:
d) Students?
e) Staff?
f) Administration?

8. What are some of the major challenges you have faced or currently face in attempting to address this socio-economic change?

Probes:
e) Opportunities?
f) Building?
g) District?
h) Broader community?

9. What are the post-secondary plans of your graduates?

Probes:
a) 2-year school, 4-year school, trades, or military?
b) How does the socio-economic composition of the community influence the post-secondary plans of your graduates?

10. What predictions would you make about the future of public school education?

C. Post-Interview Comments/Observations

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Semi-Structured Principal Interview Questions

Relationship between the unofficial choice market and its impact on public education.

Date: ____________________________________________

School: __________________________________________

Interviewee (Title and Pseudo-Name): ____________________________

Interviewer: __________________________________________

Documents Obtained: __________________________________________

Post-Interview Comments/Leads/Notes: ____________________________

Introductory

To facilitate note taking, I would like to audio record our conversation today. Please sign the release form. For your information, only researchers on the project will be privy to the recordings, which will be eventually destroyed after they are transcribed. In addition, you must sign a form developed to meet our human subject requirements. Essentially, this document states that, (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) I do not intend to inflict any harm. Thank you for agreeing to participate!

I have planned for this interview to last no longer than 45-60 minutes. During this time, I have several questions that I would like to explore. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.

Introduction

You have been selected to speak with me today because you have experienced how change in the socio-economic composition of a community has impacted public education. Through this experience, you have a great deal of information to share about the effect of this change. My research project as a whole focuses on understanding the impact of change in the socio-economic composition of a community on the organizational behavior of districts/schools. Specifically, I am interested in studying how those impacting the field of education actually understand and respond to this educational landscape. My study does not aim to evaluate your thoughts, experiences or leadership techniques; rather, I am hopeful that this study will ultimately lead to a broader and improved understanding of the current educational landscape.

A. Interviewee Background

1. How long have you been . . .
in your present position?

B. Interview Question Starters

2. Briefly describe the demographic changes that have occurred within the community

Probes:
   k)  What caused this pattern of socio-economic change within the community?
   l)  How has this change impacted the preferences for goods and services in the community?
   m)  Have subsequent patterns of choice by mortgage manifested in the community as a result of this demographic change?

3. How has the demographic change impacted the schools within the community?

Probes:
   f)  How has this change impacted your work within the school?
   g)  What are the areas of educational importance for parents and students attending your school?
   h)  What changes have occurred within the school to meet the demands of community members?

4. Has a shift in curricular focus occurred as a result of this demographic change within the community?

Probes:
   a)  What curricular changes have occurred?
   d)  How have these changes impacted students?
   e)  Have these changes been positively accepted by various stakeholders? (Parents, staff, and community members?)
   f)  Do you view the changes as having a positive or a negative impact on students?

5. What type of staff development opportunities have emerged as a result of the change in demographics?

6. How have the socio-economic changes within the community impacted the resources available to the school?

Probes:
   d)  Have the fiscal resources of the school increased or decreased?
   e)  If they increased, what additional supports to have been added to the school?
   f)  If they decreased, what initiatives have been cut in order to maintain fiscal stability?

7. How has the change in fiscal resources impacted the following stakeholders?
8. What are some of the major challenges you have faced or currently face in attempting to address this socio-economic change?

Probes:
   i) Opportunities?
   j) Building?
   k) District?
   l) Broader community?

9. What are the post-secondary plans of the graduates?

Probes:
   c) 2-year school, 4-year school, trades, or military?
   d) How does the socio-economic composition of the community impact the post-secondary plans of your graduates?

10. How many AP courses does your school offer?

Probes:
   a) How many students take AP classes?
   b) How many students take the AP exam?

11. What percentage of your students participate in extracurricular opportunities?

Probes:
   a) What is the most popular extracurricular activity?
   b) Have any extracurricular programs been recently added? If so, why?
   c) Have any extracurricular programs been discontinued? If so, why?

12. What predictions would you make about the future of public school education?

C. Post-Interview Comments/Observations
Dear Prospective Participant:

My name is Julia Nadler and I am currently a doctoral candidate in the Department of Educational Policy, Organization and Leadership working with Dr. Chris Lubienski at the University of Illinois, Urbana-Champaign. Dr. Lubienski and I are currently conducting a research project examining the relationship between changes in the socio-economic composition of a community on the organizational behavior of districts/schools. I would like to take just a few moments to share some of my experiences with you and possibly solicit your help with this study. I am hopeful that after reading the remainder of my letter, you will be willing to share some of your experiences with me.

Currently, I am employed as Director of Student Services in a community in the northwest suburbs of Chicago. Prior to that time, I was a Dean of Students. I held this position for several years, and my experiences during that time, in addition to my current work capacity, have greatly contributed to my area of interest for this research study. Over the course of the last several years, I have taken several fantastic courses at the University of Illinois that have opened my eyes to topics such as democracy, equity, justice, the purpose of schooling, and the impact of policy on stakeholders. And, although there is much research available on each of these topics, very little information presently exists regarding the relationship between changes in the socio-economic composition of the community on the organizational behavior of districts/schools. For this reason, I am interested in studying how stakeholders within education understand and respond to these changes that occurring within the community, and I am reaching out to you today with the hope that you might participate in my study.

Understanding the relationship between the unofficial choice market and its impact on public education is a research project with the intended purpose of understanding the relationship between choice by mortgage and educational outcomes. Based upon demographic changes occurring within the community where your school is located, your school has been identified as one that nicely fits my targeted area of study.

As a leader in education, I recognize that your time is tremendously precious, and for that reason, I am more than willing to do whatever it takes to make this process as easy and nonintrusive to you as possible. I would be willing to meet you at your convenience at a location that best meets your needs. Or perhaps conduct an interview over the phone to meet the demands of your busy schedule. I feel that the results of this study can have meaningful implications for school leaders like us, and I hope that you agree. If you are willing to participate in this study
and be interviewed by me, please respond via email at jnadler@d155.org or by phone at 312-371-5172.

Again, if you have any questions about this study, please contact me at jnadler@d155.org or by phone at 312-371-5172, or my university advisor, Dr. Chris Lubienski, at club@illinois.edu or by phone at 217-333-0084. If you have any questions about your rights as a participant in this study, please contact the University of Illinois Institutional Review Board via phone at 217-333-2670 (collect call accepted if you identify yourself as a research participant) or email at irb@illinois.edu. The Institutional Review Board is the office at the University of Illinois responsible for protecting the rights of human subjects involved in studies conducted by University of Illinois researchers.

We thank you for your consideration of this request.

Sincerely,

Julia Nadler
School Personnel Consent Form for Participation in Research Study

**Title of Project:** Understanding the relationship between the unofficial choice market and its impact on the public education.

**Principal Investigator:** Julia Nadler

**Other Investigators on Research Team:** Dr. Chris Lubienski

**Introduction:**
I am currently conducting a research project that focuses examining impact of change in the socio-economic composition of a community on the organizational behavior of districts/schools. Very little information presently exists regarding this relationship as it relates to the educational outcomes of students. For this reason, I am interested in studying how those impacting the field of education actually understand and respond to this educational landscape.

**Why is this study being done?**
This research project is being conducted with the intended purpose of considering the ways in which districts and schools respond to variations in family affluence. In particular, this study will delve into enrollment patterns and services provided to students. Further investigation regarding the mechanisms of this relationship will provide additional information regarding the impact on students.

**What are they study procedures? What will I be asked to do?**
If you agree to take part in this study, you will be asked to be interviewed in a private and secure location of your choice. You will also be asked to choose a pseudonym that will be sued in any presentation or publications related to the study. Interviews will be semi-structured in mature, last approximately 45 minutes and participants may be interviewed twice. With your consent, interviews will be audio recorded. Additionally, the researcher may ask to obtain a copy of various materials disseminated to the public that highlight various initiatives occurring within the school and/or within the community.

**What are the risks or inconveniences of the study?**
We believe there are minimal risks associated with this research. Your participation in this study is voluntary and confidential, which means that you can contact the Principal Investigator to withdraw from the study at any time. Only the investigators listed above will engage in conducting interviews. You have the right to decline to be audio recorded during interviews and can opt for the investigator to only take notes during interviews. Additionally, if a discomfort level occurs due to the nature of the questions, interviewees can skip questions they prefer not to
answer and end their participation at any time. The intent of these procedural safeguards is to minimize these stated risks.

What are the benefits of the study?
Further understanding the relationship between choice by mortgage and educational outcomes is important as it directly impacts school leaders and the community residing in the school catchment area. The unofficial choice market occurs when parents purchase homes in residential areas as a means to gain access to schools that meet their expectations. Additionally, the participants of this study can gain valuable insight into the challenges, strategies, and perceptions surrounding education in present times.

Will I receive payment for participation? Are there costs to participate?
You will not receive payment for participation. There are no costs to participate.

How will my personal information be protected?
Every precaution will be taken to safeguard your identity as a participant in this study. The research team will oversee all data is safely monitored. Pseudonyms will be given to all participants in the interview transcripts, and no personally identifiable information will be utilized for publication purposes (scholarly journals articles, professional reports, a doctoral dissertation, and conference presentations). The data collected from interviews (audio files and transcripts) will be kept on a secure password protected server and only investigators will have access to this data. All hard copies of consent forms and notes will be stored in a locked filing cabinet in the Principal Investigator’s Office. The Principal Investigator, Julia Nadler, will be the only person who will have access to the key to the locked filing cabinet.

Can I stop being in the study and what are my rights?
You do not have to participate in this study if you choose not to do so. If you agree to be in the study, but change your mind at a later date, you may also contact the Responsible Principal Investigator, Dr. Chris Lubienski, to withdraw from the study at any time. Dr. Lubienski also has access to the research data if necessary. Any data you contributed (audio files or interview transcripts) will be destroyed once you withdraw from the study.

Who do I contact if I have questions about the study?
If you have any questions about this study, please contact me, Julia Nadler, at jnadler@d155.org or by phone at 312-371-5172 or my university advisor, Dr. Chris Lubienski, at club@illinois.edu or by phone at 217-333-0084. If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu

Documentation of Consent:
I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement, possible hazards, and inconveniences have been explained to my satisfaction. I understand that I can withdraw at anytime. My signature also indicates that I have received a copy of this consent form.
Audio Recording Consent:
In addition, we will use a digital audio recorder to record interviews. Only researchers affiliated with the study will transcribe and then store the data in a secure server that is encrypted. Audio recording is not mandatory. Please indicate below if you are willing to be audio recorded during the interview process.

☐ (Check for consent.)

_____________________________ Yes, I am willing to be audio recorded.
Participant’s Signature

_____________________________ No, I am not willing to be audio recorded.
Participant’s Signature
APPENDIX D:

TABLES

Table 1

Target Population: Selected Districts

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<tr>
<th>District</th>
<th>Area</th>
<th>2013 Average Spending per Child</th>
<th>1995 School District-Minority %</th>
<th>2013 School District-Minority %</th>
<th>2013 School District Free &amp; Reduced %</th>
<th>1990 Catchment Area Minority Pop %</th>
<th>2010 Catchment Area School Age Pop %</th>
<th>2010 Catchment Area Minority Pop %</th>
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<tbody>
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<td>St. Charles County</td>
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<td>*</td>
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<td>22.7</td>
<td>3.2</td>
<td>27.5</td>
<td>6.8</td>
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<td>Whitfield School District</td>
<td>St. Charles County</td>
<td>$9,830</td>
<td>*</td>
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<td>18.6</td>
<td>4.2</td>
<td>25.0</td>
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*Indicates a small number that was not reported
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<th>District</th>
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<th>Average Spending per Child</th>
<th>Enrollment</th>
<th>% White</th>
<th>% Black</th>
<th>% Hispanic</th>
<th>% Asian</th>
<th>% Free &amp; Reduced</th>
<th>% Graduated Students</th>
<th>Average ACT Score</th>
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*Indicates a small number that was not reported
Table 3

Variables

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Table 3
(continued)

**Variables**

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<td>% of students graduating high school</td>
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