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Paying for Performance: Public School Property Taxes
and Public-School District Performance
in Missouri

by

Keenan D. Kinder

December 2018

A Dissertation submitted to the Education Faculty of Lindenwood University in
partial fulfillment of the requirements for the degree of

Doctor of Education

School of Education

Paying for Performance: Public School Property Taxes
and Public-School District Performance
in Missouri

by

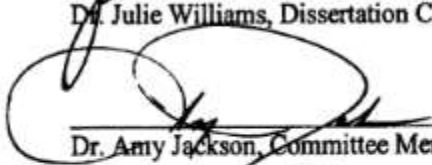
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This Dissertation has been approved as partial fulfillment
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Doctor of Education
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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

Full Legal Name: Keenan D. Kinder

Signature: Keenan D. Kinder Date: December 5, 2018

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Abstract

An increase in the property tax rate of a school district creates an increase in local revenues for the district (Missouri Department of Elementary and Secondary Education. [MODESE], 2017). The overarching question becomes: Do increases in the local tax levy compare to improved student performance? The purpose of this quantitative study was to examine the difference between property tax rates of Missouri public school districts to student performance as viewed through the lens of benefit tax theory (Duff, 2004). Secondary data were obtained via the MODESE which included property tax rates and information from the Annual Performance Reports for public school districts for academic years 2014-2015, 2015-2016, and 2016-2017. The categories examined from the Annual Performance Reports were: academic achievement, subgroup achievement, career and college, attendance, and graduation. Public schools with higher tax rates were found to have the best attendance rates and the highest graduation rates. Overall, public school districts with higher tax rates realized higher Annual Performance Report scores.

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Chapter One: Introduction

In 1821, the first American public high school was founded in Boston, Massachusetts, and so began the responsibility of American citizens to commit to upholding public schools as an integral part of our democracy (Stitzlein, 2015). Stitzlein (2015) believed to sustain democracy, citizens must commit to nurturing public schools through taxes and levies. A good education should produce a well-rounded tax-paying American who has the norms and beliefs of the culture in which he/she lives (Shah, 2016). Shah (2016) posited, “From a historical perspective, the founders believed that education was such a foundational principle of a nation as to need no explicit mention in the Constitution” (p. 129).

The focus of this research was to examine whether there are differences between public school property taxes and public-school district performance for school districts in Missouri. Chapter One comprises the background of the study, the theoretical framework, the statement of the problem, the purpose of the study, and research questions with hypotheses. The significance of the study and the definition of key terms are detailed. The limitations and assumptions of the study are presented, and the chapter concludes with a summary.

Background of the Study

Shoked (2017) believed the school district is a staple of American law. Yet, for at least three decades, stakeholders have insisted the American education system is in crisis (Lindell, 2016). Therefore, school accountability has been the emphasis of many debates at the local and national level with primary and secondary education the focal point (Brevetti, 2014; Cannon, Danielsen, & Harrison, 2015). Over 4% of the United States’

Gross Domestic Product (GDP) is spent on education (Cannon et al., 2015, p. 15), with public schools funded by tax dollars (Tate et al., 2014). This has required a closer examination of how states fund public schools (Brevetti, 2014).

Monies are appropriated to districts from the local, state, and federal levels with the key function of a school superintendent to set the budget with the local board of education (Gentry & Hirth, 2017). The job of the superintendent has changed due to current school funding and tax caps (Gentry & Hirth, 2017). Sondergeld, Johnson, and Walten (2016) summarized that budgetary decisions are one way in which superintendents may maintain widespread public support.

Unfortunately, as noted by Ikpa (2016), the budgetary priority debate between the state and federal governments has caused funding education to become secondary. Stitzlein (2015) theorized, "Political leaders and constituent groups have called for significantly reduced financial support for public schools" (p. 563). Gentry and Hirth (2017) proposed, "The debate has been focused on how much funding is supplied through property tax and is motivated by taxpayer anger over fluctuating tax bills" (p. 17). Education spending choices are an element of determining the quality and access to education for students, and "provides insight into a country's efforts in investing in its social capital" (Lauchner, 2017, p. 156).

Additional challenges faced by superintendents are district assessment and accountability (Lindell, 2014). Performance expectations have not changed, but for employees, the relationship has changed between schools and communities (Hux & Nichols, 2016). Tate et al. (2014) summarized, "School accreditation is granted by states to local districts to certify their competency and authority to provide a K-12 education"

(p. 216). Also, Tate et al. (2014) determined, “An unaccredited school district does not have the state authorization to offer a K-12 education” (p. 216). With these requirements, school leaders must adapt to fulfill their changing role (Radinger, 2014).

The Missouri Department of Elementary and Secondary Education (MODESE) (2017) oversees the accreditation process. The MODESE (2017) measures district performance and conveys the findings in the Annual Performance Report (APR). Five categories are measured in the Annual Performance Report.

These categories include student achievement, subgroup achievement, college and career readiness, attendance, and graduation rate (MODESE, 2017). McConnell and Kubina (2014) attested to the importance of a complete high school education when they reported, “Students, who skip school or drop out, lead into lives with negative outcomes (e.g., delinquency, unemployment, and incarceration)” (p. 255). Marchetti, Wilson, and Dunham (2016) determined students in subgroups have historically struggled academically when compared to the general student body.

The educational products of curriculum, extra-curricular activities, and intangibles vary from school district to school district (Wilson, 2014). Wilson (2014) contended, “Students who live mere miles apart have access to disparate educational opportunities based on which side of a school district boundary line their home is located” (p. 1416). Marchetti et al. (2016) found there is a strong linear correlation between achievement on the ACT and a student’s family income.

In many ways, the school district is considered the heartbeat of the community (Hux & Nichols, 2016). Brevetti (2017) agreed, “Schooling, public or private, arguably affects the lives of people more than any other American institution” (p. 32). Perhaps

this is one reason superintendents have become more involved in lobbying their legislature and participating in referendum campaigns, since political factors influence education (Chitpin & Jones, 2015). The role of the superintendent as a communicator of a vision has shifted to external politics focusing on education spending (Gentry & Hirth, 2017). Dent (2014) summarized, “Education and education reform are often in the forefront of the public consciousness” (p. 733).

State funding often centers on equitable resource distribution (Ikpa, 2016). Per student allocation for public school students is now parsed with private and charter school tax breaks creating political and economic incentivization, which shifts educational authority from the government to private donors (Heise, 2017; Prothero, 2018). Lauchner (2017) determined there is a strong correlation between increased government spending on education, which specifically benefits the most vulnerable groups with lower income. Ikpa (2016) pointed out, “Although school districts receive revenue from local funding sources, the state, as well as federal aid, funding is frequently inadequate in terms of building the capacity to meet the needs of the students” (p. 469).

As No Child Left Behind (NCLB) has been replaced, the Elementary and Secondary Education Act (ESEA) now deals with current education policy (Lindell, 2016). Under NCLB, each state could develop how school data would be conveyed to the public (Jacobsen, Snyder, & Saultz, 2014). Now, states have almost near-control over how to assess student achievement (Lindell, 2016). Lumpkin (2016) argued, “There is an expectation that investment in public education leads to students’ success and skills to either compete in the job market upon graduation or entry into college” (p. 170).

The Every Student Succeeds Act (ESSA) was created to aid local school districts (Lindell, 2016). Based on the spending in schools, governments have developed a desire for value given what the government is spending (Pugh, Mangan, Blackburn, & Radicic, 2015). Sondergeld et al. (2016) commented, “Since Ronald Reagan, individuals and organizations from sectors outside of education have played increasingly visible roles in the creation and enactment of educational policy in states” (p. 104). Stitzlein (2015) noted American public schools had faced numerous attacks in recent years due to growing expectations from both parents and citizens regarding student performance.

The demands on schools have shifted the focus to the effective use of funding (Stitzlein, 2015). Policy changes should be looked at closely, not only on how the change relates to instruction, but how the change will alter parent involvement and community (Rodriguez & Elbaum, 2014). Argon (2015) pointed out the public sector is increasing its efforts in holding bureaucracies accountable to a higher number of citizens. Policies need to support school leaders in developing and improving student competencies (Radinger, 2014).

Scadifi’s (2016) research suggested students in less affluent areas receive less allocation than those in more affluent areas. Morriessey (2014) discovered family income during childhood has tremendous effects on academic achievement. Unfortunately, school districts with an increasingly aging population are less supportive of school expenditures (Reback, 2015). Older people without children are not “consuming school products” and are less likely to support property tax increases (Reback, 2015, p. 1451).

In this study, inferential and descriptive statistics were applied to determine if the higher property tax rate in a school district resulted in greater student performance on state assessments. Data collected from public school districts in Missouri included the tax rates and the assessed valuations. Performance data for the past three years were gathered. These numerical data were analyzed to determine if differences existed between the variables.

Theoretical Framework

The framework for this study was the benefit theory of taxation (Duff, 2004). Governments issue taxes on the presumed or actual beneficiaries of government expenditures, and economists refer to this concept as the benefit theory of taxation (Duff, 2004). The general business taxation is structured to recover the costs of the public services and to “produce a prodigious flow of revenue to state and local governments” (Oakland & Testa, 1996, para 7). Governments levy taxes to generate revenue to finance public expenses (Duff, 2004).

Neill (2000) described the benefit principle in detail stating, “This principle holds that the taxes which an agent pays should reflect the benefit that he receives from the mix of goods and services supplied by the state” (p. 118). Governments recoup the cost of services from those who ultimately benefit from the services (Oakland & Testa, 1996). Neill (2000) argued, “The benefit principle is more easily defended on efficiency grounds” (p. 118).

In 1933, George Lorimer, editor of the *Saturday Evening Post*, wrote that it might be implied men, women, and children all benefit from the services of government. Distribution implications occur with the spending part of budgets looking at taxes and

benefits (Sutherland, Hancock, Hills, & Zantomio, 2009). The idea taxes should vary according to the benefits a person receives from the government is not without controversy and disagreement among economists (Duff, 2004).

Benefit taxes and user fees are condemned by some and praised by other economists (Duff, 2004). The benefit should be considered when determining each agent's burden (Neill, 2000). Neill (2000) pointed out, "Taxes and expenditures could be constructed so that the benefit to each agent is the same" (p. 118). Lormier (1933) stated, "Perhaps the taxpayer gets his money's worth, and perhaps he does not" (p. 24).

Revenues should cover the direct costs of public service costs (Oakland & Testa, 1996). Benefit taxation is an important benchmark for the distribution of utility, which requires taxes above and below the mean (Neill, 2000). Benefit taxes are preferable to general taxation to many economists (Duff, 2004). Neill (2000) contended that it must be considered an important tradition of using taxes to redistribute income. Duff (2004) agreed, "Benefit taxation accords with the values of individual autonomy and citizen sovereignty that underlie contractual conceptions of the state" (p. 392).

There are many possible reasons for state-local taxation, and only the benefits principle survives scrutiny (Oakland & Testa, 1996). Neill (2000) suggested the advantage from government expenditures and fairness in distributing those benefits both are important in determining how taxes will be imposed. The benefits principle has relevance for state and local structures (Oakland & Testa, 1996). Benefit taxes advance economic efficiency by ensuring scarce resources go to their best use for public and private entities (Duff, 2004).

Oakland and Testa (1996) summarized, “Taxation allows those who benefit from these services, whether within or outside the jurisdiction, to contribute to their costs” (p. 4). Duff (2004) stated, “Allocation of scarce resources to their most highly valued uses in order to maximize aggregate welfare” (p. 396). Neill (2000) summarized citizens must realize the benefit from the government’s tax, and spend decisions may ebb and wane as income rises under equal sacrifice taxation.

Local governments rely on property tax for funding (Oakland & Testa, 1996). The benefit goes up or down dependent upon the effect of the public good (Neill, 2004). Duff (2004) addressed this benefit, “Taxes should be imposed only where the value of the publicly provided goods and services are financed by these taxes” (p. 396). Neill (2000) stated, “Without taxes, the government is unable in the long run to provide the public good” (p. 119). Moon, Stanley, and Shin (2015) contended, “The characterization of school financing as a conflict between local control ideals and equal opportunity summarize discourse around this social intervention issue” (p. 207). By controlling the tax levy, district leaders can generate more local revenue into the district.

Statement of the Problem

Property taxes are one of the most hated taxes in the United States (Hayashi, 2014). Yet, money comes to schools as a combination of local and state taxes, federal monies, and sales taxes (Moon et al., 2005). An increase in the property tax rate of a school district will create an increase in local revenues for the district (MODESE, 2017). A decrease in the property tax levy will result in a decrease in local revenues for the school district (MODESE, 2017). Property taxes can be classified into one of four fund categories—general, teachers’, debt service, or capital projects (MODESE, 2017).

Property tax rates vary based on the use of the property (Hayashi, 2014). County assessors appraise property and set the assessed valuation at the current market value (Wellington, 2017). During the last 100 years, public education has seen steady revenue growth (Addonizio, 2000). The Race to the Top initiative was an attempt to spend 850 billion dollars to exert more federal control over local schools (Cusik, 2014). Glaser, Aristigueta, and Miller (2003) found, “Citizen-government relations and growing anti-tax sentiment are encouraging government to rethink the way it relates to citizens” (p. 39). Educators and parents believe greater resources make it possible to improve schools (Elliot, 1998).

The revenue from property tax supports public schools, police and fire departments, libraries, and other local infrastructures (Wellington, 2017). School funding which relies on local property taxes generates inequalities in per-pupil spending between property-rich and property-poor school districts (Cusik, 2014). Increased revenue results in smaller class sizes, better teachers, and improved schools (Elliot, 1998). The fairness of imposing a tax is lost in proportion to property wealth (Hayashi, 2014). A disconnect has developed between citizens’ perception of performance and willingness to pay taxes (Glaser et al., 2003). Some believe schools do not use the funds properly to realize any improvements (Elliot, 1998). Governors from both political parties have sought ways to increase revenue for public education without raising taxes (Moon et al., 2005).

Per-pupil expenditures increased by 3.5% every year from 1890 until 1990 (Addonizio, 2000, p. 70). Since 1990, spending per student has dramatically slowed (Addonizio, 2000). Research shows per-pupil expenditures have been found to increase

student achievement (Elliot, 1998). The increase is one-hundred times greater than the rise in Gross Domestic Product percent growth rate (Addonizio, 2000).

While state wealth impacts public education enhancement, local revenue is acquired through sales tax and property tax (Moon et al., 2005). Property tax is a policy instrument for the local government to influence the landscape and distribution of income and wealth (Hayashi, 2014). As a result, school districts have many inequalities in the financial resources available and the allocation of those resources (Elliot, 1998).

Traditionally, wealthy districts have greater student success than less affluent districts (Addonizio, 2000). Philanthropists donate money to education more than any other secular source and view education as a valuable cause for contribution; Americans donated over 38 billion dollars in 2011 (Jones, 2015, p. 906). Fortunately, “social intervention programs assist in eradicating large educational disparities among the population” (Moon et al., 2005, p. 206).

Due to the inadequate funding of education, public schools are trying to tap into non-traditional forms of revenue (Addonizio, 2000). States pursue small amounts of federal assistance even if it means giving up more constitutional authority (Cusick, 2014). States must figure out ways to create revenue to pay for education (Moon et al., 2005).

Autonomy and accountability are prized in education (Chitpin & Jones, 2015). Educators strive to create a better product for students each year. Dent (2014) stated, “Every school day in Missouri matters. Every day students, teachers, and administrators and staff are working towards a better future for all of Missouri” (p. 752). American schools have hired personnel faster than student enrollment has grown over the past 60 years (Scafidi, 2016). Still, achievement has not grown at that rate (Scafidi, 2016).

There is a sense of crisis expressed in terms of America's failing ranking in the world on international standardized tests (Lindell, 2016). Scafidi (2016) contended, "Family breakdown, increased child poverty, and other factors may have caused the decline in graduation rates and the lack of increased" (p. 128). While research has shown greater per-pupil revenue from traditional tax can have higher measures of impact on student achievement (Addonizio, 2000), some researchers argue higher per-pupil spending has not increased student achievement or graduation rates (Scafidi, 2016).

There has been a great deal of educational research about many topics surrounding race, school district size, student wealth, curriculum, teacher preparation, and variables to predict student outcomes (Kaniuka, 2014). Property tax accounts for only part of a school district's overall revenue, and property tax is one of the few revenues in which the local district has more control (Rodriguez & Elbaum, 2014). Hayashi (2014) pointed out, "When property increases in value, a homeowner's tax bill generally goes up even if their cash income has remained unchanged" (p. 36). Schueler and West (2016), expressed, "The direct role citizens play in determining education spending levels may increase their incentive to acquire sufficient information to make decisions consistent with their preferences" (p. 91).

Addonizio (2000) concluded the equalization of educational opportunities for all children, regardless of the prosperity of their communities, has long been an important goal of educational policymakers. Still, research findings indicate home buyers often select homes based on the elementary school and the high school their children will be assigned (Metz, 2015). This results in increased school quality being directly related to

home prices within the community (Metz, 2015). Without a doubt, in every state, funding levels vary; some levels vary several times greater for some children than others (Moon et al., 2005).

The disparities between impoverished and affluent communities have resulted in an attempt for increased fiscal control over local districts by the federal government (Cusik, 2014). Elliot (1998) argued, “There is considerable controversy among educational researchers over the relationship between school finance and student achievement” (p. 223). One group believes there is a significant relationship between expenditures and performance, while the other group believes there is no significant relationship between expenditures and performance (Elliot, 1998).

Moon et al. (2005) demonstrated the funding mechanism of local taxation for educational revenue began receiving criticism in the 1970s. The disparity between affluent and less affluent districts can vary from two to five times in spending per student (Moon et al., 2005). This has resulted in the reallocation of state aid to equalize to local districts in a way to offset local fiscal inequalities (Addonizio, 2000).

Purpose of the Study

The purpose of this quantitative study was to examine the differences between property tax rates of public school districts and student performance for public school districts in Missouri. Data collection was completed as a census of archival data from the MODESE. The data were analyzed to determine the statistical difference between property tax rates and components of each school district’s Annual Performance Report. The assessed valuation of property within each school district received consideration as an intervening variable.

Research questions and hypotheses. The following research questions and hypotheses guided the study:

1. What is the significant difference between Annual Performance Report scores of those Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average?

H1₀: There is no significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average.

H1_a: There is a significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average.

2. Which categories of the Annual Performance Report do school districts with a tax levy one standard deviation greater than the average levy score at least 90%?

3. What is the significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report?

H3₀: There is not a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

H3_a: There is a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

Significance of the Study

School district personnel are constantly faced with improving performance for students with limited financial resources (Chitpin & Jones, 2015). With the increased use of measurable data, pressure has risen to teachers and administrators (Chitpin & Jones, 2015). America's poor academic standing is due in part to its racial and economic achievement gaps (Lindell, 2016). Hux and Nichols (2016) contended, "For many rural school districts, that are their city or county's largest employer, costs have been cut, but political fallout has resulted" (p. 275). Ikpa (2016) asserted, "those in leadership and decision-making positions must constantly address the complexities and challenges enveloping increasingly diverse and global communities" (p. 468).

The current political and economic ideology equates students to dollars (Bausell, 2016). Funding is frequently inadequate to meet the needs of students (Ikpa, 2016). To combat inequality, increasing access to quality education is one tool (Lauchner, 2017). School leaders must increase participation in decision-making and raise efficiency to improve the quality of education (Radinger, 2015).

Funding education must be a top priority as the United States continues to compete globally (Lindell, 2016). Ikpa (2016) summarized, "if we can bail out banks, automobile companies, major corporations, and the next-door neighbor in order to prevent them from going under, we can also adequately fund education" (p. 470). Lauchner (2017) contended, "Income inequality is undoubtedly an important social indicator" (p. 148).

Lindell (2016) argued, "Children of parents with economic, educational, and social advantages begin school better prepared and better able to learn" (p. 193). Pugh et

al. (2015) believed, “The effect on school performance of school expenditure is of continuing concern” (p. 244). Stakeholder engagement is crucial to educational change and improvement (Sondergeld et al., 2016).

Communities depend on public schools (Hux & Nichols, 2016). Stakeholder engagement is crucial to educational change and improvement (Sondergeld et al., 2016). Besides the local churches, school districts are often the center for both the social and work life of the people who make up the community (Hux & Nichols, 2016). Cannon et al. (2015) believed, “Housing markets across the United States continue to place great value on access to quality educational opportunities” (p. 14).

Americans tend to underestimate what is spent on schools (Schueler & West, 2016). There exists a gap in educational research which examines the relationship between property tax levies and district performance (Schueler & West, 2016). Schueler and West (2016) found in their research that sharing information on per-pupil spending with community members provides more support and an increase in spending.

This current study may be valuable to superintendents and school district financial officers across the state of Missouri. Each year superintendents must hold an annual tax rate hearing in their community (Missouri Revised Statutes §137.030, M.S.S § 2004). District leaders may use the findings from this study to inform the public about tax levies and the benefits for students and patrons of the district.

Definition of Key Terms

For the purposes of this study, the following terms are defined:

Annual Performance Report. The Annual Performance Report score is created by the MODESE (2017) for each district or charter school in Missouri. This overall score

is comprised of scores for each of the MSIP 5 Performance (1) Standards Academic Achievement (2) Subgroup Achievement (3) High School Readiness (K-8 districts) or College and Career Readiness (K-12 districts), (4) Attendance Rate and (5) Graduation Rate (K-12 districts) (MODESE, 2017). Status, progress, and growth (where applicable) are used to calculate a comprehensive score used to determine the accreditation level of a school district (MODESE, 2017).

Assessed valuation. Assessed valuation is the total value of assessed property within the school district boundaries minus tax-increment-financed valuation, as of December 31 of the previous calendar year (MODESE, 2017).

Attendance rate. The local school district ensures all students regularly attend school (MODESE, 2017). The hours all students are present divided by the total number of hours in a school year calendar (MODESE, 2017). Attendance targets use the individual student's attendance rate and set the expectation that 90% of the students are in attendance 90% of the time. (MODESE, 2017).

College and career readiness. The local school district provides adequate post-secondary preparation for all students (MODESE, 2017).

Dropout rate. For grades 9-12, the dropout rate is calculated by the number of dropouts divided by the total of September enrollment, plus transfers in, minus transfers out, minus dropouts, added to September enrollment, then divided by two (MODESE, 2017).

Free and reduced-price meals eligibility count. Full-time equivalency count should be taken the last Wednesday in January of resident students enrolled in grades K-12 within a public-school district and in attendance one or more of the 10 preceding

school days whose eligibility for free and reduced-price meals count is documented (MODESE, 2017).

Graduation rate. The quotient number of graduates in the current year as of June 30th (MODESE, 2017). The number is then divided by the sum of the number of graduates in the current year as of June 30th, plus the number of 12th graders who dropped out in the current year, plus the number of 12th graders who dropped out in the preceding year, plus the number of 10th graders who dropped out in the second preceding year, plus the number of 9th graders who dropped out in the third preceding year (Missouri Revised Statutes §137.030, M.S.S § 2004).

Gross Domestic Product (GDP). A comprehensive measure of U.S. economic activity (Cannon et al., 2015). The GDP is the value of the goods and services produced in the United States (Cannon et al., 2015). The growth rate of the GDP is the most popular indicator of the nation's overall economic health (BEA, 2018).

Local tax effort. The local tax effort per child is computed by adding the prior year tax revenue in the district of domicile received from public school property taxes and other local revenues domicile (MODESE, 2017). Then, the number is divided by the sum by the prior year resident average daily attendance of the home district of domicile (MODESE, 2017).

Operating levy. The operating levy can be used to support the local school in a variety of ways, including salaries, bill paying, and technology upgrades (MODESE, 2017). It is referred to as adjusted operating levy, and this levy is entered into the tax books and generates tax revenue for the school district to use (MODESE, 2017).

Personal property. Personal property consists of every tangible thing owned by an individual, such as vehicles, boats, trailers, recreational vehicles, and livestock (Missouri Revised Statutes §137.015, M.S.S § 2004). Personal property encompasses part ownership, whether animate or inanimate, and other than money, but does not include household goods, furniture, wearing apparel (Missouri Revised Statutes §137.015, M.S.S § 2004).

Real property. The county assessor calculates real property by including land, all growing crops, buildings, structures, improvements, and fixtures (Missouri Revised Statutes §137.014, M.S.S § 2004).

Tax levy. The amount levied against the patrons of a school district by a governmental unit for the purpose of financing services for the common benefit (MODESE, 2017).

Limitations and Assumptions

The following limitations were identified in this study:

1. Archival data were limited to the years 2015, 2016, and 2017.
2. There may have been extraneous variables such as teacher and administrator quality or curriculum which impacted student achievement during the years of 2015, 2016, and 2017.
3. The study only included data from the state of Missouri.
4. Special school districts and charter schools were not included in the study.
5. Tax data and Annual Performance Reports referenced district-wide statistics and not the performance of individual students.

The following assumptions were accepted:

1. The public schools reported data accurately to the MODESE.
2. The data shown on the Annual Performance Report were an accurate measurement of student achievement in Missouri.

Summary

Superintendents work with the community they serve to create the budget for the public school (MODESE, 2017). Part of this process is setting the local school tax levy (MODESE, 2017). Over time, pressure has increased on school districts to be judged on performance district-wide (Gentry & Hirth, 2017). Political pressure has also mounted on superintendents in budget creation (Gentry & Hirth, 2017).

The study was designed to examine property tax levies and district performance scores in Missouri. By introducing and using a theoretical framework of benefit taxation, the findings will lend to determining whether differences are justified when providing public services through taxes for public schools. Also included in this chapter were the background of the study, statement of the problem, purpose of the study, research questions with hypotheses, significance of the study, definition of key terms, and limitations and assumptions.

Chapter Two contains a review of the literature relevant to the study. Chapter Two also covers an expanded explanation of the benefit theory of taxation (Duff, 2004), which served as the framework of the study. Main topics for the literature review include court cases and school funding, property tax and local effort, the influence of school district to property value, public school district performance, and school district accountability.

Chapter Two: Review of Literature

The purpose of this quantitative study was to examine the differences between property tax rates of public school districts and student performance for public school districts in Missouri. Property tax provides local governments with funding (Oakland & Testa, 1996). While the typical American is poorly informed about school spending, money matters greatly in terms of student learning and district performance (Elliott, 1998; Schueler & West, 2016).

Under the framework of the benefit theory of taxation (Duff, 2004), the literature review contains a review of the historical development and overall background of the formation of schools. Pertinent court cases surrounding school district funding and existing research tied specifically to Missouri laws and cases are presented. Property taxes and local effort by communities on funding schools are discussed in this chapter.

District performance, the Annual Performance Report, and subcategories of academic achievement, subgroup achievement, special education performance, free and reduced-price meals rates, college and career readiness measures, attendance rates, graduation rates, and ACT performance are explained. Then, district accountability is explained. An examination of district accountability includes information pertinent to state and federal funding of school districts. Federal measures of school district performance are discussed, and a summary of the key topics within the chapter are presented.

Theoretical Framework

American education matters not only to educators but to parents and other stakeholders, and issues of concern are highlighted because, “there is growing consensus

that the basic skills of reading, writing, and mathematics are necessary but not sufficient for success in the 21st century global marketplace” (Randi & Grigorenko, 2017, p. 1). Since the government is responsible for the long-term well-being of a community, according to Glaser et al. (2003), local taxes are means to support a community. The local property tax becomes a local benefits tax since children benefit from the revenues provided to the local public schools (Reback, 2015).

Governments issue taxes on the presumed or actual beneficiaries of government expenditures (Duff, 2004). Neill (2000) determined taxes should reflect the benefit of services the taxpayer receives. The distribution of tax burdens should suggest identical properties should be taxed at the same rate and level (Krupa, 2015).

The theoretical framework of this study was based on the benefit theory of taxation (Duff, 2004). Since public expenses are paid by government tax levies, the benefit theory of taxation was an appropriate lens to view this study (Duff, 2004). The cost of local government services is shared by the taxpayers of the jurisdiction (Krupa, 2015). Reback (2015) discovered, “School revenue preferences will depend on how potential consumption benefits of improved school services or higher house prices due to these improvements compare with the costs of a higher tax burden” (p. 1454). Taxation is required to recover the costs of public services provided (Oakland & Testa, 1996). Glaser et al. (2003) determined, “Taxes used to support investments consistent with community agenda; citizens are more likely to be willing taxpayers” (p. 58).

Effective tax rates must be equal to nominal tax rates (Krupa, 2015). The typical 55- to 64-year-old prefers greater school spending than older residents (Reback, 2015). Even though this age might not directly benefit from children in school, this group views

the benefit of home prices and community improvement (Reback, 2015). Governments recoup the cost of services from those who benefit from the services (Oakland & Testa, 1996). Glaser et al. (2003) argued, “Those who are enlightened reason that they will receive many indirect benefits from public school system even though they may not have children in it” (p. 41).

Governments target policies toward certain groups based on the results of the policy (Reback, 2015). The benefit theory of taxation is defended on the grounds of efficiency and equity (Neill, 2000). Taxes should vary according to the benefits persons receive from the government (Duff, 2000). The assessors’ responsibility is to establish and maintain an equitable property tax assessment system (Krupa, 2015). Duff (2004) stated, “Allocation of scarce resources to their most highly valued uses in order to maximize aggregate welfare” (p. 396). There is a tradeoff between service delivery and new taxes (Glaser et al., 2003).

Districts have an obligation to serve all students including those who move into the district (Schaeffer, 2014). Differential tax burdens can result from inaccurate assessments (Krupa, 2015). Identical taxpayers should have the same burden (Krupa, 2015). Improvement of the school must look at many factors and levels (Chitpin & Jones, 2015). School leaders must look for innovations to benefit schools and communities (Scanlan & Tichy, 2014). Districts must decide how to allocate money to help teachers use the most effective strategies, in turn, helping students (Elliott, 1998). In 1890, K-12 education accounted for 1% of the Gross Domestic Product, and this has risen to over 3% in 1990 (Addonizio, 2000).

Creating school systems so all students can learn is a challenge, but persistence toward this effort results in workplace benefits (Randi & Grigorenko, 2017). Working with business people in the community is a great experience for students to learn practical applications (Hoover, 2016). In turn, those in the community may benefit as well (Hoover, 2016). School quality is positively related to increasing the housing prices which benefits the homeowners of a community (Cannon et al., 2015).

Many economists prefer benefit taxation over other forms of taxation (Duff, 2004). Unfortunately, many school districts have an increasing number of adults who do not consume nor realize benefits from the services of public schools (Reback, 2015). Older citizens are less apt to pay for comforts in the classroom and invest in education (Glaser et al., 2003). There are those who believe the tax burden should be determined by the benefit of the taxpayer, and revenues collected should cover the direct costs of public services (Neill, 2000; Oakland & Testa, 1996).

Taxes are one way the government redistributes income in a nation (Neill, 2000). Oakland and Testa (1996) stated, "Taxation allows those who benefit from these services, whether within or outside the jurisdiction, to contribute to their costs" (p. 4). The benefit from taxation correlates with the effect of the public good (Neill, 2004). Duff (2004) argued taxes should be collected to finance services provided to the public. Without taxes governments could not operate; in turn, services provided by governments would not reach the people governments are intended to serve (Neill, 2004). Governments can treat citizens as customers of their services (Glaser et al., 2003).

Voters often make decisions based on the benefits they associate with the outcome (Roscoe, 2013). Therefore, there is a critical need for governments to engage

citizens to invest in their communities (Glaser et al., 2003). Older citizens may not feel they benefit from public schools or property taxes directed at schools without an improved understanding of the benefits (Glaser et al., 2003). Community members must make a strategic investment in education and explain to the older citizens this investment is in their self-interest with benefits for them as taxpayers (Glaser et al., 2003).

Historical Development of Property Tax and Funding School Districts

Following the Revolutionary War, public education became the focus of the country's leaders (Diaz, 2016). At one time, public education had common features around the world (Ooghe & Schokkaert, 2016); every town had a school, and every child went to school (Cusick, 2014). Now, local school districts are a specialized governmental unit (Hardin, 2016). Compulsory education guarantees every person at some time in their life earns a grade (Dickinson & Adelson, 2016). Owens (2016) stated, "School districts are administrative units, but they are also a larger definition of neighborhoods" (p. 563). Stitzlein (2015) noted, "The responsibility of citizens includes upholding a commitment to schools as a central institution of democracy" (p. 564).

Neighborhood schools at one point in this country were the focal point of the community and social activity (Glaser et al., 2003). Schools provide a service at the taxpayer expense which the community depends upon (Hardin, 2016). Parents' residential choices are based in part on the options of school in terms of building and district attendance boundaries (Owens, 2016). Birch and Sunderman (2014) pointed out, "The value of homes and associated properties, as well as their operating costs, are generally important concerns for homeowners" (p. 89).

The burden of school funding is a confusing and misunderstood topic (Hughes, Reeves, & Puchner, 2017). The United States is a country where educational opportunities vary greatly between those from rich and poor backgrounds (Jerrim, 2014). Financial support of public schools has declined as governments have felt pressure to balance their budgets (Reback, 2015). Arcalean and Schioppa (2016) pointed out, “Children are educated either in public schools, which are financed by taxpayers or in private schools, financed by parental spending” (p. 815).

Free public education is in the original Missouri government charter (Hoerner, 2015). Schools were important in building bonds with the community (Glaser et al., 2003). Rural areas still comprise two-thirds of the United States student population and face funding struggles with problems unique to small schools (Kimmons, 2015). Shoked (2017) stated, “Local school districts garner nearly 40% of local budgets nationwide” (p. 951).

The job of the superintendent has changed due to current school funding and tax caps (Gentry & Hirth, 2017). Roscoe (2013) stated, “Bond issue proposals are very commonly put to voters in localities across the country” (p. 150). These issues are usually for capital outlays like the construction of tangible items (Roscoe, 2013). Shoked (2017) contended, “The school district is a staple of American law” (p. 945). Jabbar (2016) stated, “Under new school-choice policies, schools feel increasing pressure to market their schools to parents and students” (p. 4). School leaders must communicate and encourage voters to support school funding initiatives (Hughes et al., 2017).

The public should know first what the government is doing and then can determine the effectiveness of the administration of the local district (Hardin, 2016).

Knoeppel, Pitts, and Lindle (2013) pointed out, “The capacity to budget greatly impacts the ability of educational leaders to deliver an adequate education to children; to do so requires both a stable and sufficient source of revenue” (p. 95). Gentry and Hirth (2017) proposed, “The debate has been focused on how much funding is supplied through property tax and is motivated by taxpayer anger over fluctuating tax bills” (p. 17).

State funding to public education has traditionally focused on equity in allocating resources (Ikpa, 2016). Local school districts have been facing budget crises across the United States (Diaz, 2016). Over 4% of the United States Gross Domestic Product is spent on education (Cannon et al., 2015). The property tax rate is levied on the assessed valuation of the political unit; then those taxes are the base for local funding (Krupa, 2015). County assessors determine assessment levels (Krupa, 2015).

The current political and economic ideology has tied students to available monies (Bausell, 2016). Political leaders present budgetary information in larger political frames to support their views (Schueler & West, 2016). Lauchner (2017) explained, “Education spending per level of education, while not a perfect method for considering the quality and access to education, provides insight into a country’s efforts in investing in its social capital” (p. 156). Lindell (2016) described the new Federal law, “The Act (ESSA) now grants an amount of money equal to 40% of the per-pupil expenditure in a state for each student who falls below certain standards for socio-economic status” (p. 202).

The United States ranks almost at the top of the world in spending on education for its people (Cannon et al., 2015). Scadifi (2016) summarized, “Students in less wealthy school districts often had much less spent on their education than students in more affluent areas” (p. 128). Schueler and West (2016) stated, “The direct role citizens

play in determining education spending levels may increase their incentive to acquire sufficient information to make decisions consistent with their preferences” (p. 91).

School districts are small units of democracy as the community elects local school boards to govern the school (Hardin, 2016). In 1965, federal control over local districts expanded when money would be channeled through state departments of education (Cusik, 2014). School systems provide opportunity and promote social mobility (Jerrim, 2014).

State departments of education have constitutional authority over local school districts (Cusick, 2014). Public schools are the largest expense of local governments’ budgets (Reback, 2015). Local government has the chance to change its relationship with the people it serves to maintain a willingness to pay (Glaser et al., 2003).

Tax rates for education quality do not work if rich parents chose to send their children to private schools (Arcalean & Schiopu, 2016). This country and its economy are better if more students are well educated (Brown, 2015). Arocho (2014) contended, “The United States has a decentralized primary and secondary education system that has led to fragmentation and inequality within and among the states” (p. 1480). Roscoe (2013) argued, “Voters will be highly reluctant to increase levels of taxation—not necessarily because they oppose higher levels of services or they are unable to pay, but because they are angry that their money is not being used optimally” (p. 148).

Court Cases and School Funding

State courts have developed standards to define adequacy (Lindell, 2016). Shah (2016) noted, “The Supreme Court stated in *Wisconsin v. Yoder* that some degree of education is necessary to prepare citizens to participate effectively and intelligently in our

open political system if we are to preserve freedom and independence” (p. 138). *Brown v. Board of Education* is the first major case dealing with equity in schools (Davis, 2016). After this ruling, many believed inequity and inadequacy continue to exist in public schools not just on the grounds of race (Davis, 2016). Several lawsuits have been filed against states about adequate and equitable funding practices (Elliott, 1998). Shah (2016) pointed to *Bush v. Gore* and stated, “The Court ruled equal access to the franchise to be fundamental because it is a preservative of other basic civil and political rights” (p. 143).

The Supreme Court, before Congress passed the ESEA, held education to be the most important function of state and local governments (Shah, 2016). In the *Blue Springs School District v. Kansas City School District*, taxpayers claimed increased activities were not fully mitigated by adequate state financing (Schaeffer, 2014). Taxpayers in accredited districts contended transfer students were more expensive to educate than their own students (Schaeffer, 2014). These transfers were often students with special needs and English language learners (Schaeffer, 2014).

In *Breitenfeld v. School District of Clayton*, the court held that unaccredited schools must pay tuition for students wishing to transfer to accredited districts (Dent, 2014). The outcome of *Breitenfeld* resulted in Normandy School District being dissolved and led to uncertainty for the community (Hoerner, 2015). *Breitenfeld* brought the issue of failing back into the public eye (Hoerner, 2015). Hughes et al. (2017) summarized, “School finance statutes have produced staggering discrepancies between rich and poor districts” (p. 32). School funding has been litigated in every state (Hughes et al., 2017). Davis (2016) pointed out, “Courts have, at times, agreed, and applied the *Brown* ruling to other types of educational inequality cases since the 1950s” (p. 119).

In *San Antonio Independent School District v. Rodriguez*, the Supreme Court held property taxation is a means to fund schools (Arocho, 2014). Goodman (2015) explained the ruling as, “Equal education was not a fundamental right under the Constitution, and that wealth is not a protected class deserving of heightened scrutiny when state and local law provide less funding to the school districts with concentrations of poverty” (p. 305). Arocho (2014) explained, “The Court held that funding education through local property taxes, despite the resultant disparities in per-pupil funding between neighboring school districts, did not violate the Equal Protection Clause of the Fourteenth Amendment” (p. 1482). Shah (2016) clarified *Plyler v. Doe*: “The Supreme Court found by depriving the children of any disfavored group of an education, we foreclose the means by which that group might raise the level of esteem in which it is held by the majority” (p. 151).

Missouri v. Jenkins returned control to state and local governments rather than continuing jurisdiction in federal courts (Goodman, 2015). Goodman (2015) explained this implication: “Some say the doors re-opened to resegregation as long as it was in fact (based on neighborhoods and income status) rather than by law” (p. 304). Goodman (2015) concluded that *Missouri v. Jenkins*, “leads to varying quality of education based on variations in wealth, which are closely related to variations in race and ethnicity” (p. 307).

Wheelock (2017) summarized, “The United States Supreme Court has recognized the need for flexibility in the ways that states provide educational services” (p. 136). Knoepfel et al. (2013) explained in their research, “The interpretation of the education clause in class action suits heard in forty-five of the fifty states has led to

recommendations for reform, particularly in the areas of finance and accountability” (p. 97).

Missouri public school law. In the literature, Lindell (2016) pointed out the state’s constitution requires a minimum level of educational quality for every student. Missouri’s Hancock Amendment prohibits burdening counties with increased activities without full state funding (Schaeffer, 2014). Hoerner (2015) explained the Hancock Amendment as, “A shield to protect taxpayers from the government’s ability to increase the tax burden above the borne by taxpayers on November 4, 1980” (p. 564). The Hancock Amendment is a tax and spending lid on government (Hoerner, 2015). Hubbard (2014) defined the unfunded mandate protection from the Hancock Amendment as, “an unfunded mandate [which] occurs when state government requires the local government to undertake any new or increased activities without providing the funding of those activities” (p. 786).

Property Tax and Local Effort

Stakeholder engagement is crucial to educational change and improvement (Sondergeld et al., 2016). Knoeppel et al. (2013) concluded, “The ability of schools and districts to adequately educate children is impacted by the ability to claim sufficient funds and to align those resources in such a way to maximize student achievement” (p. 98). Local funding generally comes in the form of property taxes and are considered unfair (Hughes et al., 2017). Local property taxation seems to let communities fund schools at the level they deem appropriate (Arocho, 2014). Tate et al. (2014) further explained, “The link between residential boundaries and property taxes, a primary revenue source for schools, is direct” (p. 217).

Education spending makes up half of local budgets (Schueler & West, 2016). Thirty-seven percent of funding to schools comes from local resources (Cannon et al., 2015). Stitzlein (2015) discussed, “American public schools have faced a barrage of attacks in recent years...due to heightened expectations from parents and citizens regarding student performance” (p. 563). Richer income groups drive political agendas to their favor and can lower the tax rate and spending on public schools (Arclean & Schioppa, 2016). Schueler and West (2016) found, “The public is more enthusiastic about boosting funding in the abstract than about increasing taxes to do so” (p. 109).

The demands focus on the effective use of funding (Stitzlein, 2015). Thirty-seven percent is the national average of local monies spent in public schools, according to Cannon et al. (2015). Scafidi (2016) found that American schools have hired personnel four times faster than student enrollment growth during the past 60 years. Change in home value is related to distance from the public school (Metz, 2015). When a home is purchased, it is considered to have sold for the market price; therefore, the assessor makes a valuation based on the best use of the property (Wellington, 2017).

Property taxes are the most hated levies in the United States (Hayashi, 2014). The public usually does not support higher taxes, yet, higher tax rates lead to more taxpayer vigilance (Krupa, 2015; Roscoe, 2013). Property tax is one of the major items in family budgets (Birch & Sunderman, 2014). Property taxes are unpopular, rise every year, and are highly visible because the tax is paid in a lump sum (Hughes et al., 2017).

Property taxes are salient to property owners, and valuation of property seems arbitrary (Hayashi, 2014). Arocho (2014) outlined, “Even if a low-value-property-value district greatly values education and therefore imposes high taxes, however, the revenues

of its higher property tax rate cannot match the revenues that many high-property-value districts can raise with lower tax rates” (p. 1481).

Another reason property taxes are strongly disliked is that property taxes can increase sharply from year-to-year (Hayashi, 2014). Considerable differences exist within states in regard to local funding (Cannon et al., 2015). Elliott (1998) pointed out, “Financial resources improve student achievement through the purchase of more educated and experienced teachers and smaller student-teacher ratios” (p. 226). State and federal governments could increase property tax reductions to help elderly homeowners who do not use public schools (Reback, 2015).

Parents of school children prefer higher spending on local schools than other residents in the same community (Reback, 2015). Households without children often withdraw from the community and are resistant to pay taxes to educate other people’s children (Glaser et al., 2003). Parents who chose private school want to minimize tax burden (Arcalean & Schiopu, 2016), and parents who send their children to public schools demand adequate spending per student (Arcalean & Schiopu, 2016).

Davis (2016) contended, “Due to reliance on local levies and property taxes, low-income districts who cannot afford the extra property taxes perpetually underfund their schools” (p. 119). Davis (2016) followed by stating, “Higher income districts can not only adequately support their schools but use the extra money to offer an abundance of resources as well” (p. 119). Arocho (2014) discovered, “Funding schools with local property taxes has created severe disparities in per-pupil funding between high-property-value districts and low-property-value districts” (p. 1481). Roscoe (2013) found in his study in Massachusetts during a 20-year span, 45% of tax increase proposals passed if the

tax was to go towards schools and education. The overall success rate of the study was 38% (Roscoe, 2013).

Increases in tax rates and increases in public school enrollment decrease public spending per student in low-income areas while driving it up in high-income areas (Arclean & Schiopu, 2016). Roscoe (2013) found, “Although public opinion largely opposes tax increases, voters frequently choose to raise their taxes in property tax cap override elections” (p. 145). School finance sounds simple, but each state’s funding formula is different (Hughes et al., 2017).

People have used poor educational quality to defend lower financial support for schools (DeCuir, 2014). DeCuir (2014) explained organizations and individuals, “Objected to higher taxes to support what they considered wasteful spending in public schools” (p. 35). Arocho (2014) stated, “Revenues raised via property taxation are no longer an accurate metric of a community’s commitment to education” (p. 1481). Gentry and Hirth (2017) concluded, “Traditional public-school districts are forced to seek additional funds through the general fund referenda process” (p. 30).

There can be tax equity within neighborhoods, but little research has been done to include neighborhood location effect (Birch & Sunderman, 2014). Roscoe (2013) determined:

Overrides were more successful in communities that had higher levels of education, lower levels of affluence, and smaller nonwhite populations. In addition, overrides were more successful in towns with lower existing tax rates and where the particular override was less salient and narrower in scope.

(Abstract)

Wilson (2014) noted, “Localities with more middle class and typically white students have higher tax bases to draw from, are able to offer higher qualities of education, and have higher levels of academic success” (p. 1439).

Home Values and Relationships to Schools

School and property value are linked (Cannon et al., 2015). Some people have residential goals based on the school district of given neighborhoods (Owens, 2016). Hubbard (2014) stated, “It is well-known that one of the most important considerations for a family in deciding where to live is the school district in the area” (p. 802). Tate et al. (2014) noted, “In Missouri and throughout the United States, neighborhood is associated with the construction of K-12 school district attendance boundaries” (p. 217).

A clear independent impact can be measured by housing prices and school district grades (Jacobsen et al., 2014). Owens (2016) found, “Past research shows that income segregation between neighborhoods increased over the past several decades” (p. 549). Homes with access to better schools sell for higher prices (Cannon et al., 2015). Owens (2016) stated, “School quality is capitalized by housing prices, pricing some households out of neighborhoods” (p. 552).

Homeowners in areas with high tax rates are demand more accurate assessments and are more vigilant in paying their taxes (Krupa, 2015). Metz (2015) noted, “Improvement in school quality is reflected by higher home prices” (p. 152). McGrath (2015) summarized, “High poverty rates and a history of levels of high unemployment create risk factors for any school district” (p. 16).

Local school options are observable in housing market transactions (Cannon et al., 2015). Quillian (2014) found, “Families often carefully select their residential

neighborhood with their children's development in mind" (p. 408). Rural school districts are often the center of a community in regard to social and work life of the people who make up the community (Hux & Nichols, 2016). Lauchner (2017) believed, "a decrease in relative income levels is significant in the assessment of overall inequality" (p. 148). Lindell (2016) argued, "Limitations of geography and reputation will also prevent school districts from hiring exclusively excellent teachers" (p. 195).

Home value is related to the quality of the school and distance to the school (Metz, 2015). Rosenberg, Christianson, and Hague Angus (2015) pointed out, "aspects of rural schools' settings, such as the distance from urban areas and the commute between the schools and the students' and teachers' homes, can exacerbate the challenges that rural schools face" (p. 194). Students in rural settings have less access to social and educational resources (Kimmons, 2015).

Home values increase based on school options within reasonable driving distances (Cannon et al., 2015). Rodriguez and Elbaum (2014) found smaller schools tend to create a climate where parents are more involved when compared to larger schools. Parents are more likely to support funding increases while property owners are less supportive (Schueler & West, 2016). Spending large amounts of money on education benefits communities (Cannon et al., 2015), since school quality is a determinant of local home prices (Cannon et al., 2015).

Metz (2015) found homes within walking distance are valued higher than those beside school or too far away to walk. Wellington (2017) summarized homes would not remain affordable if the homeowner is forced to sell to pay property taxes. Growing or contracting housing markets can affect the local tax base and in turn affect the revenues

coming to a district (Krupa, 2015). Higher tax burden can lead to improvement in schools which can improve home prices (Reback, 2015). Owens (2016) pointed out, “Higher income households have more resources, (*than lower income households*) and parents used these resources to purchase housing in particular neighborhoods, with residential decisions structured, in part, by school district boundaries” (p. 549).

Researchers have found an association between home prices and school quality (Cannon et al., 2015). A 5% increase in test scores of a school district can result in a value of homes by 2.5% (Jacobsen et al., 2014). Krupa (2015) contended, “Property tax equity matters are central to the establishment of a high-quality property tax administration system” (p. 5). Assessment quality is crucial to equitable property taxes (Krupa, 2015). There could be a negative correlation between income and property tax rates and aging Americans as this population increases (Reback, 2015).

Families with children will pay more in housing costs than childless households in areas with high-quality schools (Owens, 2016). Age demographics could substantially influence local tax revenues, school quality, and home prices (Reback, 2015). Even childless households may pay for school quality when buying a house to maximize home value (Owens, 2016). Researchers have found individuals are willing to pay a premium for homes in higher quality school districts (Jacobsen et al., 2014). Owens (2016) argued, “Local school options may be a key mechanism structuring the residential choices of families with children” (p. 550).

Financial resources shape residential decisions and preferences like safety and public schools (Owens, 2016). Owens (2016) found, “Studies show that a one standard deviation increase in test scores corresponds to a 1-4% increase in housing costs,

accounting for other neighborhood characteristics that may affect house prices” (p. 552). An unaccredited school district will have lower pricing on the housing (Hubbard, 2014). Residential factors powerfully affect student learning, outcomes, and school environment and performance (Quillian, 2014).

Neighborhood quality has been linked to academic achievement (Morrissey, Hutchinson, & Winsler, 2014). The effect of housing restrictions, zoning, property taxes, and school districts drives the price of housing up so certain people and the poor cannot afford to live in those areas (Wilson, 2014). Wilson (2014) further explained, “School districts compete for residents who shape their populations, tax bases, and programs” (p. 1437).

Public School District Performance

All states have some measure in place of district performance (Dickinson & Adelson, 2016). The effect of expenditure does translate into improved performance but to a limited extent (Pugh et al., 2015). Argon (2015) noted, “The topic of student achievement has increased social pressure on schools and called the responsibility of administrators for student achievement to attention” (p. 927).

Rhodes (2015) explained, “Over the past three decades, the states have adopted a suite of reforms to their education systems in an effort to improve school performance” (p. 181). The 2001 NCLB Act forced local districts to publicly distribute performance data (Jacobsen et al., 2014). The NCLB Act also forced states to set up accountability systems for public school districts (Ooghe & Schokkaert, 2016). School accountability requires measures of school performance (Ooghe & Schokkaert, 2016).

Schools have learned to deal with many new mandated state tests since the early 1990s (Stotsky, 2016). School accountability increases student learning (Ooghe & Schokkaert, 2016); therefore, teachers must provide high-quality instruction to all students and use research-based approaches (Randi & Grigorenko, 2017). Argon (2015) argued, “Accountability is based on the realization of student expectations and acquisition of school goals” (p. 927). Brown (2015) found, “High-pressure accountability can and has led to conformity at the expense of real learning” (p. 71). Ikpa (2016) contended, “Many individuals in these distressed districts characterized by overcrowded classrooms, outdated resources, and limited funding, face day-to-day challenges that force them to develop creative survival techniques” (p. 469).

Lindell (2016) argued, “Children of parents with economic, educational, and social advantages begin school better prepared and better able to learn” (p. 193). Rosenberg et al. (2015) advanced, “Low-performing schools in rural settings can face challenges common to all struggling schools, such as low student motivation and maintaining a qualified teaching staff” (p. 194). Chitpin and Jones (2015) pointed out, “The growing movement of accountability in education has seen, in the last two decades, increasing emphasis on the use of data to define school and teacher performance” (p. 387).

As districts increase in size, the performance of students generally shows a decline (Kaniuka, 2014). Performance data allow citizens to accurately judge their schools (Jacobsen et al., 2014). Public perceptions of school quality are based on test score performance and accountability scales provided to the citizens (Schueler & West,

2016). Larger school size can improve ACT as larger schools offer a more diverse curriculum (Kaniuka, 2014).

The success of youth in school is highly influenced by the community where they live (Khan & Zahra, 2015). In 2010, the *Common Core Standards* created a widespread adoption of a set of national standards (Randi & Grigorenko, 2017). The ESEA money is used to measure student performance and district performance (Cusick, 2014). More money is spent in schools where teachers are better educated and more experienced (Elliott, 1998).

Studies have shown smaller class size leads to greater student achievement (Hubbard, 2014). Jennings, Deming, Lopuch, and Schueler (2015) argued, “. . . examining schools’ effects on test scores alone may miss important ways in which schools can improve (or hurt) their students’ life chances” (p. 78). Quillian (2014) discovered, “Residence in an affluent neighborhood is an important source of educational advantage” (p. 403).

Efforts of the Bush and Obama administration initiated public school accountability through standardized testing (Stotsky, 2016). Politicians and parents continue to increase pressure for schools to show improvements in accountability (Brown, 2015). State accountability measures now support alignment between K-12 and college education (Jackson & Kurlaender, 2016).

Parental support and involvement in education is key to student achievement and district success (Rhodes, 2015). Rhodes (2015) pointed out, “Parental frustration is grounded in the perception that policy changes with huge implications for their children’s education have been instituted without consultation or consent” (p. 188). Schools help

students stay out of trouble, complete high school and college, and earn a living (Jennings et al., 2015). Argon (2015) described, “The aim of accountability in education is to maximize student achievement by increasing the quality of teaching and training activities as well as to identify the extent of achievement of the goals” (p. 927). Lumpkin (2016) found a correlation between the academic performance of students and the quality of school building the students were educated in. Newer modern facilities result in great academic achievement (Lumpkin, 2016).

Annual Performance Report (APR). Adequate funding is necessary to implement and sustain reform initiatives (Ikpa, 2016). The Annual Performance Report does not provide information on how the district spends its revenues (Hardin, 2016). Evaluation should help school leaders do their job better (Radinger, 2014). As the measurable criteria of performance have increased, the pressure on teachers and administrators has risen (Chitpin & Jones, 2015). The public uses school data to make judgment of public schools (Jacobsen et al., 2014). States delineate what students should know (Stotsky, 2016). The 2010 *Common Core* Standards set expectations for students to acquire skills upon which districts can be measured (Randi & Grigorenko, 2017). Academic achievement measures do not work interchangeably (Dickinson & Adelson, 2016).

Recent educational outcomes have been described as disappointing by many researchers in America (Jerrim, 2014). Federal funding led state departments to enact policies and laws to measure schools such as Missouri’s Annual Performance Report (Cusick, 2014). Since school resources are systematically related to student district achievement (Elliott, 1998), equality and fairness are terms used to serve as catalysts for

new accountability measures (Gutierrez, 2015). Accountability policies have expanded since NCLB, and the amount of school data available to the public has grown (Jacobsen et al., 2014).

School accountability means schools are a key factor in determining the academic outcomes of students (Kotok, Sakiko, & Bodovski, 2016). Regarding accountability, Argon (2015) noted “the development of learning, teaching, and educational methods require one to claim responsibility for the achievement or failure resulting from current practices” (p. 927). State policymakers see accountability policies as a means to encourage schools to ensure student achievement (DeCuir, 2014).

College and career readiness measures have been included in state assessments and performance measures (Jackson & Kurlaender, 2016). Schools can prioritize goals from sources other than the state (Jennings et al., 2015). Parents desire different outcomes for students based on various social pressures within the community (Jennings et al., 2015). Argon (2015) determined, “School administrators are expected to use school resources in the best possible manner and increase the success of the school” (pp. 927-928).

Academic achievement. Educational researchers have studied high stakes testing, student achievement, and district performance since the 1950s (DeCuir, 2014). School accountability has increased test scores of students (Ooghe & Schokkaert, 2016). District factors influence student achievement including wealth, race, and prior achievement (Kaniuka, 2014). The standard measurement of literacy alone is not sufficient in the 21st-century marketplace (Randi & Grigorenko, 2017). Hiss and Franks (2015) pointed out, “[There is a] widely held (but often unexamined) assumption that standardized

testing is a common standard used to compensate for wide differences in academic quality among high schools” (p. 34).

Lindell (2016) summarized, “Good teachers not only increase students’ scores on standardized tests, but they also can lower students’ teen pregnancy rates, increase their likelihood of going to college, and raise their lifetime incomes” (p. 190). Academic outcomes increase student life chances by students getting better jobs and earning more money (Brown, 2015). Chitpin and Jones (2015) described student success is maximized when “teachers have high expectations of students” (p. 392); although, Scafidi (2016) argued, “Higher income, more educated parents, and fewer siblings have all been shown to increase student achievement” (p. 128).

There is a tremendous variation from state to state on what is covered in state assessments (Dickinson & Adelson, 2016). Ooghe and Schokkaert (2016) pointed out, “The average test score in a school strongly depends on the characteristics of the pupil population” (p. 360). Jennings et al. (2015) noted, “School effectiveness based solely on test scores will likely miss other potentially important dimensions of school quality” (p. 58).

State tests should measure how well students meet the standards dictated by the state (Stotsky, 2016). Large learning gains have been made in collecting and evaluating assessment data (Brown, 2015). Significant consequences have been attached to standardized test performance to improve student achievement (DeCuir, 2014). Test scores are not the only way to predict the future economic success of students (Jennings et al., 2015).

Subgroup achievement. Access to quality education is unequal in America (Jerrim, 2014). Jabbar (2016) argued, “Faced with the pressure of accountability and charter renewal, these schools traded greater funding for potentially great averages in student achievement” (p. 4). Marchetti et al. (2016) contended, “Since the passage of No Child Left Behind Act of 2000, schools across the country have become increasingly accountable to students who have historically underachieved” (p. 3).

Entrance to college is both academic performance and affordability (Kaniuka, 2014). Problems in achievement gaps are between white and wealthy students and minority and disadvantaged students (Lindell, 2016). Students from ethnic and racial minority groups have less educated parents; are from families with a lower socioeconomic status (SES), and do not have the social capital to be involved in their children’s education (Rodriguez & Elbaum, 2014). Many students with disabilities miss transition experiences because those experiences are not offered (Hoover, 2016). Demographic diversity of student bodies should remain the central topic of policy debates around school assignment (Benner & Yijie, 2014).

Schools with high percentages of low-income or minority students tend to have poor academic performance and high dropout rates (McKee & Caldarella, 2016). Goodman (2015) contended, “Research studies demonstrate that the average SAT and ACT scores of Latino, Hispanic, and African American students are notably below the Anglos and Asian Americans” (p. 315). School counselors can use data to influence change within the school to promote equity (Alger & Luke, 2015). Wilson (2014) explained, “Fragmentation and localism in public schools lead to the exclusion of poor and minority students from access to high-quality school districts” (p. 1416).

Higher SES schools boost achievement scores among higher SES students than the lower SES students within the same school (Jennings et al., 2015). Quillian (2014) stated, “Increased inequality in the income level of neighborhood contexts will contribute to increased inequality in educational outcomes” (p. 403). It is much costlier to educate diverse populations because of various levels of need in their education (Knoepfel et al., 2013).

Special education performance. Students with special needs used to have much less devoted to them (Scadifi, 2016). This has increased over the past 20 years (Scadifi, 2016). Addonizio (2000) argued, “Fiscal pressure on public schools is exacerbated by the steady growth of the special education population” (p. 70).

Hoover (2016) summarized, “The goal for students with disabilities as they leave high school is that they will go to college; be able to find employment in the real world, and/or have the skills necessary to be independent as possible” (p. 21). Students with disabilities who stay in the regular education room perform better than those pulled out (Scanlan & Tichy, 2014). Randi and Grigorenko, (2017) contended, “Special education research has provided guidance to classroom teachers in supporting students’ acquisition of reasoning skills in the content areas” (p. 5).

Teacher attitude has been found to be the most important factor for special education students’ success (Scanlan & Tichy, 2014). Diaz (2016) found, “Students with special education needs may be at risk due to the increased cost of adequately educating students with special needs” (p. 27). Youth with disabilities have lower employment rates and fewer benefits than their peers without disabilities (Hoover, 2016).

Federal policy focuses on procedural compliance rather than outcomes in their education (Diaz, 2016). A model should be implemented to focus on developing students' talents than on focusing on students' deficits for those learners with special needs which would far more improve their academic achievement (Stoddard, Tieso, & Robbins, 2015). The community can be a transition resource for students with special needs, and the community benefits as these students enter into the community after graduation (Hoover, 2016).

Free and reduced-price meals. The number of students eligible for free and reduced-price meals has greatly increased from 1990 to 2010 (Owens, 2016). Tate et al. (2014) summarized, "Race and poverty were positively correlated with high school students' academic outcome measures used in Missouri's accountability system" (p. 217). Parents in low-value areas do not have the resources to match those in high-value areas (Arocho, 2014). Goodman (2015) stated, "Students from middle and upper socioeconomic classes move to the better public schools (often in the suburbs) or choose private school" (p. 307). Jennings et al. (2015) stated, "Children from more privileged families attend better schools and have better experiences within any given school than do less privileged children" (p. 58).

Education can equalize between socioeconomic groups (Jerrim, 2014). Arcalean and Schiopu (2016) discovered, "Public education quality is low when few resources are available" (p. 822). Marchetti et al. (2016) documented, "Reading scores and math scores of free and reduced-price meals students are found to be significantly lower than those of non-free and reduced students" (p. 14).

Keller et al. (2015) contended, “A common indicator of poverty is eligibility for free or reduced-cost school lunch” (p. 237). Lindell (2016) entertained, “annual teacher turnover is nearly 30% higher in schools that have mainly free or reduced-lunch price students than in schools with few such students” (p. 196). Owens (2016) stated, “High-income and highly educated parents have increased investments in their children’s education compared to low-SES parents over the past few decades” (p. 553).

Families with higher SES are more involved in their children’s education, while families with a lower SES are less involved (Rodriguez & Elbaum, 2014). Students from ethnic and racial minority groups have less educated parents, come from lower SES backgrounds, and do not have the social capital to be involved in their children’s education (Rodriguez & Elbaum, 2014).

Since there are disadvantages associated with growing up in impoverished neighborhoods (Owens, 2016), the first priority should be to transform the vicious cycles of poverty and illiteracy into cycles of health, education, and development (Khan & Zahra, 2015). Research firmly supports the fact that money affects student achievement (Elliott, 1998). Poor economies where fertility rates are higher and the tax base is lower have public schools of poor quality (Arcalean & Schiopu, 2016).

Education promotes the existing social pattern by justifying social inequalities (Jerrim, 2014). Public schools become more segregated when lower-middle class and working poor leave their children in traditional public schools and “parents who are more engaged and have more resources tend to more often self-select and enroll their children into charter schools” (Hoerner, 2015, p. 577). McGrath (2015) explained, “Higher levels

of unemployment and poverty also mean a more challenging environment for the schools” (p. 15).

Marchetti et al. (2016) pointed out, “Students that receive free and reduced lunch prices, by definition, are families from low income” (p. 4). Lauchner (2017) determined there is “a strong correlation between increased government spending on education—specifically education benefiting the most vulnerable groups—and lower income inequality” (p. 149). Jerrim (2014) argued, “Educational institutions serving disadvantaged communities are often poorly sourced” (p. 200).

Learning policies should focus on lessening the influence of poverty on educational achievement (Khan & Zahra, 2015). Persistent inequalities plague many schools and the community where the school is located (Scanlan & Tichy, 2014). Former President Johnson claimed the poor were poor because they lacked quality schooling (Cusick, 2014). There are inequalities in access to knowledge among students (Elliott, 1998). Moon et al. (2005) found, “More affluent individuals receive better education and jobs compared to individuals who originate from less-affluent households” (p. 207).

Many schools are using SES as a mechanism for maintaining school diversity (Benner & Yijie, 2014). In Springfield, Missouri, Dent (2014) found, “Sixty-nine percent of non-low-income students read on grade level, while only 33% percent of low-income students read on grade level” (p. 734). Stotsky (2016) believed, “[The] ESEA has yet to show in fifty years that extra money to schools (via Title I funds) for low-income students has made a difference” (p. 289). Jennings et al. (2015) pointed out, “Schools play a central role in sociological accounts of how inequality is transmitted from parents to children” (p. 58).

Schools serving disadvantaged students are at risk of trivializing learning to teach to a specific test and distorting curricula (Stotsky, 2016). Education spending is forced in opposite directions due to inequality in poor and rich economies (Arclean & Schiopu, 2016). Hoerner (2015) commented, “Research has shown that poor children are more concentrated in traditional public schools in districts where private, charter, and magnet schools are present” (p. 577).

Lower socioeconomic status and higher minority schools have worse school climates (Kotok et al., 2016). Economic disparities lead to disparities in educational outcomes (Owens, 2016). Stoddard et al. (2015) outlined in their research, “Students in largely urban and lower income districts are not provided the same opportunities to engage in high quality and challenging curriculum” (p. 169). Jackson and Kurlaender (2016) stated, “Students who attend poor quality schools or who do not participate in rigorous courses of study may not receive the necessary grounding in the core subjects” (p. 480). Ooghe and Schokkaert (2016) contended, “It is natural to financially compensate schools with socially disadvantaged pupil population, as it is difficult for them to realize the required quality norms” (p. 382).

Schools with students who need the most college counseling are most likely not to receive it (Alger & Luke, 2015). Quillian (2014) suggested, “Economic segregation increases the years of education completed for high-income children, and it decreases it for low-income children” (p. 409). Jennings et al. (2015) stated, “Early studies of school effects suggest that differences in school quality do not play a large role in the transmission of disadvantage from one generation to the next” (p. 56). Jennings et al.

(2015) concluded their research stating, “Our results show that in the 21st century, low-income is more of a disadvantage than race among high school students” (p. 77).

College and career readiness. There are a larger number of students who expect to compete in college but are not prepared to do so (Jerrim, 2014). Students have admitted they could have done a better job to improve their preparation for life after high school (Alger & Luke, 2015). Jackson and Kurlaender (2016) stated, “Recent policy discussion has focused on the need to better align K-12 systems with higher education within and across states to ensure a more seamless transition from high school to college for young adults” (p. 477). Curry (2017) summarized, “teachers need to reconsider what it means to be college and career ready, and what it means to have a core set of skills that allow learners to meet the demands of both academic and life priorities” (p. 63). Ikpa (2016) stated, “Some students may be under-prepared and must play ‘catch-up’ when entering secondary institutions because inadequate funding made them ‘resource’ disadvantaged” (p. 469).

Sondergeld et al. (2016) discovered, “K-12 education stakeholders agreed strongly that their instruction and school experiences were preparing students to be successful in postsecondary study and the workforce” (p. 109). Jennings et al. (2015) pointed out in their research, “Attending a four-year college, in contrast, depends to a great extent on conscious choices that can be made during high school” (p. 57).

State assessments now have measures for college and career ready performance (Jackson & Kurlaender, 2016). Goodman (2015) stated, “Studies in several states support this assessment that public secondary schools with higher minority populations often perform at lower levels on standardized measures” (p. 316). Alger and Luke (2015)

believed, “In preparing students to be college and career ready, professional school counselors work with students and their families through the process of selecting courses and internships that are rigorous and relevant to students’ college and career goals” (p. 17).

College and career ready skills include taking advanced preparation classes in high school, completing an entrance exam, and applying for financial aid (Jerrim, 2014). Jackson and Kurlaender (2016) stated, “Students who are more prepared for college may be more likely to go to college” (p. 482). Students with disabilities need transition services to be college and career ready including instruction, community experiences, and development of employment (Hoover, 2016). In 2012, only 27% of Missouri students were college ready in all four subjects of the ACT test (Dent, 2014). State departments of education have tried to get colleges to accept Common Core grade 11 tests as a measure of college readiness (Stotsky, 2016).

Aligning high school curricula with college and work is a clear goal of current education (Jackson & Kurlaender, 2016). A portion of the *Common Core Standards* calls for college and career readiness data of school districts (Jackson & Kurlaender, 2016). Stuteville and Johnson (2016) presented this concept: “The public schools are often criticized and blamed because there is a perception that the schools are not producing ‘good citizens,’” (p. 100). The level of rigor in public schools is often inversely proportional to schools with higher minority populations (Goodman, 2015).

School outcomes and future success are more closely related to parent income than school performance (Jennings et al., 2015). Rauscher (2015) uncovered, “Education expansion spurs the economy and innovation, promotes job creation, and expands skilled

and higher paying jobs that demand more educated workers” (p. 1397). An inferior education limits social mobility and weakens connections to critical social networks, which affects the success of students after graduation (Wilson, 2014). Stitzlein (2015) explained, “Parents expect schools to fulfill their private economic goals and those of their children by awarding them degrees or certifications that will ultimately enable them to secure lucrative jobs” (p. 565).

Attendance rates. Attendance is a building block for educational success (Benner & Yijie, 2014). Compulsory school attendance laws began in the 1850s (Rauscher, 2015). Rauscher (2015) explained, “Compulsory laws aimed to achieve universal school attendance and were primarily directed at lower-class and immigrant families who did not already send their children to school” (p. 1402). Attendance rates in pre-school and elementary are predictive of attendance rates in high school (Khan & Zahra, 2015). McConnell and Kubina (2014) stated, “School attendance is critical for American students” (p. 249). Benner and Yijie (2014) found, “Being a present and active participant in school, students form emotional bonds with teachers and peers that in turn facilitate school investment and educational effort” (p. 1288).

Khan and Zahra (2015) determined there is a “positive significant relation of primary school net attendance ratio with literacy rate” (p. 28). McConnell and Kubina (2014) continued, “When students are not in school, they are missing out on their education and potentially engaging in risky behaviors” (p. 249), and absences signal disengagement (Benner & Yijie, 2014). McConnell and Kubina (2014) summarized, “Students’ attendance rates have been, and continue to be, a severe problem in public school classrooms each year” (p. 253). Morrissey et al. (2014) contended, “Following up

with students who are chronically absent or tardy may help encourage student attendance, and in turn increase achievement” (p. 752).

An increase in attendance rate produces an increase in educational outcomes and can be used as a measure of progress (Khan & Zahra, 2015). Drops in school attendance signal a turning point in students’ lives with low performance to follow (Benner & Yijie, 2014). McConnell and Kubina (2014) pointed out, “Promoting attendance early in a student’s life can encourage attendance and maintain this habit throughout his or her career” (p. 249). Students with attendance rates lower than 8% have been shown to score on average 20 points less on standardized tests than their peers (Morrissey et al., 2014).

Factors that affect attendance include individual, household, and community characteristics including the value placed on education by all three (Khan & Zahra, 2015). Morrissey et al. (2014) explained, “Children who frequently miss or are late to school fail to benefit from teacher instruction and modeling, peer interaction and activities linked to scaffold learning” (p. 742). Benner and Yijie (2014) argued, “School attendance is a serious concern for parents, educators, and policymakers, and understanding the developmental progression of attendance is critical to identifying those students at greatest educational risk” (p. 1298).

Consistently, there is research showing a correlation between attendance and student outcomes dating back to the start of compulsory school laws (Rauscher, 2015). Parents are more accountable for regular school attendance of students in the elementary grades (Morrissey et al., 2014). Morrissey et al.’s (2014) research suggests a greater negative impact on achievement as children grow older.

Absenteeism is a serious problem in American schools (Benner & Yijie, 2014). Poor attendance is linked to poor academic outcomes and life outcomes (Benner & Yijie, 2014). Poor attendance is one of the three leading indicators of a student dropping out (McKee & Caldarella, 2016). Absenteeism and other disruptions in attendance have detrimental effects on students' learning (Hoerner, 2015).

Compulsory laws are created to override irresponsible parents and improve attendance of poorer people (Rauscher, 2015). There is a link between family income, student achievement, and attendance (Morrissey et al., 2014). Morrissey et al. (2014) explained the importance of attendance: "Children who miss class fail to benefit from teacher-led lessons, peer interactions, and other activities designed to foster learning" (p. 741).

Graduation rates. America's graduation rate has only slightly increased in the past 20 years (Scadifi, 2016). The United States has a high dropout percentage compared to other developed countries (McKee & Caldarella, 2016). Kotok et al. (2016) discovered, "There still exists an unequal distribution of high school dropouts across districts, regions, and states" (p. 571). Social and academic risk factors accumulate over time, which increases the likelihood of students dropping out (McKee & Caldarella, 2016).

Districts with truancy and dropout prevention have had positive effects on student engagement (Benner & Yijie, 2014). McKee and Caldarella (2016) summarized, "Dropping out of high school has negative results and implications for individuals and society" (p. 515). Ten percent of students who enter high school do not complete and earn a diploma (McKee & Caldarella, 2016). The NCLB Act included language

addressing graduation rates to measure district performance and accountability (Kotok et al., 2016). Twenty percent of the variation of reasons for dropouts can be accounted to the school and school factors (Kotok et al., 2016). Relationships built between students and faculty can prevent students from dropping out (Kotok et al., 2016).

ACT Performance

The ACT is a common measure of college readiness (Kaniuka, 2014). College entrance exams measure the likelihood of future success of students (Jackson & Kurlaender, 2016). Hiss and Franks (2015) summarized, “Our research shows a student’s academic performance in high school—not their test scores—best predict postsecondary success” (p. 34).

The ACT has historically been used as a measure of higher performing students (Dickinson & Adelson, 2016). Per-pupil spending, overall district achievement, and SES impact district ACT results (Kaniuka, 2014). Marchetti et al. (2016) explained, “There is a strong, linear correlation between achievement on the ACT and a student’s family income” (p. 5). Students who meet the standards of the ACT have a high probability of success in college (Kaniuka, 2014). Taking a college entrance exam and advanced high school classes are one step towards increasing the prospects of a student competing for college (Jerrim, 2014). The ACT results are not only used as a measure of college ready but also as a measure of student growth (Marchetti et al., 2016).

The ACT has been added to state accountability guidelines (Dickinson & Adelson, 2016). Some states are having all high school students take the ACT as part of their measurement, not just college-bound students (Dickinson & Adelson, 2016). The ESSA, according to Stotsky (2016), “allows states to use the SAT or ACT in grade 11 for

determining college readiness” (p. 297). Stotsky (2016) continued, “These college admission tests have been aligned down to Common Core’s high school standards; these tests can no longer serve their original predictive purpose well” (p. 297). Marchetti et al. (2016) stated, “States that test statewide commonly use the results of the ACT as part of a school’s accountability” (p. 7).

District Accountability

School accountability has dominated public debates about education and school reform (Brevetti, 2014). Stitzlein (2015) stated, “Accountability is about ensuring schools’ ability to achieve American dominance in international rankings of student achievement” (p. 564). Accountability is both a process and an outcome for schools (Argon, 2015).

Karoly (2016) stated education is in, “a policy climate that stresses results-based accountability at all levels of government and prioritizes spending for evidence-based programs” (p. 38). States are required to collect data and report annually (Rodriguez & Elbaum, 2014), and Stuteville and Johnson (2016) believed, “It is incumbent on each state’s department of education and its local school district to develop appropriate curriculum standards” (p. 100). Hubbard (2014) added: “Schools become accredited or lose their accreditation based on a variety of factors including academics, attendance, and their graduation rates” (p. 800).

Accountability has been the focus of educators to meet basic competency in K-12 (Jackson & Kurlaender, 2016). Dickinson and Adelson (2016) believed, “Administrators may want to give careful consideration to which achievement measures they consider when making policy changes” (p. 5). There are vast differences in the quality and quantity of education that students receive (Jerrim, 2014). The pressure on standardized

testing for accountability damages tests and school curriculum (Stotsky, 2016).

Advanced skills, problem-solving skills, critical thinking, and creativity should be of the utmost value (Randi & Grigorenko, 2017). Gutierrez (2015) advanced, “Policymakers call for more accountability, giving the impression that the profession is in need of more accountability—even despite mounting research suggesting the approach and concepts are flawed” (p. 85). The reauthorized NCLB held schools and school districts but not teachers accountable (Stotsky, 2016). Hubbard (2014) argued, “Eliminating student accountability also undermines the accreditation system and places the sole responsibility of accreditation status on the teachers and administrators” (p. 800).

Solutions to school performance must include a focus on the community and the community’s support of education (Hoerner, 2015). Rhodes (2015) contended, “Because standards, testing, and accountability policies provide few opportunities for parents to participate in policy design, they send the signal that government places a low value on parental input” (p. 188). Elliott (1998) discovered a correlation between the money spent on core subjects and higher achievement in those subjects. Stuteville and Johnson (2016) stated, “Public education is a state and local function of the United States, and education policy and standards largely reflect state and local preferences” (p. 112).

Students performance helps districts maintain accreditation (Hubbard, 2014). Hubbard (2014) believed, “A school district’s academic performance, attendance, and graduation rates are directly influenced in part by the choices of its students” (p. 800). Rhodes (2015) found in his research, “parents residing in states with more developed assessment systems express more negative attitudes about government and education and are less likely to be engaged in some forms of involvement in their children’s education”

(p. 181). Rhodes (2015) found the less defined the assessment system in place, the more the stakeholders held school and government in a more positive attitude.

State and Federal Funding

Schools are overburdened and severely underfunded (Ikpa, 2016). Starting in the 1970s, there was a movement to shift the percentage of funds from local sources to state sources in education funding (Knoeppel et al., 2013). Spending on elementary and secondary education makes up about 25% of states' budgets (Schueler & West, 2016). Wheelock (2017) stated, "Many state courts have declared the responsibility to adequately fund schools to be a state, not a local, duty" (p. 136).

Ikpa (2016) summarized, "Adequate financing of public education at the state and federal levels is necessary for providing needed resources to support K-12" (p. 469). Lumpkin (2016) asserted, "At a minimum, adequate funding should be provided to transform inadequate school buildings into facilities that enhance teaching and learning, (p. 183). Ikpa (2016) theorized, "The degree to which state aid has substituted the void created by the loss of federal support has varied" (p. 469). Addonizio (2000) argued, "States would do well to strengthen local school financial reporting requirements and establish threshold levels at which local revenue growth would trigger state aid reductions in the interest of statewide equity goals" (p. 73).

State departments are dependent on federal funding (Cusick, 2014). Eighty-three percent of school funding comes from the states (Cannon et al., 2015). State funding is a mix of taxes which is sent to local districts (Hughes et al., 2017). Elliott (1998) found evidence of positive effects of increasing per-pupil expenses, and summarized, "Greater

financial resources will be better to able to afford classroom resources, such as math and science equipment, which in turn will facilitate learning” (p. 226).

The federal government gives grants and loans to states to create greater equity in educational opportunities (Moon et al., 2005). Reback (2015) concluded, “In most United States school districts, local residents control the last dollar spent in public schools” (p. 1466). Local residents may decide to raise revenues per schoolchild to compensate for declining state and federal monies (Reback, 2015). Larger districts can gain a larger share of the federal resources, even though smaller districts have a greater need of those resources (Kimmons, 2015). Gentry and Hirth (2017) noted, “School districts are seeing a slow depletion of staffing and school programs. Many of these cuts of staff and programs are ones that support the most disadvantaged school districts” (p. 30).

Each year states propose more severe consequences for the failure of schools to meet the standards imposed (Gutierrez, 2015). Although federal funding has remained fairly constant, state and local funding have been decreasing (Diaz, 2016). Federal funding can come in the forms of grants, general aid, and categorical aid which may not be funded year to year (Hughes et al., 2017). In 2012, state and local sources made up 90% of school district funding (Hardin, 2016). Rhodes (2015) determined, “Touted as the primary solution to many of the nation’s educational problems, standards, testing, and accountability policies have come to dominate the education policymaking” (p. 182).

Proper resources are necessary to make a difference in school performance and improvement (Brown, 2015). Local schools have begun to use local funds to pursue their interests, relying on state and federal monies to do what was once accomplished with

local funds (Cusick, 2014). Local school districts are permitted to function in practice as sovereign entities (Wilson, 2014).

The United States defers to the states to create the school finance systems (Arocho, 2014). Decreases in state aid often make local tax increases easier to pass with the voters (Roscoe, 2013). Per-pupil expenses are not necessarily the answer. As an example, Alaska has more per-pupil expense than all but one state, yet the expenses have not led to higher than average student outcomes compared to the rest of the nation (Wheelock, 2017).

Federal Measurements of Local Funding and Performance

The federal government bypasses local school boards claiming to act on behalf of students (Cusick, 2014). Wilson (2014) stated, “Increased state and federal accountability has not generally improved the academic plight of the poor, urban districts” (p. 1448). Education budgets are created at the district level (Schueler & West, 2016); therefore, Ipka (2016) argued, “Budgetary constraints often constrain one’s ability to deliver quality services to our students” (p. 468). Lindell (2016) summarized, “NCLB conditioned federal education funding on the requirement that each district provides services federally funded...that are ‘at least comparable to services in (low-poverty) schools that are not receiving fund,’” (p. 198).

Governor election races and even Presidential races express their commitment to education and how they will focus on education (Schueler & West, 2016), since adequate levels of funding are necessary for quality learning (Elliott, 1998). However, the gap between the rich and the poor is much larger in the United States than any other developed country (Jerrim, 2014). The threat of withdrawing federal money limits state and local constitutional control over districts (Cusick, 2014).

There is a constant drive to make public education more democratic and universally fair (Gutierrez, 2015). Larger districts benefit and can provide more to their students at a lower cost (Kimmons, 2015). Since the federal government requires students with disabilities to receive the services they need (Diaz, 2016), resources available to any given student vary greatly from state to state across the country (Davis, 2016).

Arocho (2014) argued, “Congress can encourage states to give all communities an equal opportunity to finance a high-quality education for all students, regardless of the value of their taxable property” (p. 1479); however, Goodman (2015) pointed out, “No federal constitutional challenge will stand on the issue of funding disparities in public education” (p. 305). Wheelock (2017) explained the ESSA, “The federal impact aid program supports districts which lose tax revenue due to the presence of large parcels of land within their boundaries owned by the federal government” (p. 115). Individual schools have now a more limited control over local decisions than ever before (Pugh et al., 2015). Diaz (2016) pointed out, “IDEA links federal funds to state’s compliance with various requirements” (p. 35).

Summary

The Missouri Constitution guarantees a fundamental right to public education (Hoerner, 2015). Ikpa (2016) pointed out, “The decline in revenue reserves in many urban centers can be directly linked to declining sales tax, income tax, and tourism tax revenues” (p. 469). Providing information on per-pupil expenditures to an area leads to support of increasing spending (Schueler & West, 2016). Federal programs and money

are held in check with measures of accountability (Cusick, 2014). Elliott (1998) determined financial resources alone may not ensure student achievement

Chapter Two included literature on district performance, property tax, local, state, and federal funding. Also contained in the chapter were the historical background of school funding and the importance of taxation to schools. A discussion of authors' opinions and findings from research allowed for an examination of district performance on assessments such as the ACT, free and reduced-price meals populations, and other subgroup achievement categories. The literature was reviewed under the lens of the economic benefit theory of taxation (Duff, 2004).

Chapter Three contains the research methodology of the study. Specific information about the population and sample are shared. Since secondary data were obtained, a specific instrument to collect data and analyze data was not necessary. Data collection procedures are explained. The data analysis methods used in the study are detailed, and ethical considerations are provided in Chapter Three.

Chapter Three: Methodology

In Chapter Three, a thorough explanation of the methodology used in this study is outlined. Quantitative methods were used in this study to determine whether differences existed in tax levy rates for schools in the bottom quartile of Annual Performance Report scores when compared to schools from the top quartile of the Annual Performance Report. Fraenkel et al. (2015) determined this “approach requires no manipulation or intervention on the part of the researcher other than administering the instruments necessary to collect the data desired” (p. 12). Data were extracted from the MODESE Missouri Comprehensive Data System public school database.

A step-by-step format of the methodology is presented in this chapter. First, the problem and purpose are reviewed. Next, the research questions and hypotheses are listed. Following the hypotheses, the research design is discussed. The rationale for the choices made during the study is described, and the population and sample are explained. Data collection and data analysis procedures are given. Chapter Three concludes with ethical considerations.

The benefit theory of taxation (Duff, 2004) was the framework for this research. Stitzlein stated, “Accountability is a largely an economic concern, where taxpayers seek efficient use of their money and a satisfying rate of return on their investment in children” (p. 564). Data from Missouri school districts during the 2014-2015, 2015-2016, and 2016-2017 school years were used.

Problem and Purpose Overview

The purpose of this quantitative study was to examine the difference between property tax rates of public school districts and student performance for public school districts in Missouri. Few studies exist studying revenue generation in support of public education (Knoepfel et al., 2013). Local school districts, not the state, have the primary responsibility to educate students within their boundaries (Wilson, 2014).

Stitzlein (2015) contended, “In order to preserve and improve democracy for future generations, citizens have a sole responsibility to protect and support public schools” (p. 564). Lauchner (2017) stated, “Increasing education spending may not be the proper tool with which to combat inequality” (p. 149). Brevetti (2014) contended, “If policymakers shift educators’ focus onto testing and money, the essence of good teaching will be lost.” (p. 33). Chitpin et al. (2015) pointed out, “Student achievement data are often in the spotlight of accountability, but often fails to take in consideration factors such as school culture” (p. 392).

The school district is a local government entity (Shoked, 2017). Shoked (2017) contended, “The school district is so well-entrenched that lawmakers and commentators ignore its uniqueness as a legal institution” (p. 945). There is a key crisis in American education in the form of accountability (Stitzlein, 2015). Tate et al. (2014) described, “In Missouri, the process of accrediting school districts is mandated by state law and by State Board of Education regulation” (p. 216). There is a strong push for localism in public education influenced by desirable real estate impacting the value of housing near schools (Metz, 2015), which leads to further race and class fragmentation (Wilson, 2014).

The superintendent must submit a tax levy to the county collector by September first of each year to levy a tax for the school district (MODESE, 2017). School districts then publicly post a tax rate hearing notice at least 10 days prior to the tax rate hearing (MODESE, 2017). At the tax rate hearing and on the notice, the superintendent provides information predicting revenue to be generated by the proposed levy and specifies in which fund the money is placed (MODESE, 2017).

Research questions and hypotheses. The following research questions and hypotheses guided the study:

1. What is the significant difference between Annual Performance Report scores of those Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average?

H_{1o}: There is no significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average.

H_{1a}: There is a significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average.

2. Which categories of the Annual Performance Report do school districts with a tax levy one standard deviation greater than the average levy score at least 90%?

3. What is the significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report?

H3₀: There is not a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

H3_a: There is a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

Rationale for Quantitative Research

Quantitative research is used with the intent of measuring variables. Measuring variables to test objectives using statistical procedures is accomplished through quantitative research (Creswell, 2014). The intent to collect numeric data in a quantitative fashion framed the creation of the research questions (Fraenkel et al., 2015).

Prior literature contains theories such as regionalism approaches, the public choice model, voter theory models, utility models, citizenship models, and human capital theory (Gentry, & Hirth, 2017). The framework of education funding through the human capital theory (Gentry, & Hirth, 2017) emerge most often from the literature. For this study, the economic benefit theory of taxation provided a framework to analyze whether there was a measurable academic gain from taxation (Duff, 2004).

Research Design

Quantitative methodology was used to determine whether there were significant differences which existed between variables. Fraenkel et al. (2015) argued, “When it comes to the purpose of research, quantitative researchers seek to establish relationships between variables and look for and sometimes explain the causes of such relationships”

(p. 10). Creswell (2014) agreed, “Quantitative research is an approach for testing objective theories by examining the relationship among variables” (p. 4). Quantitative studies can generalize concepts more widely, predict results, or investigate causal relationships (Fraenkel et al., 2015).

The scientific method was applied through a postpositivist worldview. From this viewpoint, there are causes which determine effects or outcomes (Creswell, 2014). In this study, the inferential statistics were used to determine the difference in whether the higher property tax rate in a school district results in greater student performance on state assessments.

Creswell (2014) contended, “The problems studied by post-positivists reflect the need to identify and assess causes that influence outcomes” (p. 7). Creswell continued to point out, “Research seeks to develop relevant true statements, ones that can serve to explain the situation of concern or that describe the causal relationships” (p. 8). Quantitative designs call for specific treatments influencing outcomes (Creswell, 2014). Directional hypotheses were used to indicate a specific direction as higher or lower (Fraenkel et al., 2015). The property tax levy was the specific treatment in this study which influenced the outcomes of district performance.

Tax rate data were collected from Missouri school districts. Additional Missouri student performance data for the 2014-15, 2015-16, and 2016-17 school years were extracted. Using this numerical data, analyses were conducted to determine whether a significant difference between the variables existed. Fraenkel et al. (2015) stated, “Use inferential statistics if you can make a convincing argument that a difference between the means of the variables obtained is important” (p. 249).

Population and Sample

Figure 1 illustrates the 2017-2018 Missouri School Districts, Schools, and Counties. The population and sample for this research were all 518 Missouri school districts from which archival data were available from the MODESE Missouri Comprehensive Data System for the 2014-15, 2015-16, and 2016-17 school years. By using the entire population, validity and reliability were attempted to be ensured, and issues surrounding sampling sizes were eliminated (Creswell, 2014). With the use of 518 school districts, the study contained a higher confidence interval and a lower margin of error (Creswell, 2014).

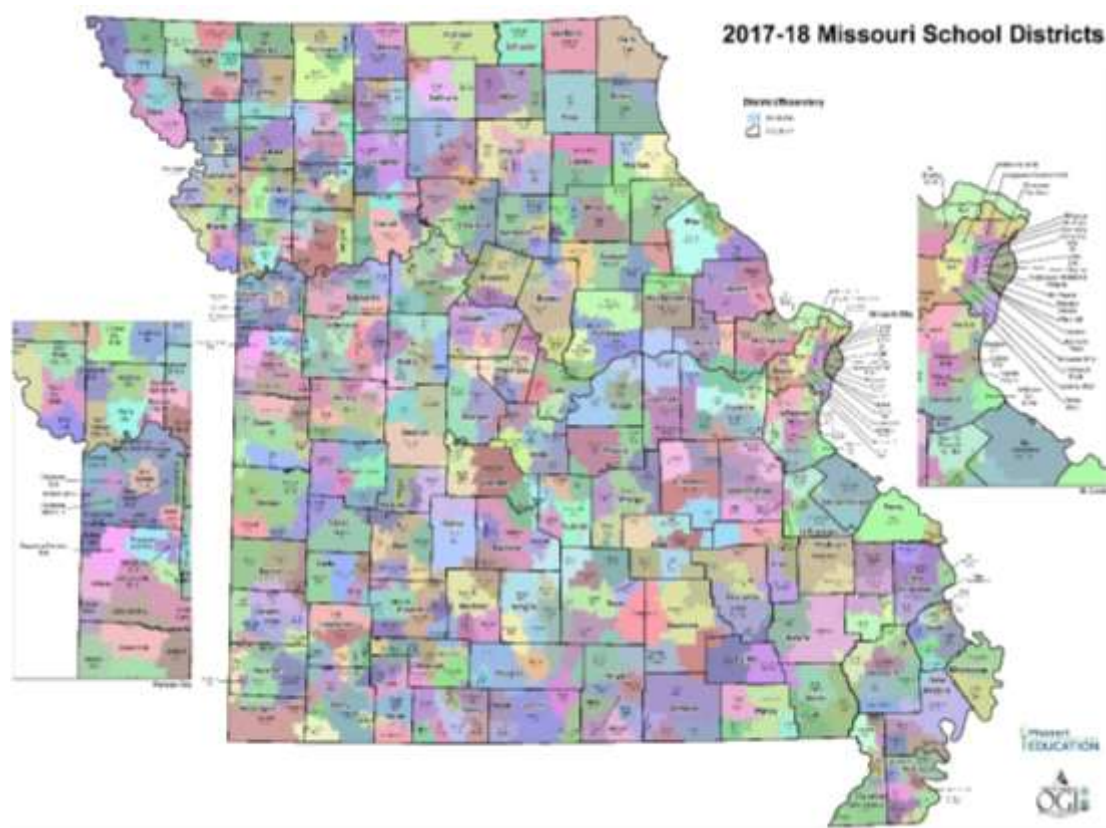


Figure 1. MODESE. (2017). 2017-2018 Missouri School Districts, Schools, and Counties.

Secondary Data

According to Devlin (2018), “some investigators have made good use of existing datasets that provide archival data about children. This process is called secondary data analysis” (p. 125). Johnston (2014) defined secondary data analysis as:

. . . an analysis of data that was collected by someone else for another primary purpose. The utilization of this existing data provides a viable option for researchers who may have limited time and resources. Secondary analysis is an empirical exercise that applies the same basic research principles as studies utilizing primary data and has steps to be followed just as any research method. (p. 619)

A specific instrument was not used in this study, instead, the secondary data were collected from the MODESE (2017) and were available for public use.

These data included property tax rates and district performance (MODESE, 2017). The Annual Performance Report scores for each district were shown for both achievement and accountability. All the data collected were validated by the MODESE and were considered valid by the State Board of Education for Missouri and the United States Department of Education.

Data Collection

Data collection must allow for drawing accurate conclusions about the characteristics of what is being studied (Fraenkel et al., 2015). No data were collected until Lindenwood University approved the IRB (Appendix A). Three years after completion of the research project, all data will be destroyed.

Data were extracted from the MODESE for 2014-15, 2015-16, and 2016-17. The data were placed into Excel files for statistical analysis. The data were disaggregated into categories of property tax levies and scores from the Annual Performance Report, which included academic achievement scores, subgroup performance scores, attendance rates, graduation rates, and college and career readiness scores.

Data Analysis

Bluman (2015) explained, “Quantitative variables are variables that can be measured or counted” (p. 6). Creswell (2014) determined, “Statistical significance testing reports an assessment to whether the observed scores reflect a pattern other than chance” (p. 165). To answer research questions one and three, the data obtained for this study were exported to Microsoft Excel files and were analyzed using an independent samples *t*-test. This *t*-test is used to determine the difference between variables that are not related (Bluman, 2015). Inferential statistics allowed the researcher to make inferences about the data based on findings from the sample (Fraenkel et al., 2015). To answer research question two, descriptive statistics allowed the researcher to determine in which categories of the Annual Performance Report school districts with a tax levy one standard deviation greater than the average levy scored at least 90%.

Independent variables. The independent variable assesses the possible effects on one or more other variables (Fraenkel et al., 2015). For this research study, the independent variable was the property tax levy set by school districts across the state of Missouri. The minimum levy to be collected set by the state is \$2.75 per hundred dollars of assessed valuation (MODESE, 2017).

Dependent variables. The variable to be affected by the independent variable is the dependent variable (Fraenkel et al., 2015). For this research, the dependent variable was the Annual Performance scores, and the categories the MODESE evaluates school districts upon. Multiple dependent variables were used to examine property taxation. Having more dependent variables allows for better meaning from the data (Fraenkel et al., 2015). Multiple data sources will predict future outcomes (Fraenkel et al., 2015). The mode, mean, median of variables were determined, and quartiles were assigned based on tax rates.

Ethical Considerations

Researchers should disclose potential conflicts of interest that surround research (Creswell, 2014). Although the researcher was employed by a public school system, there was no conflict of interest during the study. All data collected were secured in a locked file cabinet at the home of the researcher. The data were also stored on a password protected computer. Three years from the completion of this study, all data will be destroyed.

Summary

Chapter Three includes the methodology used in the research study including the problem and purpose, research design, research questions and hypotheses, population and sample, data collection, data analysis, and ethical considerations. This quantitative study, designed with the benefit theory of taxation framework (Duff, 2004), was intended to allow for determining whether academic performance differences exist between Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average. A *t*-test was

applied to the data to respond to research questions one and three. Descriptive statistics were used to respond to research question two.

The data analysis process is described in Chapter Four. The research questions and hypotheses are restated. Then, the data collected to respond to each research question are analyzed. Tables and figures are presented to provide the reader with a visual representation of the data.

Chapter Four: Analysis of Data

The difference between public school property tax rates and public-school district performance was the focus of this study. All data were drawn from a three-year period, specifically school years 2014-15, 2015-16, and 2016-17. Data collection was completed as a census of archival data from the MODESE Inferential statistics were utilized to discover differences between property tax rates and components of each school district's Annual Performance Report. Descriptive statistics were applied to determine which categories of the Annual Performance Report school districts with a tax levy one standard deviation greater than the average levy scored at least 90. An intervening variable was the assessed valuation of property.

Tax information and school achievement data were first gathered for each school district in the state. Then, the annual performance scores were compared to tax levies. Specific categories of the Annual Performance Report were analyzed to determine if school districts with higher tax levies were significantly different than districts with lower tax levies. Finally, the bottom and top quartiles of school districts' tax levies were examined.

Research Questions and Hypotheses

The following research questions guided the study:

Research question one. A *t*-test was conducted to determine whether a significant difference between Annual Performance Report scores of those Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average existed.). The *t*-test is a statistical test used to see whether a difference between two means of samples is

significant (Fraenkel et al., 2015). Significance testing aids in determining whether the scores reflect a pattern other than chance (Creswell, 2014). Each year of data was examined, and an average of three subsequent years of data was assessed.

For public school districts with higher tax rates, there was a difference between the tax rate and Annual Performance Report scores [$t = .24278$] and a p -value of [$p = .408133$] which was not statistically significant [$p < .05$]. For this reason, the null hypothesis H_{I_0} was not rejected. Hypothesis H_{I_a} was not supported. The data are presented in Tables 1, 2, 3, and 4.

Table 1

2014-2015 Average APR Score

District Descriptor	APR %
Districts above one standard deviation: average APR score	91.68%
Districts equal to average tax levy APR score	89.53%

Note. The upper extreme of the public-school tax levies was \$6.4685. The lower extreme of the public-school tax levies was \$2.400. The average levy was \$3.6266. The range of public school tax levies was \$4.0685. The standard deviation was \$0.7297. There were 77 school districts falling in the range of one standard deviation above the state average. The average Annual Performance Report score for these districts was 91.68%.

Table 2

2015-2016 Average APR Score

District Descriptor	APR %
Districts above one standard deviation average APR Score	93.16%
Districts equal to average levy APR Score	93.55%

Note. The upper extreme of public school tax levies was \$6.5218. The lower extreme of public school tax levies was \$2.4900. The average levy was \$3.6156. The range of public school tax levies was \$4.0318. The standard deviation was \$0.7163. There were 57 school districts falling in the range of one standard deviation above the state average. The average Annual Performance Report score for these districts was 93.16%.

Table 3

2016-2017 Average APR Score

District Descriptor	APR %
Districts above one standard deviation average APR Score	96.95%
Districts equal to average levy APR Score	97.30%

Note. The upper extreme of public school tax levies was \$6.5588. The lower extreme of public school tax levies was \$2.5600. The average levy was \$3.6373. The range of public school tax levies was \$3.9968. The standard deviation was \$0.7208. There were 51 school districts falling in the range of one standard deviation above the state average. The average Annual Performance Report score for these districts was 96.95%.

Table 4

2014-2015, 2015-2016, and 2016-2017 Average APR Score

District Descriptor	APR %
Districts above one standard deviation average APR Score	93.93%
Districts equal to average levy APR Score	93.46%

Note. The average levy for three years was \$3.6307. The average standard deviation was \$0.7223. The *t*-value was .24278, and the *p*-value was .408133. The result was not significant at $p < .05$.

Research question two. Descriptive statistics were used to determine in which categories of the Annual Performance Report school districts with a tax levy one standard deviation greater than the average levy scored at least 90. The data are presented in Figure 2 and Tables 5, 6, 7, and 8.

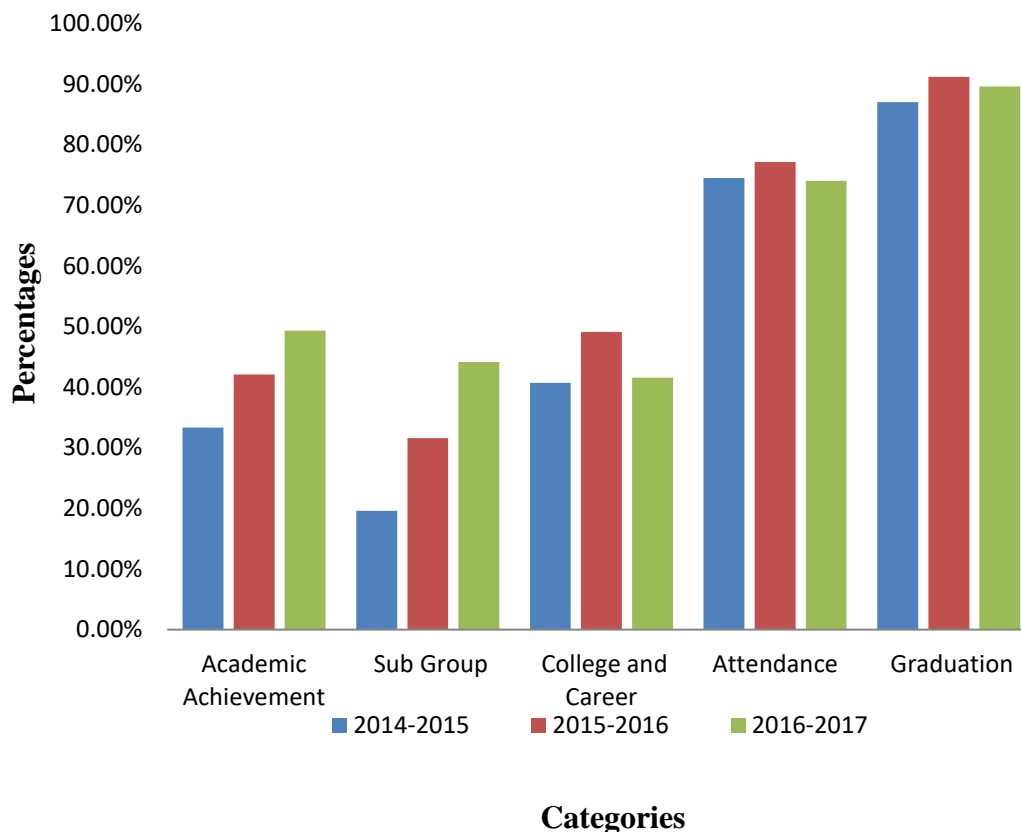


Figure 2. Category performance on the Annual Performance Report

Table 5

2014-2015 Percentage and Number of Districts Above 90% on APR

APR Category	% of Districts above 90%	# of Districts above 90%
Academic Achievement	49.35%	38
Subgroup Achievement	44.16%	34
College and Career Ready	41.56%	32
Attendance	74.03%	57
Graduation Rate	89.61%	69

Table 6

2015-2016 Percentage and Number of Districts Above 90% on APR

APR Category	% of Districts above 90%	# of Districts above 90%
Academic Achievement	42.11%	24
Subgroup Achievement	31.58%	18
College and Career Ready	49.12%	28
Attendance	77.19%	44
Graduation Rate	91.23%	52

Table 7

2016-2017 Percentage and Number of Districts Above 90% on APR

APR Category	% of Districts above 90%	# of Districts above 90%
Academic Achievement	33.33%	17
Subgroup Achievement	19.61%	10
College and Career Ready	40.74%	22
Attendance	74.51%	38
Graduation Rate	87.03%	47

Table 8

2014-2015, 2015-2016, and 2016-2017 Percentage and Number of Districts Above 90% on APR

APR Category	% of Districts above 90%	# of Districts above 90%
Academic Achievement	42.70%	79
Subgroup Achievement	33.51%	62
College and Career Ready	44.32%	82
Attendance	75.14%	139
Graduation Rate	90.81%	168

Research question three. To analyze question three, a *t*-test was utilized to assess the difference between tax levies of school districts in the bottom and top quartiles of the Annual Performance Report. Each year of data was examined, and an average of three subsequent years of data was assessed.

For districts in the bottom quartile, there was a difference between Annual Performance Report scores and tax levy [$t = -5.00768$] and a *p*-value of [$p = .003725$], which was statistically significant [$p < .05$]. For this reason, the null hypothesis $H3_0$ was rejected, and $H3_a$ was supported. The data are presented in Tables 9, 10, 11, and 12. Figure 3 contains the tax levies in column graph form.

In the bottom quartile, the Annual Performance Report scores for school districts in 2014-2015 were 88.2% or lower. In the top quartile, scores were 96.8% or higher. The difference in averages was .2809¢. The top quartile average tax rate was 8.03% higher than the bottom quartile average tax rate.

Table 9

2014-2015 Average Tax Levy by Quartile

District Descriptor	Property Tax Levy Average
Bottom quartile APR scores	\$3.4945
Top quartile APR scores	\$3.7754

In the bottom quartile, school districts scored 86.8% or lower in 2015-2016. In the top quartile, school districts scored 97.1% or higher. The difference in averages was .3415¢. The top quartile average tax rate was 9.78 % higher than the bottom quartile average tax rate.

Table 10

2015-2016 Average Tax Levy by Quartile

District Descriptor	Property Tax Levy Average
Bottom quartile APR scores	\$3.4912
Top quartile APR scores	\$3.8327

In the bottom quartile, school districts scored 86.8% or lower in 2016-2017. In the top quartile, school districts scored 97.1% or higher. The difference in averages was .2571¢. The top quartile average tax rate was 7.55% higher than the bottom quartile average tax rate.

Table 11

2016-2017 Average Tax Levy by Quartile

District Descriptor	Property Tax Levy Average
Bottom quartile APR scores	\$3.4039
Top quartile APR scores	\$3.6610

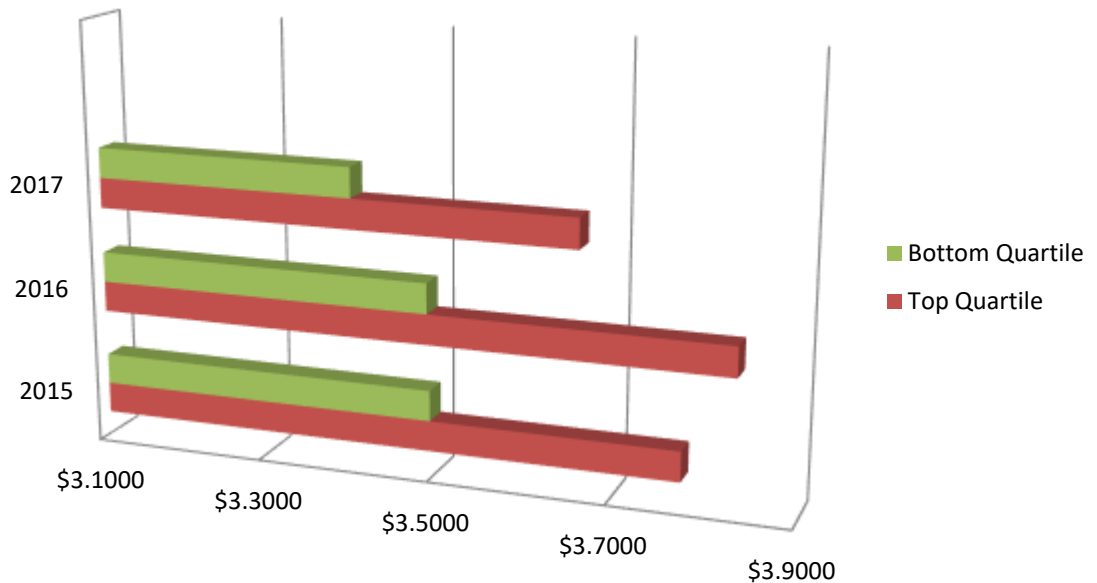


Figure 3. Public school property tax levy.

In the bottom quartile, school districts scored 87.26% or lower in years 2015-2017. In the top quartile, school districts scored 97.0% or higher. The difference in averages was .2932¢. The top quartile average tax rate was 8.47% higher than the bottom quartile average tax rate. The t -value was $t = -5.00768$, and the p -value was $p = .003725$. The difference was significant at $p < .05$.

Table 12

2014-2015, 2015-2016, and 2016-2017 Average Tax Levy by Quartile

District Descriptor	Property Tax Levy Average
Bottom quartile APR scores	\$3.4632
Top quartile APR scores	\$3.7564

Summary

Public school tax rates and school performance on the Annual Performance Report were calculated. Furthermore, scores from specific categories of the Annual Performance Report were compared to the property tax rate of the school districts. Specifically, the bottom quartile of Annual Performance Report scores were compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report. A discussion of the analyses, as well as tables and figures, were presented.

Chapter Five contains a summary of this study. The findings are presented by addressing each research question, and the conclusions from this study are connected to the literature that was reviewed in Chapter Two. Additionally, in this chapter,

implications for practice are provided which may be used by superintendents across the state of Missouri when working with their boards of education and local patrons of the district. Finally, recommendations for future research are presented for consideration.

Chapter Five: Summary and Conclusions

In Chapter Five, the data findings from Chapter Four are reviewed. Statistical analyses of the research questions were used to determine the findings (Frankel et al., 2015). Lindell (2016) claimed, “School finance has proven to be too blunt a mechanism to improve educational quality” (p. 199). The study was conducted through the lenses of the benefit theory of taxation.

Benefit theory taxation principle states the levy raises revenue and has an ideal design where tax levies achieve the purpose for which the levy is suited (Duff, 2004). Sutherland et al. (2009) explained taxation has, “major long-term consequences for the relative living standards of different groups and for public finances” (p. 47). Benefit taxation can promote choices between private and public goods (Oakland et al., 1996). Taxes can be considered distributive justice (Neill, 2000).

In this study, inferential and descriptive statistics were utilized to determine if the higher property tax rate in a school district resulted in greater student performance on state assessments. The purpose of this study was to determine the difference using quantitative methods to examine property taxes and school district performance in Missouri. Archival data from 2014-2015, 2015-2016, and 2016-2017 were used. Besides public school tax levies, districts receive money from other sources (MODESE, 2017).

There were other outside sources which affect district-wide performance which is a limitation of the study (Lindell, 2016). Another limitation was the data reviewed were gathered from schools from the state of Missouri rather than nationwide. The data were limited to district-wide statistics and did not measure individual performance or change.

Next, the implications for practice are discussed in detail. After reviewing the findings and thoughtful consideration of the implications, clear ideas for future research were drawn. Finally, Chapter Five concludes with an overall summary of the entire research project.

Findings

Research questions one and three were posed to determine the difference between public school property tax rate and public-school district performance.

Research question one. Research question one was presented to explore whether a significant difference exists between Annual Performance Report scores of those Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average. For public school districts with higher tax rates, there was a difference between tax rate and Annual Performance Report scores [$t = .24278$] and a p -value of [$p = .408133$] which was statistically not significant [$p < .05$].

For this reason, the null hypothesis H_0 was not rejected. There was no significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average. In figure 4 the average scores per the tax average are shown. The t -value was $s .24278$, and the p -value was $.408133$. The result was not significant at $p < .05$.

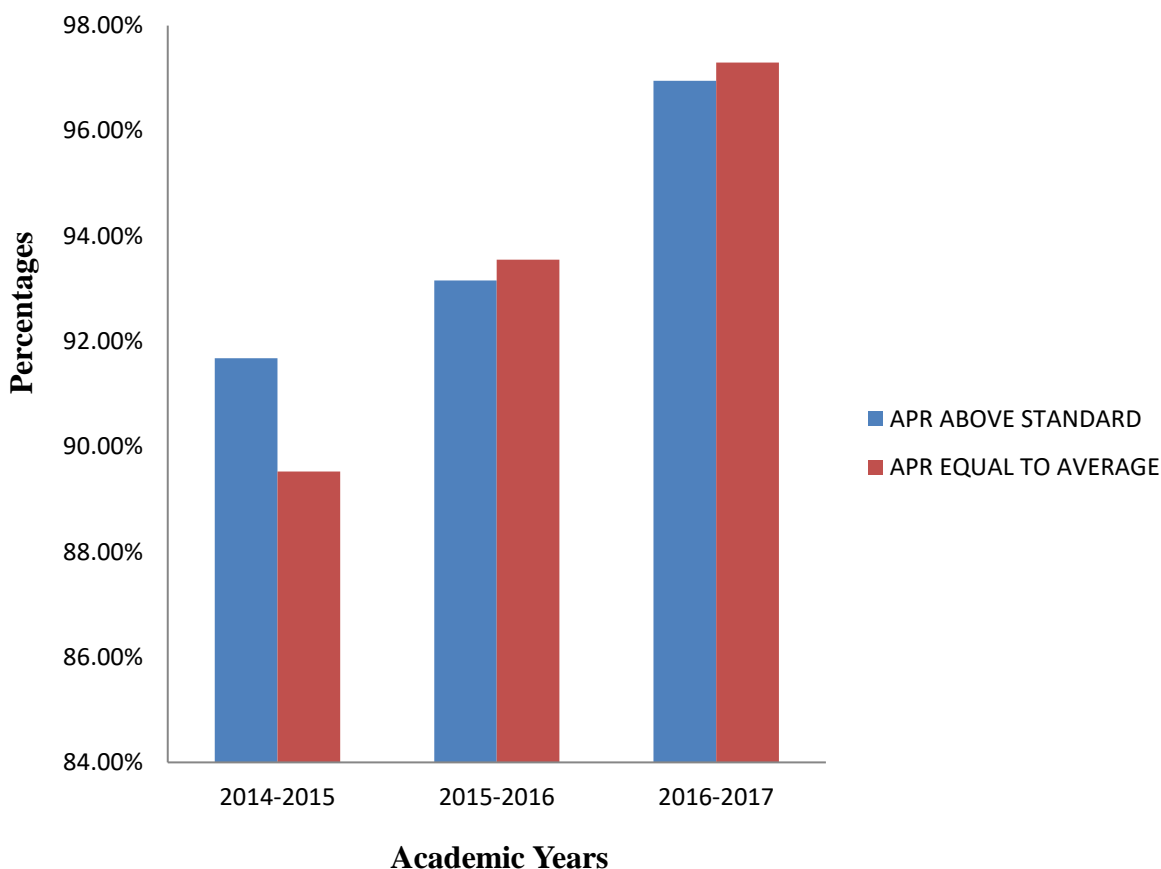


Figure 4. Average APR scores per tax average.

Research question two. Research question two was presented to determine which categories of the Annual Performance Report school districts with a tax levy one standard deviation greater than the average levy scored at least 90%. Over the three-year span of data studied, the graduation rate had the highest percentage of districts above 90% at 90.81%. Attendance was the second highest scoring category with 75.14% scoring above 90%. Third in ranking was college and career ready numbers.

Over the three years, 44.32% of the districts scored above 90%. Academic achievement was the fourth highest category with 42.70% of the districts scoring above 90%. The lowest category was sub-group achievement where only 33.51% of the

districts scored above 90%. Various trends could be determined from the three years of data. First, graduation rate was the category with the most success for the school districts. Second, attendance rate was the next highest category. These two categories could be linked together when the data were analyzed.

College and career ready showed the largest movement in percentage during the three-year span. Subgroup achievement had the lowest percentages, including one year when less than 20% of the schools earned 90% in subgroup achievement. Academic achievement decreased over the three-year span. It was found 49.35% of the schools earned 90%, which had dropped to 33.33% by the end of the third year.

Table 13

2014-2015, 2015-2016, and 2016-2017 Percentage and Number of Districts Above 90% on APR

APR Category	% of Districts above 90%	# of Districts above 90%
Academic Achievement	42.70%	79
Subgroup Achievement	33.51%	62
College and Career Ready	44.32%	82
Attendance	75.14%	139
Graduation Rate	90.81%	168

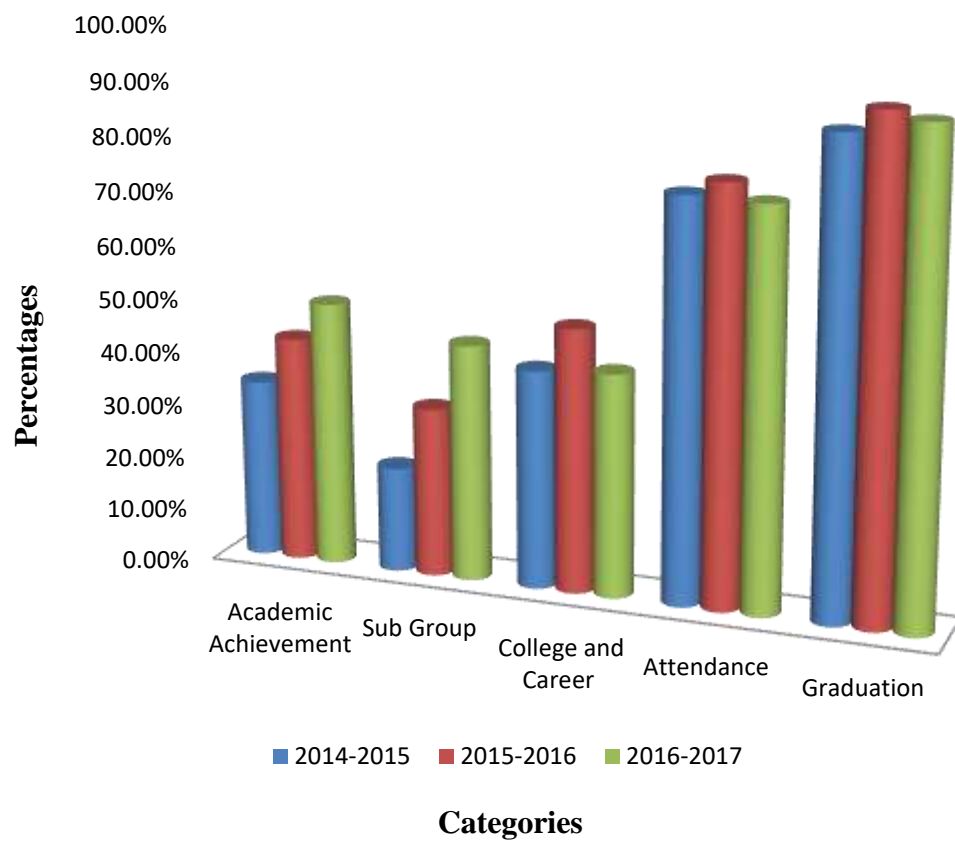


Figure 5. 2014-2015, 2015-2016, 2016-2017 Category performance on the Annual Performance Report.

Research question three. Research question three was posed to determine if there exists a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores and the state average tax levy of school districts in the top quartile of the Annual Performance Report. The bottom quartile of school districts scored 87.26% or lower. In the top quartile, school districts scored 97.0% or higher. The difference in tax rate averages was .2932¢.

The t value was $t = -5.00768$, and the p -value was $p = .003725$. The result was significant at $p < .05$. The null hypothesis was rejected. The alternate hypothesis was supported as there was a significant difference between the average tax levy of school districts in the bottom quartile of Annual Performance Report scores and the state average tax levy of school districts in the top quartile of the Annual Performance Report.

Conclusions

By reviewing all findings, the public-school districts with the highest tax rates generally have the highest graduation rates. Public school districts with higher tax rates had higher overall Annual Performance Report scores. Graduation rate was the highest performing category on the Annual Performance Report for schools scoring above 90%.

McGrath (2015) contended, “Higher levels of unemployment and poverty also meant a more challenging environment for the schools,” (p. 15). Benner and Yijie (2014) discovered public-school districts with truancy and dropout prevention create climates with positive effects on student engagement.

There was a significant difference for districts with one standard deviation above the tax levy mean. Although money and performance are often linked together (Tate et

al. 2014), one standard deviation was not enough to show a significant impact in this study.

By comparing the data and results of the three research questions, public school districts with a higher tax rate generally have a higher attendance rate of the students. Attendance and dropouts have been shown to be linked (McConnell & Kubina, 2014). School climate influences school outcomes including academic performance (Kotok et al., 2016). In Missouri, students from unaccredited schools are legally able to attend schools in nearby districts (Tate et al., 2014).

Providing for students with special needs and students in subgroups leads to higher costs, since these students generally have lower attendance rates than other students (Diaz, 2016). Attendance rate is linked to successful employment because employers desire workers who show up regardless of the type of work—blue collar, white collar, and technology jobs (Rauscher, 2015). As shown from the results of research question two; subgroup achievement including special education had the lowest Annual Performance Report performance.

Districts in the top quartile scored higher on the Annual Performance Report than those in the bottom quartile. At most 25% of test score variance can be attributed to the school of the student (Cusick, 2014, p. 178). Finance may be only one variable influencing academic achievement. Variation in student performance may be attributable to differences in test administration (Dickinson & Adelson, 2016). Computers administration versus paper/pencil administration can create significant testing performance differences (Dickinson & Adelson, 2016).

The condition of school buildings is another factor related to academic achievement (Lumpkin, 2016). Public school buildings in Missouri are generally funded through property taxes within the local district (MODESE, 2017). Lumpkin (2017) explained, “Aesthetically pleasing and adequately maintained school facilities impact students’ dropout rates, attendance, and academic performance” (p. 170).

Implications for Practice

Lobbying legislators and participating in campaigns has become more and more a role for superintendents (Chitpin & Jones, 2015). While public schools are facing economic and educational crises, the debate continues on how to fund schools (Diaz, 2016; Gentry & Hirth, 2017). Chitpin et al. (2015) noted, “Many school administrators take stock using data to inform them of the changes that are happening in their school, and they also know that these data tell only part of the story of the schools’ learning needs” (p. 395). District assessment and accountability are challenges faced by superintendents (Lindell, 2014). Adapting to changing roles is now the norm school leaders must face doing their jobs (Radinger, 2014).

Local public-school boards of education and the local policy makers for public schools, could also use the results of this study to inform community members. Benner and Yijie (2014) argued, “The question of who is at risk is of particular import for educators and policymakers as they seek to improve achievement, increase graduation rates, and encourage attendance” (p. 1288). McKee and Caldarella (2016) stated, “High school dropouts become a drain on social services” (p. 515).

Lauchner (2017) advanced, “The push for the right to education has not proven to be the tool for combating economic inequality as originally intended” (p. 161). Cusick

(2014) stated, “For public purposes no longer do students fail, but teachers fail, principals fail, the state fails, and the whole education system fails” (p. 178).

Public expenses are paid through levies set by the government to generate revenue (Duff, 2004). Yet, policymakers sometimes make changes to taxation without exploring the effects on schools (Gentry & Hirth, 2017). Policymakers determine per-pupil spending do not have to live within the budgetary constraints like school managers (Pugh et al., 2015). The civic consequences of schooling policies must be evaluated and understood (Rhodes, 2015).

Addressing subgroup achievement is a major issue in education (Marchetti et al., 2016). In this study, subgroup achievement scores were the lowest performing category for even the top quartile of school districts within the state. Marchetti et al. (2016) pointed out, “The achievement of gap students is a high stakes issue for many schools and districts” (p. 4). Stitzlein (2015) contended, “The responsibility of citizens includes upholding a commitment to schools as a central institution of democracy something that sustains democracy” (p. 563).

Special education needs, which go unaddressed, lead to truancy, which in turn leads to the juvenile criminal justice system (Diaz, 2016). Focusing on helping this subgroup improve their achievement could have long-term savings for the public (Diaz, 2016). If educational quality fails to provide for the disadvantaged, a lower social underclass is constantly perpetuated (Shah, 2016).

Chambers of commerce could use this information in recruiting businesses to their communities depending on where they fall in the Annual Performance Report scores and tax rates. The Chambers could demonstrate to potential businesses looking to locate

in their region the results of their local property tax compared to other potential sites. Businesses also would be interested in the available workforce to draw employees.

Income segregation has led to housing segregation (Owens, 2016) which can create public school districts with wide varieties of performance. Certain neighborhoods create climates which draw certain types of people, and those people can be linked to certain types of school buildings (Owens, 2016). All factors can lead to economic segregation (Owens, 2016).

Recommendations for Future Research

First, question one should be revisited in the future. After reviewing the data, one standard deviation was not a broad enough measurement of performance or distinction within the public-school tax levy. Second, assessed property valuation brought into the equations could greatly improve the study.

Assessed valuations of public school districts might also show whether differences exist in the overall socioeconomic status of each public-school district that is studied. Lindell (2016) pointed out, “Non-school factors such as race, socio-economic status, and parents’ education have the largest effect, usually more than half the variation in student performance” (p. 193). School effects on student outcomes will always be focused and studied (Jennings et al., 2015).

Another topic of study may include the highest tax rates of those schools performing poorly on the Annual Performance Report. During the data collection, there were several school districts with comparatively high tax rates, yet these public-school districts had very low Annual Performance Report scores. Future research could try to answer why this is the case for these districts.

Assessed property valuations. The overall value of the property within the district could be included in research surrounding public school performance. Cannon et al. (2015) stated, “It is also probable that families value schools that are near parents’ workplaces” (p. 15). Some educational research is suggesting residential segregation is creating educational segregation to the extent *Brown v. Topeka* is violated (Quillian, 2014). Family income which is linked to student achievement (Hutchison & Winsler, 2014) could be incorporated from archival data as well to paint a more thorough image of districts in various quartiles which were studied.

Per-pupil expenditures. Socioeconomic status has a small but statistically significant factor in parent engagement at the school level (Rodriguez & Elbaum, 2014). School size is also an important variable to be addressed (Pugh et al., 2015). When studying the per-pupil expenditures, early childhood learning expenses could be examined as well.

Karoly (2016) summarized, “One way to assess the value of preschool education is to compare upfront costs with the economic benefits they produce, measured by outcomes” (p. 37). The measurable outcomes include graduation rate, academic achievement, attendance rate, all of which are measured by the Annual Performance Report (MODESE, 2017). Funding has been used to try to attempt to level the disparities in education for years to create balanced academic achievement (Wheelock, 2017), but research is needed to determine if the source of the funding can lead to a different impact per dollar.

Mixed-methods approach. A mixed-methods approach may be a direction to consider when moving forward with this research. Mixed-methods would allow for

different kinds of information (Fraenkel et al., 2015). By surveying and interviewing school leaders, teachers, staff, and students at the bottom, the top, and the lower quartile, school-specific characteristics might be determined.

Mixed-methods research would be valuable in examining tax rates and student performance through the lens of benefit theory of taxation (Duff, 2004) in the future. A deeper look at the top quartile could include quantitative methods using surveys to provide for an inspection of common characteristics among the better performing school districts.

Qualitative data would allow for the exploration of perceptions of the social condition in Missouri schools. This method would also open discussion perhaps guiding research forward to look at the social issues surrounding society's problems instead of laying all performance on the steps of the school house. Stitzlein (2015) found, "Recent accountability movement has shifted the onus of curing society's problems almost exclusively onto schools" (p. 563).

Other frameworks or theories. Localism is a framework in which education sometimes is viewed (Wilson, 2014). This could change the scope of the study by examining how localism impacts the educational process and foundations within a community. Wilson (2014) argued, "Local government law structures in most states do not require or even encourage collaboration between school districts in order to address disparities among districts" (p. 1450). Regionalism is a framework to view education to address inequalities and try to fix those inequalities (Wilson, 2014).

Legalism is another framework the research could be approached. Shoked (2017) summarized, "Lawmakers should consider abolishing the school district and bestowing

control over schools on general governments” (p. 945). Shoked (2017) believed school districts are failing to promote certain core values of citizenship where they used to outperform other local governments. Lindell (2016) gave examples where courts and state governments are mandating the mechanics of school districts and their current functions.

Legalism is the basis for many of the arguments on changing or reformatting the educational picture (Gentry & Hirth, 2017). When viewed through the lens of citizenship theory, education, taxation, and legal policy can be examined (Rhodes, 2015). Glaser et al. (2003) focused on citizenship stating, “Citizens are retreating to self-interest from their obligations to community and the institutions of community” (p. 39). Arocho (2014) forwarded this notion: “The United States has exhibited a strong commitment to public education throughout its history. The local control of education is long associated with United States’ federalism” (p. 1479).

Summary

Examining the difference between property tax rates of public school districts to student performance for public school districts in Missouri was the purpose of this study. Public tax dollars pay for public schools (Tate et al., 2014); therefore, the focus of public school discussion and reform have been centered on public school performance (Lindell, 2016). Education today is influenced by political factors (Chitpin & Jones, 2015). State governments want and desire to see a value for what they are spending on education (Pugh et al., 2015).

The job of the superintendent of schools is to communicate with the local school board, state lawmakers, and the community to set a budget to use public dollars (Gentry

& Hirth, 2017). By examining funding from both the federal and state government to public school districts, issues concerning student performance to home values come to light. Understanding these issues provides superintendents with the necessary knowledge to inform the patrons of the community of the benefits of supporting their local school districts.

This study was framed under the benefit theory of taxation (Duff, 2004). Many economists argue the key purpose of taxation is designed for the benefit of the citizens who pay them (Duff, 2004). Taxpayers should receive some benefit for the taxes they pay (Neill, 2000). Educational spending has continued to rise for the past 100 years and the public desires improving results (Addonizio, 2000). The expectations for improved performance continued as resources continue to decline (Chitpin & Jones, 2015).

The study was conducted to respond to the following three research questions and hypotheses:

1. What is the significant difference between Annual Performance Report scores of those Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average?

H_{1o}: There is no significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average.

H_{1a}: There is a significant difference between Annual Performance Report scores of Missouri public school districts with a tax levy one standard deviation greater than the state average tax levy and districts with a tax levy equal to the state average.

2. Which categories of the Annual Performance Report do school districts with a tax levy one standard deviation greater than the average levy score at least 90%?

3. What is the significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report?

H3₀: There is not a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

H3_a: There is a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

The key limitations of the study were as follows:

- Three years of archival data were used.
- Data were limited to public school districts in the state of Missouri.
- Many other factors can contribute to student performance outside the scope of the Annual Performance Report scoring.

The key assumptions of the study were as follows:

- Data were reported truthfully and accurately by the state of Missouri and public school districts in Missouri.
- Public school property taxes affected school budgets in the years of 2015, 2016, and 2017.

The study included an extensive literature review. Several notable topics were covered. First, the literature review began with an overview of the historical background of funding public schools. The historical background led to a discussion of the framework that guided this study: Benefit theory of taxation (Duff, 2004).

This theory was appropriate to view this study since taxation provides the funding for public school districts. To further explore the issues surrounding taxation, a discussion of important court cases revolving around school funding was presented. Cases presented were *Wisconsin v. Yoder*, *Brown v. Board of Education*, *Blue Springs School District v. Kansas City School District*, and *Breitenfeld v. School District of Clayton*. Property tax and local effort were then explained in the literature review. Relevant to this study was information as to how home values are influenced by a school district's performance.

The main topics of discussion surrounding public school district performance were academic achievement, subgroup achievement, special education performance, free and reduced-price meals, college and career readiness, attendance rates, graduation rates, ACT performance, and district accountability. Additional information was shared regarding state and federal funding and how federal monies impact local funding, and consequently, student performance.

A quantitative methodology was used to study measurable data as opposed to perceptual data (Fraenkel et al., 2015). The population consisted of all the public-school districts in Missouri. Using the entire population and archival MODESE data improved the validity and reliability of the study. Inferential statistics were applied to respond to

research questions one and three. Descriptive statistics methods were selected to answer research question two.

The research revealed graduation rate was the most closely rated category to the tax rate in district performance. The research also indicated there was a significant difference in the average tax levy of school districts in the bottom quartile of Annual Performance Report scores when compared to the state average tax levy of school districts in the top quartile of the Annual Performance Report.

Finally, in Chapter Five, conclusions were drawn from the findings as well as implications for practice and for suggestions for future studies. Various school leaders, school boards, and community organization may find the information useful. A conclusion may be drawn from this study; the long-term success of youth is influenced by the community and school in which they live (Khan & Zahra, 2015).

Appendix A

IRB Approval



DATE: March 2, 2018

TO: Keenan Kinder
FROM: Lindenwood University Institutional Review Board

STUDY TITLE: [1205511-1] Paying for Performance: Property Taxes and District Performance in the State of Missouri

IRB REFERENCE #:
SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: March 2, 2018
EXPIRATION DATE:
REVIEW TYPE: Exempt Review

Thank you for your submission of New Project materials for this research project. Lindenwood University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt Review (Cat. 4) based on the applicable federal regulation. Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document. Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the completion/amendment form for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of . Please note that all research records must be retained for a minimum of three years.

If you have any questions, please contact Michael Leary at 636-949-4730 or mleary@lindenwood.edu. Please include your study title and reference number in all correspondence with this office.

If you have any questions, please send them to IRB@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

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Vita

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