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THE MISSISSIPPI SCHOOL FUNDING FORMULA: A STUDY OF ADEQUACY
DISSERTATION

A Dissertation
presented in partial fulfillment of requirements
for the degree of K-12 Leadership: Doctor of Philosophy
in the Department of Leadership & Counselor Education
The University of Mississippi

by

MARCUS EDWARD CHEEKS

May 2023

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ABSTRACT

The purpose of this was to examine the relationship between Mississippi public school district per pupil funding disaggregated by funding source (total, federal, state, and local) and student academic achievement gaps within districts based on poverty and race. Pearson's correlational coefficient was used to assess the relationship across 139 Mississippi school districts during fiscal year 2019. State Special Schools, Charter Schools, and Agriculture Schools were excluded from the analysis. School districts lacking a sufficient number of African American and Economically Disadvantaged children to calculate a school proficiency score in ELA and Math were also removed. Thus, the analysis consisted of 122 districts in ELA and 87 in Math. Federal and local per pupil funding reported a more significant impact on closing achievement gaps between Economically Disadvantaged and non-Economically Disadvantaged and African American and non-African American white students. The least correlated predictors were state-level and total per pupil funding. The research findings are consistent with prior research findings advocating the importance of targeting school funding to the academic needs of all children because targeted funds have a greater impact on raising the achievement levels of children based on poverty and race.

Keywords: per pupil, academic achievement, poverty, race, assessments, achievement gaps, Economically Disadvantaged

DEDICATION

This work is dedicated to my late father and mother. Charles E. Cheeks never completed high school but understood the importance of hard work. He provided a home free of outside influences and created an environment for me to grow. Mary J. Cheeks never reached her dream of attending college but was home every afternoon when I arrived to help me with homework and to teach me how to value the things we have been given by God. This degree builds on the teaching of parents who may not have been formally educated but gave me a strong dosage of perseverance and commitment. My late sister LaRhonda Y. Cheeks would be tickled at being the only family member required to address me as “Doctor” – I miss you, Rhonda. This journey has been filled with twists and turns. Each challenge pushed me to the next opportunity. It is my prayer that this process has equipped me with the necessary tools to better serve my God, family, church, and community.

Thank you to my Godparents, the late Paul and Lilly Campbell, who, as former educators, ignited the fiery love of teaching in me. Special thanks to my aunt, Dr. Celestine Cheeks, who served as a loving, yet firm guide and had no problem having another Dr. Cheeks in the family. Your expertise put me on track like none other.

Cherished love to my wife DeVonda and my three sons, Jonathan, Myles, and Allen, you know the untold story and I hope you are proud of what “we” have accomplished. Thank you for giving up precious time that rightfully belongs to you for me to walk along this path. “Eye has not seen, nor ear heard, nor have entered into the heart of man the things which God has prepared for those who love Him” (1 Corinthians 2:9). God did it and I simply say, “THANK YOU!”

LIST OF ABBREVIATIONS AND SYMBOLS

ADA	Average Daily Attendance
CPSD	Canton Public School District
ELA	English Language Arts
ESEA	Elementary Secondary Education Act
MAEP	Mississippi Adequate Education Program
MCSD	Madison County School District
MAAP	Mississippi Academic Assessment Program
MSAS	Mississippi Statewide Accountability System
Math	Mathematics
NAEP	National Assessment of Education Progress
QDI	Quality Distribution Index

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Chapter I: Introduction

Money may likely be considered the primary change agent used in closing the achievement gap among children with differing socioeconomic backgrounds. However, Baker et al. (2008) revealed the complex social and academic needs of children present sizeable economic and educational challenges in the school's ability to prepare them to meet high state academic achievement standards. These challenges create questions about K-12 funding policies and their ability to provide adequate funding that ensures all children, regardless of educational and economic needs, can meet challenging academic achievement standards.

According to the Mississippi Department of Education (2014), the Mississippi Adequate Educational Program (MAEP) is designed to provide a level of state funding capable of supporting the district-level operations of a successful school educational program. The MAEP funding formula provides a base student cost combined with dollars generated to support at-risk children and specific add-on programs. MAEP does not provide funding for several key areas of student need. According to the Mississippi Department of Education (2021), students identified as English Learners and Neglected/Delinquent are two specific groups of students not funded through MAEP funding, thus creating an inadequate funding pool for school districts with high numbers of students with diverse educational needs. Students with learning barriers created due to poverty, an inability to speak and understand the English language, or students with learning deficiencies often need more resources to attain the standards of successful education set by Mississippi's educational policy. Absent appropriate school funding, a school's ability to provide sufficient resources based on student need makes the process of educating all children

more difficult than one might perceive. For example, if the State's school funding policy provides dollars for one math specialist for each elementary school and each school receives a math specialist, this policy meets the criteria of providing an equal educational opportunity for all children. However, if School A has ten children that are deficient in mathematics versus School B, which has 300 children deficient in mathematics, a funding policy that provides one Math Specialist may be equal but is also grossly inadequate. Adequate school finance systems provide sufficient school resources to meet state standards while failing to truly meet the diverse student needs of all children (Baker & Green, 2015). When funding is not provided for students with unique learning needs, as listed in the previous paragraph, the ability of the MAEP funding formula to provide a level of funding that ensures "all" children meet state academic achievement standards falls short of its intended purpose.

The 1954 U.S. Supreme Court landmark case of *Brown v. Board of Education* ruled education "a right which must be made available to all on equal terms" (McConnell, 1995). The ruling made a major step toward educational equality in the United States. However, structural and social barriers remain in making a world-class public education "available to all on equal terms." Advocates are increasingly concerned with allocating resources and instructional practices that will equip all students for success after high school, recognizing that some students require more support than others to reach established learning goals (Barth, 2016). This has led many to argue for a view of equity that sets the goal as "adequacy" rather than equality. Adequacy is the principle all students should receive "an adequate education," whatever it takes to provide it (Brighthouse & Swift, 2008).

Funding is a central component of providing high-quality education and often leads to improved outcomes. A 2016 study found when considering the strong body of academic

literature on the positive relationship between substantive and sustained state school finance reforms and improved student outcomes, a strong case can be made that state and federal policy focused on improving state finance systems to ensure equitable funding and improving access to resources for children from low-income families is a key strategy to improve outcomes and close achievement gaps (Baker et al., 2016). However, allocating equal funding for every student does not guarantee that all students will have a rigorous educational experience. The aim of providing a quality education must be to ensure resources address the specific needs of all children through high-quality educational standards and instructional practices. The central issue in this research was to determine if the level of PreK-12 funding meets the needs of all Mississippi children as measured by the state accountability system. The first step in this process was to explore the impact of school funding systems on student achievement.

Impact of School Funding Systems

As a rule of thumb, for a state school finance system to provide equal educational opportunity, that system must provide sufficiently higher resources to ensure equity and adequacy in higher need (e.g., higher poverty) settings than in lower need settings (Baker, 2017). Student needs can vary based on socioeconomic backgrounds, the quality of teachers, and the system of educational support. Therefore, the critical work of teaching children in an equitable system demands a funding mechanism that ensures each child's needs are met and there is a rigorous accountability system that holds educational leaders accountable for their successes and failures.

Fulfilling the promise of equal educational opportunity and ensuring that poverty, policies, and practices stop impeding meaningful educational reforms will require significant commitments by federal, state, and local governments, as well as other stakeholders (Goodman,

2019). Mississippi has made several attempts to reform its K-12 funding formula to educate children in Mississippi better; however, it fails to fully fund the most recent reform efforts.

Reforming methods of state distribution of funding to local school districts can be viewed as a challenging task. Too often, state leaders embrace major school funding reform only when they are directed by court decisions (Wong, 2013). Further complicating school funding was the recent emergence of non-public schools and a precipitous decline in public support for fully funding MAEP (Robertson, 2021). According to Baker et al. (2008), economic models have become sophisticated and have incorporated social and political variables into their equations. Regardless, children attending school in high poverty areas are more likely to experience learning challenges which do not exist in more affluent areas (Watson et al., 2013).

The impact of money on academic achievement, focusing on equitable and adequate funding, continues to be a growing concern as impoverished schools struggle to meet state academic achievement standards. In the U.S. today, our poorest students are nearly four times as likely to fail in math than their wealthiest peers (Field et al., 2007). If we are to close the achievement gap completely, we must address current inequities in funding, access to high-level curriculum and good teachers, and how schools use all funding streams.

Analysis of academic achievement results was a primary indicator of student success and the efficiency of educational funding. Mississippi annually reports assessment achievement gap analysis in the areas of Mathematics and Language Arts. According to Assessment reports from 2017 through 2019, in Mathematics, achievement gaps between African American and White students have increased (widened) by 1.3 percentage points. An even larger increase was noted over the same period of time in Language Arts to the amount of 3.1 percentage points (Mississippi Department of Education, 2019a). This data reveals a major exception in states

where adequate funding was provided to the lowest poverty districts and at the same time was inadequate for high poverty school districts. Spending in Mississippi's lowest poverty districts may reach the definition of adequate; however, due to achievement gap results, students continue to lag or at best, barely exceed the average (Baker et al., 2019).

The money a school district can spend on operations determines the staff ratios, class size, and wages a local public school district is able to pay (Baker et al., 2016). Therefore, adequate funding may be inadequate due to the operational expenses required to provide an adequately equal education. There was strong evidence that states with school funding systems concretely linked to the actual cost of delivering their academic standards to all students, including those with additional programmatic needs, realize achievement gains, benefit students and strengthen the states' civic and economic health (Sciarra & Hunter, 2015). Therefore, providing an adequately funded school finance system not only benefits Mississippi's children but potentially improves the State's social and economic future.

The Mississippi Adequate Education Program

The Mississippi Adequate Education Program was signed into law in 1997 to ensure an adequate education for every child in Mississippi. The MAEP funding policy is designed to provide schools with the necessary resources for their students to attain an adequate level of student achievement. House Bill (HB) 957 was the latest version of Mississippi's attempt to provide funding for public education. For generations, there was no need for anything more than a cursory introduction to education because the state was largely rural and agricultural (Winter, 1988).

The MAEP funding formula uses a "foundation program approach" which produces a base student cost, the required amount to provide each Mississippi student an adequate

education. Each district must provide up to 27% of the base student cost through a local contribution made up of local ad valorem taxes. The State funds the difference between what a local community can provide (up to a maximum of 27%) and the total base student cost, and that amount is multiplied by the school district's average daily attendance, to get the district's MAEP allocation (Robertson, 2021).

Providing an adequate funding formula does not address the needs of all children. It only provides resources for a local school district to reach a successful achievement level. For example, in Mississippi, the MAEP state funding formula is used to establish adequate current operation funding levels necessary for the programs of each school district to meet a successful level of student performance – as measured by the Mississippi Academic Assessment Program (MAAP).

According to the Mississippi Department of Education (2021), a successful school district program is funded based on the mean operational cost of successful and efficient school districts across the state as a measure in four key areas – instruction, administration, maintenance and operation, and ancillary. These calculations are based on an average of school districts considered successful and efficient expenditures two years prior to the year of funding calculations. The total MAEP District Funding is determined by multiplying the average daily attendance by the base student cost. An additional at-risk component and funding for add-on programs – transportation, special education, gifted education, vocational education, and alternative education is provided. The complete formula is listed here.

MAEP FUNDING FORMULA:

1. $ADA \times \text{Base Student Cost} + \text{At-Risk Component} - \text{Local Contribution} + 8\%$

Guarantee = MAEP Formula Allocation

2. $\text{MAEP Formula Allocation} + \text{Add--on Programs} = \text{Total MAEP District}$

Funding

Source: (Mississippi Department of Education, 2021)

The Mississippi Statewide Accountability System (MSAS) was designed to measure student achievement in English Language Arts (ELA), Mathematics, Science, and US History. Students are assessed in third grade through eighth in English Language Arts (ELA) and Mathematics, fifth and eighth grades in Science, Algebra I, Biology I, English II, and US History. The results of all MSAS assessments provide information to improve student achievement (Mississippi Department of Education, 2021). This program also covers teacher salaries, textbooks and materials, operational costs, transportation, special education, vocational services, gifted education, and alternative education (Stone, 2020).

Examining the Mississippi Statewide Accountably System's results provides a guide to assess MAEP's base allocation formula and local contributions as critical factors in determining if the MSAS identifies large achievements or large groups of underperforming students, this may indicate issues with equity and adequacy in the formula. Reviewing student achievement levels as measured by the MSAS across different economic and social environments will yield information capable of supporting or rejecting the general premise of MAEP.

The Problem

Based on the 11th Amendment of the US Constitution (Callahan, 1976), also known as the “establishment clause,” state constitutions articulate the requirements for public education

funding across the states. As a result, school finance policies converge at the intersection of public finance, law, and other social sciences in each state. Providing educational equity and adequacy through school finance policies creates challenges for state educational leaders due to the complex nature of measuring differences in educational resources versus determining how many resources are needed to ensure educational outcomes are met. This problem was further compounded by how school finance systems measure the distribution of resources across school districts. Failure to observe funding practices at the school level may potentially mask large disparities across school buildings and children within buildings (Ladd & Fiske, 2008).

The Mississippi Department of Education's vision is to create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce and to flourish as parents and citizens (Mississippi Department of Education, 2021). In responding to this question, one must consider the impact of financial adequacy as it relates to MAEP. According to Baker (2017), schools in the United States are among the most inequitably funded of any in the industrialized world, with those serving the most affluent students often much better resourced than those serving the poorest. This notion of inequitable funding can also be transposed to the state of Mississippi when observing academic achievement gaps across subgroups of students. Income differences between schools and school districts, specifically among poor/disadvantaged children, could be one possible explanation for widening or stagnating achievement gaps within the state. When families are highly segregated by income across school districts, resources that contribute to a student's academic success, such as school funding, teacher quality, parents' social capital, and students' peer characteristics, are more unequally distributed (Owens, 2018). This research proposes to examine the issue of funding inequality and differences in academic success across subgroups in Mississippi. State and local

revenue constitute approximately 90% of current spending by local public school districts because federal aid contributes a relatively small share of school districts' total revenue – only about nine percent, on average. Given these differences in funding sources, this research will determine if there are different relationships among funding sources (federal, state, local) and gaps in achievement within districts based on the economic status of students and race.

The amount of money a district can spend on operations determines the staff ratio, class sizes, and wages a local public school district is able to pay (Baker, 2017). For example, Madison County, MS, has two public school districts – Canton Public School District (CPSD) and Madison County School District (MCSD). According to the MAEP funding formula, both school districts receive adequate funding to provide a "free public education" for all children. In 2019 the MCSD, with a population of 12,480 students, received \$63,354,771, or \$5076 per pupil in MAEP (state) funding. MCSD received an " A " accountability rating for the 2018-2019 school year, which it maintained for the previous three years. However, the CPSD, with a student population of 3,131, received \$15,971,815, or \$5101 per pupil in MAEP funding. The CPSD received a "D" accountability rating for the 2018-2019 school year and a "D" rating for two of the prior three years. Local contributions in CPSD make up 52% and 43% of the MCSD district's overall budget, respectively. The CPSD, due to a high poverty rate and a growing population of disadvantaged students, receives 16% of its overall budget through federal funds. In contrast, only six percent of the MCSD budget was made up of federal dollars.

Funding data based on these two school districts indicate that the amount of funding may not be the primary issue when observing a measure of success. The CPSD is not considered successful or efficient based on 2019 funding and accountability data. How can two school districts within the same geographical area of the State be on opposite ends of the spectrum

concerning finances and student achievement? MCSD receives nine percent more of its revenue from local sources and CPSD receives seven percent more of its total budget from federal sources. At a rate of 10,000/per student, CPSD would receive \$1300 federal, \$4400 state, and \$4300 local; MCSD would receive \$700 federal, \$5200 state, and \$4100 local. The question explored here is: do these ratios, individually and as a whole, correlate to differences in achievement gaps?

The results may indicate the level of efficiency in relation to Mississippi's school funding formula. The formula appears to be adequate and, on some levels, equal, but it was glaringly inefficient. This research examined the relationship between the MAEP funding formula and student assessment to identify factors for consideration to focus funding resources in a manner that provides an adequate and equitable education to all Mississippi children. Without considering the variations in social and economic differences among Mississippi school districts and the resulting funding, the state will lack a key tool in providing an adequate education for the children in the state. Considering the varying social and economic needs of children, which differ greatly from school district to district, does the MAEP formula appropriately address fiscal disparities among disadvantaged children?

Adequacy and Equity

There was a relationship between fiscal effort and adequacy -- that is, states that spend more of their "economic pie" on education tend to exhibit more adequate spending levels. One can compare the state of Arizona to the state of Mississippi in their funding practices. Of particular concern in the state of Arizona, which spends inadequately and puts forth a low effort, compared to the state of Mississippi, which fails to achieve adequate funding levels despite putting forth relatively high effort levels (Baker et al., 2019). The efficiency of school funding

was becoming more of a question for the legislative leader when designing school funding formulas.

As policymakers wrestle with the difficult task of achieving adequate schools through equitable funding mechanisms, they must also balance those efforts against the need to maintain taxpayer equity (Pijanowski, 2017). Adequacy-based funding formulas generally seek to ensure the existence of an efficient relationship between student outcomes and spending. When the goal is calculating adequate spending, researchers reverse this production function relationship; they relate spending to outcomes instead of relating outcomes to spending. Even though Mississippi lawmakers do not fully consider student need at the onset of allocating school funding, student outcomes are the primary tool of measurement used to verify efficient usage of allocated state funding.

Adequacy

An “adequate education” is the product of a system that provides all children, regardless of academic need or local residency, with a “thorough and efficient” education. A system driven by student educational needs and physical resources is utilized to specifically target student learning deficiencies. According to Rebell (2006), several state high courts have found that an adequate education must adapt to the needs of contemporary society. Measuring adequacy involves the complicated evaluation of whether a given state or district spends “enough” on public education. Enough money to address the basic educational needs of all students and the specific needs of students who may have learning needs that require additional cost. It considers both inputs into the school system, as well as the outcomes those schools achieve (Baker et al., 2019). Baker et al. (2019) recommends two indicators of measuring adequacy, equated spending

levels (current operating expenditures) and equated spending relative to common outcome goals (student outcomes).

An adequate education in Mississippi public schools provides enough funding to ensure all children can reach a minimum level of educational outcomes. However, these outcomes must reflect a balance of success across academic subgroups. Success across all subgroups is difficult to attain when the MAEP funding formula but the design does not address the specific needs of at-risk children. According to *A Review of the Mississippi Adequate Education Program Funding Process*, (2002), “the [MAEP] formula does not account for school district efficiency, a factor that could, over the long term, affect funding levels. The formula does not allow for unusual growth or loss in districts' enrollments. Also, neither state law nor departmental regulations require an accountability mechanism to ensure that at-risk funds added to district allocations are actually targeted for the at-risk student population.” To effectively be considered adequate, the education funding formula should consider all academic needs of all children regardless of location.

An adequate education for children in Mississippi as an education system where all children are proficient on state education standards, regardless of geographic location or academic need. As previously defined, West and Petterson (2007), this education system must focus on funding policies focus that close achievement gaps between rich and poor school districts and implement a comprehensive accountability system – a system that includes high curriculum standards, an intervention plan for failing schools, and a rigorous exit exam that all students must pass before graduating high school.

The term adequacy was subject to multiple interpretations. According to Houck and DeBray (2015), William Clune was the first to formalize it as representing a legal and policy

conceptual shift away from equity. Baker (2017) describes it, relative to school finance, as having both an absolute and a relative dimension, where the absolute was concerned with the overall total spending needed for an educational system to meet stated educational outcome goals, and the relative indicates the expenditure differentials necessary to support different types of students in supporting those goals. Funding was "adequate" if it was enough to provide an education capable of producing desired outcomes for students (e.g., to meet state standards) (Barnett & Kasmin, 2018). What funding formula will ensure that adequate money was available in each school to meet the State's educational goals for all students (Augenblick et al., 1997)? Adequacy approaches typically focus on ensuring some threshold level of education that must be achieved for all children (Guarino et al., 2009). According to (Guarino et al., 2009), recent court decisions in the United States have leaned toward defining adequacy in terms of a dollar amount of funding that was believed to be enough to achieve the desired level of student achievement on standardized tests.

While there are strong arguments on one hand that adequate education should be the standard, and on the other hand that equal education was what *Brown v. Board of Education* requires, some scholars have argued that the standard should be a combination of the two: "equally adequate," or "adequately equal" (Goodman, 2019). This combination approach was necessary when the state legislature of Mississippi in effect says to each school district, "If you establish and maintain a school district that was successful when measured by the standards of the State Accreditation System, then the State will provide sufficient funds for your students to succeed (Robertson, 2021). Student needs are clearly not the highest priority.

Because adequacy requires the alignment of resources with measures of student

achievement, the analysis of student performance data was important to understand how well the State has provided equality of educational opportunity (Knoepfel et al., 2014). Adequate funding could potentially be achieved by using a state foundation aid program in conjunction with a fully functioning local property tax. As long as the foundation amount of funding was set at a high enough level to achieve adequacy and the level was guaranteed with funding from the State, the goal of providing access to an adequate level of education could be achieved without eliminating or severely crippling the local property tax (Ladd & Fiske, 2008). The consistent issue with adequacy funding was that adequacy focuses on the bottom part of the distribution of spending and places no attention on the variations above the threshold needed for adequacy (Baker et al., 2008).

The concept of adequacy-based funding may give the impression that resources are provided appropriately to meet the needs of all children, but this determination was limited to specific states and the context in which school funding systems are designed in those states. In states like Mississippi, school funding was administered at the district level where district leaders have flexibility in determining how funds are used at the school level. Rather than funds going directly to individual schools where student needs might be more relevant to building leadership's funding decisions, equity-based funding systems, by definition, focus more on the concepts that address the treatment of individuals.

Equity

Equity was a principle used to determine a fair distribution of resources that began to emerge in the late 1960s as a tool used by lawyers to challenge the fairness of school funding formulas or identify school funding formulas as discriminatory policies warranting state or federal court intervention (Baker et al., 2008). Equity in relation to school finance was a concept

that was based on the comparison of spending across school districts. School finance systems based on equity look to reduce disparities to a reasonable level of spending across a state's school districts (Ladd, 2008). Equity concepts are divided into two independent approaches – horizontal and vertical equity. Horizontal equity refers to how well students of similar characteristics are treated with the same quantity and quality of educational inputs. Vertical equity refers to the degree to which students who differ from others are treated appropriately different (Downes & Stiefel, 2015).

Horizontal and vertical equity concepts attempt to answer the question of "how much." How much funding was available for students independent of factors such as local funding or geographical location? In horizontal equity one must ask: how much are equal treatments being treated equal? A question that should be asked is: are all children across the state of Mississippi being given an equitable number of teachers with quality training regardless of their local tax base and county location? Vertical equity seeks to determine: how much it takes to ensure unequal treatments are treated unequal? Have leaders asked: are children with an identifiable and measurable educational need receiving equal funding to address the identified need, i.e., poor children or children with learning deficiencies? Equity-based funding systems must therefore have a component designed to address the fact that some unequal students may also have unequal access to resources. This notion was why in recent years, state educational leaders often opt to develop school funding systems that focus more on adequacy than equity. A review of Mississippi's K-12 educational funding formula offered insight into student needs and the impact of current funding policies.

Student Achievement and School Funding Systems

Is the relationship between student achievement and resources measured by expenditure categories of instruction, instructional support, leadership, and operations and maintenance a true indicator of student needs? MAEP provides funding for teachers and other district employee salaries, retirement and insurance, textbooks and other instructional materials, basic operational costs (utilities and facility maintenance), transportation (operation of buses), special education, vocational education, gifted education, and alternative education (Mississippi Department of Education, 2021). In theory, these provisions should make school funding more progressive by spending more money on students from low-income families. But this depends on how successful states are at counteracting local funding, which tends to be regressive (Chingos, Blagg, & Kristin, 2017). The ability of Mississippi's poor school districts to generate the necessary funding from local revenue to meet the needs of all children, can be a difficult task to accomplish. In the absence of sufficient revenue, school districts are challenged to hire the most qualified staff and provide needs-based resources for all children.

Putnam (2011) says a study of the vertical equity and fiscal neutrality of the Mississippi Adequate Education Program should be conducted. Are students receiving the adequate resources necessary to be competitive in the workforce or a postsecondary setting? Also, are the state's school districts utilizing the funds being allocated to them efficiently, which will maximize the resources being provided to the students (Putnam, 2011)? To effectively respond to these questions, this research assessed the relationship between per pupil spending levels at the district level and cost factors that cause cost differentials (percent of students in poverty) in comparison to state assessment achievement gaps across subgroups. While money alone may not be the answer, more equitable and adequate allocation of financial inputs to schooling provides a

necessary underlying condition for improving the equity and adequacy of outcomes (Baker, 2021).

The Purpose Statement

The purpose of this study was to examine the relationship between the average total Mississippi per public school funding by district, disaggregated by funding source (federal, state, local), and student academic achievement gaps within districts based on poverty and race. Poverty was a widely known predictor of academic success Chingos et al. (2017) and the researcher determined the relationship between gaps in student outcome and average per pupil revenue in each district. A quantitative analysis of per pupil Mississippi school district revenue from local, state, and federal levels and internal school district student achievement gaps among African American and Economically Disadvantaged students based on the Mississippi Academic Assessment Program (MAAP) was conducted.

The independent variable was total per pupil expenditure, divided by funding source (all, federal [ESEA], local [property tax], and state [MAEP funding]) for the school year 2018-2019. The dependent variables are the achievement gaps in each district among African American and White students, and Economically Disadvantaged and non-Economically Disadvantaged students.

Research Questions

The following research questions guided the data collection and analyses in this research:

Question One:

To what extent was there a relationship between Mississippi school districts' total per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged students.

Question Two:

To what extent was there a relationship between Mississippi school districts' total per pupil revenue and the achievement gaps among African American students and Non-African American students?

Question Three:

To what extent was there a relationship between Mississippi school districts' federal per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged Students?

Question Four:

To what extent was there a relationship between Mississippi school districts' federal per pupil revenue and the achievement gaps among African American students and Non-African American students?

Question Five:

To what extent was there a relationship between Mississippi school districts' state per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged Students?

Question Six:

To what extent was there a relationship between Mississippi school districts' state per pupil revenue and the achievement gaps among African American students and Non-African American students?

Question Seven:

To what extent was there a relationship between Mississippi school districts' local per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged Students?

Question Eight:

To what extent was there a relationship between Mississippi school districts' local pupil revenue and the achievement gaps among African American students and Non-African American students?

Terms and Definitions

This section provides definitions of key terms used within the research based on the context of usage within this study:

Adequacy

It was an absolute concept that requires school district spending to reach some minimum level threshold in each district. An adequate school finance system provides sufficient spending to give students in each district an opportunity to meet state performance standards.

Adequate Education

According to West and Petterson (2007) states can avoid judicial intervention by adopting Massachusetts-style education reforms where state education funding policies focus on closing achievement gaps between rich and poor school districts and a comprehensive

accountability system – a system that includes high curriculum standards, an intervention plan for failing schools, and a rigorous exit exam that all students must pass before graduating high school. In this approach, all students are provided the necessary resources to reach proficiency on state educational standards, regardless of their physical location or academic needs.

Fiscal neutrality

A child's zip code should not determine the quality of education. Principles of fiscal neutrality dictate that the quality of a child's education (fiscal inputs) should not be associated with the fiscal capacity (property wealth) of the school district in which the child resides. It was usually measured as the relationship between taxable property wealth and per pupil spending across public school districts within a state, where a fiscally neutral system shows no statistical relationship between the two measures (Baker et al., 2008).

Equity

It was a comparison of spending across school districts. An equitable finance system reduces the disparity across a state's school districts. Equity was therefore assessed by examining differences in resource allocation across different groups of students (Guarino et al., 2009). Earlier writings articulating school funding equity frameworks describe two primary goals of school funding systems—horizontal and vertical equity, where horizontal equity demands the equal treatment of equals and vertical equity, the unequal treatment of unequal's (Baker & Corcoran, 2012).

Educational Equity

Educational equity means that every student has access to the educational resources and rigor they need at the right moment in their education across race, gender, ethnicity, language, disability, sexual orientation, family background, or family income (Evers et al., 2017).

State School Finance System

A "*state school finance system*" was the set of rules, regulations, and policies, which combine state aid with local resources to fund schools so they can meet a given educational goal—usually having at least something to do with improving equity and adequacy of resources for the children of the state (Baker & Corcoran, 2012).

Property-poor School Districts

The term *property-poor* school districts was utilized to describe school districts where the per pupil state assessed value of real estate and personal property was considered low. State education funding formulas provide additional dollars to a school district where the per capita property wealth was low.

Property-rich School Districts

The term *property-rich* school districts was utilized to describe school districts where the per pupil state assessed value of real estate and personal property was considered high. State education funding formulas provide additional dollars to a school district where the per capita property wealth was low.

Conclusion

The introduction of this research provides a foundation for a broad discussion exploring the impact of the Mississippi Adequate Education Program (MAEP), Mississippi's school funding system, on student academic achievement. The chapter examines the method of distributing funding to local school districts and the challenging task of ensuring all students receive an adequate education. A primary indicator of student success and the efficiency of educational funding was academic achievement gaps, according to Baker et al., (2019). Exploring Baker's conclusion as it relates to Mississippi's students and existing funding streams,

this research is presented in five chapters: (1) introduction, (2) literature review, (3) research methodology, (4) study results, and (5) data analysis.

The literature review discusses Mississippi's current K12 school funding formula and the performance-based measuring system the Mississippi Academic Assessment Program (MAAP). The historical development and evolution of the Mississippi educational system and its funding practices are explored. In addition, Chapter 3 presents the methods to be used to answer the research questions on the relationship between funding, sources of funding, and racial and economic achievement gaps. Chapters 4 and 5 inform the final phases of the research as the data analysis process was completed. A summary is provided at the conclusion of each chapter.

Chapter II: Literature Review

Learning environments designed to meet the basic needs of all children by providing the most adequate mix of the right curriculum, educators, and tools for learning sound appropriate. However, students deserve more. Specifically, a learning experience that was dynamic and engaging and most importantly, relevant to the world outside of schools (Bishop & Jackson, 2015). Focusing on equitable and adequate funding continues to be a growing concern as poor schools' struggle to meet state academic achievement standards.

The concepts of equity and adequacy are difficult to measure and implement, because every state must meet the needs of a large number of school districts, which usually vary considerably in their student characteristics and needs, costs of doing business, ability and willingness to raise tax revenues, and local preferences for educational services (Augenblick et al., 1997). The underlying elements of funding schools through fair and adequate measures have left many states educational systems facing multiple funding mechanisms. Examining how states provide educational funding requires research - including school funding through a historical lens, a discussion on equity in school financing, and reviewing the impact of resource accountability. Fair and equitable state finance systems must be at the center of efforts to improve educational outcomes and reduce stubborn achievement gaps among students (Baker et al., 2019). Despite the predominant role equity and adequacy play in litigation, there are no universally accepted definitions for either of these words in education funding. Most commonly, equity was measured in terms of the variation in per pupil revenues among school districts in a single state (Augenblick et al., 1997).

School funding reform generally looks at available state funds versus considering a comprehensive review of school related financial demands. This notion was credited to Elwood Cubberly, who exposed problems with the local financing of public education in 1906. Cubberly (1906) pointed out that states often considered increasing funding but not necessarily how to distribute it "to secure the best results," which results in large inequalities. A general assumption concerning school resources is, where greater resources are available and delivered through fair and equitable funding systems, academic achievement levels and outcomes rise while achievement gaps shrink (Baker et al., 2016). Baker et al. (2016) recognized that the money a school district can spend on operations determines the student teacher/staff ratios, class size, and wages of a local public school district can pay its personnel. Therefore, equitable and adequate funding becomes the most critical factor in developing school systems designed to support *successful* educational opportunities for all children, particularly when local resources are required to support the school system.

Historically, the organization of schools in a state was related to methods states use to provide educational funds. Schools during colonial periods were organized in various ways. For example, some were supported by the private trading companies that provided funding, while others were created with private endowments or through subscription or taxation on the part of the community (Augenblick et al., 1997). Depending on area populations, schools were established in one-room houses where school-age children would travel to the location for instructions. In some instances, individuals were taught to read by parents or older siblings.

As states developed, local communities were authorized by state legislatures to create schools designed to serve the public by providing a free public education for its "indigent families" even if there was little or no public support (Augenblick et al., 1997). Local funding

remained the dominant pattern of support for schools before state taxation became the accepted method of funding the schools by the mid-to-late 1800s. Today, state support provides 48% of all current operating revenues obtained by school districts (Chen, 2022). The amount of state and local revenue drives most of the current spending by local public school districts because federal aid constitutes such a relatively small share—only about 9%, on average (Baker, 2017). The National Conference of State Legislatures published in a report entitled *The State Role in Education Finance* (Verstegen, 2011), that the State also bears the burden of ensuring a statewide education finance system was founded on some general principles. A sound state school finance system:

- provides equity for both students and taxpayers,
- is efficient in making the best possible use of resources,
- provides adequate resources to local school districts so that they may achieve State and local educational standards,
- incorporates fiscal accountability through generally accepted budgeting, accounting, and auditing, and
- promotes predictability and stability of education revenues and expenditures over time.

Responsibility for equitable and adequate provision of resources, programs and services to children was laid out in state constitutions (Baker & Weber, 2016). Because the US constitution does not mention a role for the federal government in the provision of public education, under the “establishment clause” in the 11th Amendment, (Callahan, 1976), the authority to operate public schools lies with the states. Currently, state constitutions include

requirements for the provision of public education. The historical difficulty of equitably financing education was examined in the next section.

Historical view of Educational Funding

Education was the largest share of state and local government budgets and a continuing concern of lawmakers, the courts, educators, and the public (Verstegen, 2011). Although the state constitutions establish the states' affirmative responsibility to provide education to all school-age children, far too many states fall short of effectuating that right in a meaningful way, consistent with contemporary needs and demands (Sciarra & Hunter, 2015).

Financing for schools had its genesis in the Massachusetts colony in 1642. Laws were passed by the colonial legislature that required "a certain man of each town" to determine whether children were being taught "to read and to understand the principles of religion and capital laws of the country" (Alexander & Salmon, 1995). The necessity of education was imperative to living under the strict written codes of the newly formed colonies. Colonial governments educating their citizens was an outgrowth of ensuring religion, morality, and knowledge of government. Parents were required to ensure their children knew the principles of religion and laws of the commonwealth. The idea behind this, once again, was that if all citizens could understand the written language on some basic level, all citizens would be able to understand and therefore, abide by the governing laws of the land (Matzat, 2004).

In the colonial period, schools were organized in a variety of ways: some were sponsored by private trading companies that supported colonization, while others were created through private endowments or through subscription or taxation on the part of communities (Middlekauff, 1971). Although formal schooling was not widely available, education was important to the early American colonists.

Quickly realizing that simply teaching children to read and write at home and in the church was insufficient, colonists began to establish public schools in the early 1600s, with the founding of the Boston Latin School in 1635. The Law of 1647 required that towns of fifty families hire a schoolmaster who would teach children to read and write. Towns of a hundred families must have a grammar schoolmaster who could prepare children to attend Harvard College (Middlekauff, 1971).

The purpose and design of schools during colonial days have changed in many ways. The first colonial public schools bore little resemblance to our modern system. At first, only boys attended these institutions, and their coursework seldom went further than what today we would call a grammar school curriculum. Throughout the 17th century, women only received an education if their families were wealthy enough to pay for formal private education. The education of poor women was typically limited to whatever they picked up at home.

Following the American Revolution and the founding of the United States, state legislatures began allowing local communities to create schools, including "public" academies that were designed to serve the public by providing a free public education, at least for indigent families, even if there were little or no public support (Augenblick et al., 1997). Finance policies for public elementary and secondary education changed little since the early development of state school funding processes in the 1920s and 1930s (Verstegen, 2011).

Prior to the mid-19th century, students of all ages were taught together in one-room schoolhouses. However, well-traveled U.S. educators like Horace Mann Watson et al. (2013) knew that in other countries, students were segregated by age. Building upon the Prussian system, Mann introduced "age-grading" of students in Massachusetts in 1848. This method

proved so successful that it quickly became the norm in public education across the country (Watson et al., 2013).

Many states began to add provisions to their Constitutions establishing universal, publicly provided education in the mid-1800s. The specific language varies from state to state, but virtually all state constitutions contain education clauses that require the state legislature to provide an "adequate," "basic," or "thorough and efficient" education for all children (Berry & Wysong, 2010). Mississippi's first educational system came into practice for all citizens in the late 1870s during the period of Reconstruction. The original law created a dual educational system for black and white children (Stephenson, 1906). The dual-track law created an educational system for the promotion of intellectual, scientific, moral, and agricultural improvement by establishing a uniform system of free public schools in Mississippi.

The state's duty was to secure for all as high a minimum of good instruction as possible, but not to reduce all to this minimum; to equalize the advantages to all as nearly as can be done with the resources at hand (Verstegen, 2011).

The state of Texas supports students eligible for free and reduced lunch programs and students who are pregnant. New York provides state support for students who are at-risk for not meeting statewide learning standards. Likewise, South Carolina provides funding directly for students who fail to meet statewide standards in reading, writing, and mathematics or who do not meet first-grade-readiness test standards (Verstegen, 2011).

Until the 1970s, Mississippi operated a segregated school system under the 1896 United States Supreme Court decision *Plessy v. Ferguson*, which allowed for the creation of "separate but equal" public schools and facilities. The schools were seldom equal in terms of budgets, school attendance, or educational expectations. In 1954 the U.S. Supreme Court overturned

Plessy in the controversial *Brown v. Board of Education* decision, creating a new focus on public schools. This landmark case addressed the role segregation played, and by extension, racial integration would play, in the personality, motivational, educational, and professional development of people of color (Zirkel & Cantor, 2004).

As states grew and the educational needs of their citizens expanded, their constitutions established universal and public educational laws. Today's schools are marked by significant changes with both available technology and the nature of students. In many places, particularly rural communities where populations are shrinking, school districts are being consolidated to stay fiscally sound while providing students with all the necessary and desirable modern facilities (Watson et al., 2013). While students in these consolidated districts have longer travel times, they are also able to avail themselves of the Wi-Fi, tablets, laptops, and computer labs enjoyed by students in metropolitan districts.

Baker and Weber (2016) have concluded state education agencies generally lack budget authority or substantial authority to alter distributions of state school aid to achieve greater progressiveness of state school finance systems. Real improvement still depends on the sufficiency of educational resources, such as successful teaching, effective supervision, efficient administration, and a variety of other factors needed to ensure a sound education. States have identified education essentials and increasingly turned to cost studies to obtain information on the funding needed to support these essentials (Sciarra & Hunter, 2015). Thus, school site resource variation was unlikely to be resolved by regulation, absent any correction to inter-district spending disparities. At best, states may pressure districts to improve within-district disparities in aggregate and specific teaching resources (Baker & Weber, 2016).

State laws established a funding mechanism based on taxes creating a pool of resources to fund public education to be disbursed from the state treasurer. The common funds, maintained in a trust, established resources to be distributed based on the number of children attending each school district.

Hybrid funding formulas were developed which released funds to local school districts based on both resource-based and student-based elements. Formulas typically determined the cost of educating a student through needed resources such as teachers, staff, and facilities. Low-income children generate a supplemental fund, while students who require special programs are considered within the resource-based element of this hybrid formula (Chingos et al., 2017).

Mississippi law requires school districts to contribute revenue to the funding of public schools (PEER, 2002). Each district was expected to contribute \$28.00 for every \$1,000.00 of assessed local property wealth. The state was not to contribute less than 73% of the amount of funds calculated by the State necessary to educate the students within each district, regardless of its local wealth. Tax levies may be imposed in excess of \$55.00 for every \$1000.00 of assessed local property wealth as a means of increasing local revenue.

Mississippi provides increased funding for students from low-income households by applying a multiplier of 1.05 to the base per pupil amount for low-income children (PEER, 2021). A resource-based system was included for the cost of delivering special education services. Special education teachers, staff, and resources are required by law. The state estimates the number of special education teacher units a district will need by calculating the average salary drawn by special education teachers in each district to determine the prior year's reimbursement rate. Funds distributed for special education services may include sign-language

interpreters, positive behavior specialists, extended year instruction, and partial scholarships for special needs students whose parents wish to enroll them in a private school.

Mississippi Education Reform

Reforming the manner in which a state distributes its funding to local school districts is challenging. Too often, state leaders embrace major school funding reform only when they are directed by court decisions (Wong, 2013). We have learned over the past decade that the process of educational reform was much more complex than had been anticipated (Fullan, 2007). The effects of politics can be considered a leading detractor when states consider reforming educational funding systems regardless of political affiliation. According to Alexander and Salmon (1995), this "implied that education was a state responsibility and a vital aspect of a democratic form of government." Reforms implemented by divided or Republican governments deliver concentrated benefits to districts serving poor students. The school-finance reforms implemented by Democratic state governments have substantially different effects on district funding than reforms produced by Republican or divided governments (Berry and Wysong, 2010).

According to Burnette (2018), the nation as a whole earns a failing grade of D-minus on school spending from the Education Week Research Center in the *Quality Counts 2018* school finance report, based on several indicators that include per pupil spending and the proportion of taxable resources they devote to K-12 education. Mississippi's current ranking corresponds directly with the nation's grade as identified by the *Quality Counts 2018* school finance report. Education reform appears to remain necessary for the State of Mississippi.

MERA of 1982

The Mississippi Education Reform Act of 1982 (MERA) caused Mississippi's educational system to undergo its most sweeping changes under the leadership of Governor William Winters. Winter's primary goal was to establish a statewide kindergarten program. The Mississippi Education Reform Act of 1982 (MERA) was viewed as an educational reform act that impacted poor African-American students across the State. At the time, many legislators did not view public education as a statewide problem but a "black" problem. Legislators stated, "white people in their communities do not attend public school" Until the 1970s, Mississippi operated a segregated school system under the 1896 United States Supreme Court decision *Plessy v. Ferguson*, which allowed for the creation of "separate but equal" public schools and facilities.

The schools were seldom equal in terms of budgets, school attendance, or educational expectations (Wickham, 2016). This view was stated because of the 1970s federal integration rulings that forced many African American and non-African American children to attend public schools. Instead of complying with federal law, many County governments continue the evolution of a dual educational system based on race. White Mississippians begin opening and attending private schools within their communities. The 1982 educational reforms revealed even after 92 years of educating Mississippi's children, there remained a propensity to educate black children independent of white children.

The Mississippi Education Reform Act of 1982 (MERA) focused on more than ensuring African American children were educated but worked to improve education in Mississippi improved state school governance, leadership, and finance; improved professional preparation and growth of school personnel; improved school performance; and higher student achievement

(Winter, 1988). The passage of MERA was just one example of the steps taken by the state to distance itself from its troubled past. The 1954 Supreme Court Decision *Brown v. Board* transformed Mississippi public schools in both positive and negative ways. The federal mandate to desegregate public schools was met by huge opposition in Mississippi from both the state government and the citizens themselves (Hawkins, 2010).

The law also reformed the makeup of the State Board of Education. The State Superintendent and members of the Mississippi Board of Education were codified as appointed positions with the goal of providing strong, nonpolitical leadership in public K-12 education. A new performance-based accreditation system designed to emphasize student outcomes was also enacted. To ensure quality learning environments for all students, the Mississippi Board of Education developed process standards.

The law provided \$507 million State Aid Capital Improvement Bonds to provide over 9000 new and renovated classrooms across the State. Teacher licensure processes underwent significant changes, which involve standards for certification and licensure and continuing professional development of Mississippi teachers and administrators. The establishment of a new performance-based school accreditation system was implemented to ensure students were provided with the necessary supports to master defined content and objectives. Uniform curriculum frameworks were written by Mississippi classroom teachers using national content standards, giving educators the flexibility to teach skills and organize all courses from basic to advance. Finally, all Mississippi public school districts were required to adopt a nine-month full-school day kindergarten program that operates during the school year (Wickham, 2016).

William Winter, government Mississippi (1980 -1984) was given the most credit for the passage of the first substantial education reform, which was also viewed as a social movement.

The passing of MERA galvanized Mississippi citizens around the fundamental issue of a good public education system.

MERA was deemed as the catalyst for educational reform in other southern states Tennessee, South Carolina, and Arkansas. Because of Mississippi's racially charged background, MERA was a perfect opportunity to shift that view. The history of denying African American access to equal public education due to a fear that knowledge would give them the power to become serious economic and political threats to Whites (Wickham, 2016).

MAEP of 1997

Mississippi educational reform continued in 1997 with the signing of the Mississippi Adequate Education Program (MAEP). The goal of MAEP was to ensure an "adequate" education for every child in Mississippi (Mississippi Department of Education, 2021). MAEP was a funding policy designed to provide schools resources necessary for adequate student achievement based on operational needs. Funding was being provided at a level as to support "a successful level of student performance the law requires a state appropriation of \$16 million each fiscal year to be distributed to the 152 school districts for maintenance and upkeep of the buildings, transportation, classroom supplies and technology, and other needed projects (Mississippi Department of Education, 2019b).

The funding mechanism of MAEP was designed through a formula based around five primary components:

- a base allocation which includes a combination of both state and local contributions,
- a consideration of a school district enrollment,
- transportation needs,
- several key student-based components such as at-risk students, and

- the needs of exceptional education children.

Most state funding formulas aim for proportional funding among all districts throughout a state, based on student enrollment. For property-poor districts, states kick in extra money to make sure the funding was even (Burnette, 2018). The law does not consider the needs of preschool education or students who speak English as a second language. MAEP, when compared with national educational funding mechanisms, was considered a "foundation program" funding approach. More was discussed about this approach later in the literature review.

Mississippi's first educational law created a dual system focused on economic needs rather than the educational needs of its citizens. After over 100 years and multiple attempts to reform education, the question remained if Mississippi's educational system addresses the needs of its citizens or is primarily a funding mechanism driven by ancillary components not particularly focused on creating a successful educational system. This research reviewed the equity and adequacy of Mississippi school funding by reviewing the evolution of Mississippi's K-12 education reform and whether such reform was adequately meeting the needs of its' children.

Continuing efforts to reform the now 20-year-old Mississippi Adequate Education Program has failed in multiple legislative session. Most recently, legislators attempted to eliminated MAEP before completing a new school funding formula. The bill died due to the failure to sign in to law a new school funding formula law. One goal of this project was to make available to legislators research about the complex components in developing a new education funding formula based first on student needs over funding availability.

School Funding Methods

How school funding is determined can be equally as complicated as ensuring adequate funding is utilized in an effective manner for student learning. The process in which states allocate funding and measure the effectiveness of those funds creates complex funding and monitoring mechanisms, many of which are not specifically focused on the needs of children. The local district determines spending and taxing levels and the State matches differences between what is raised locally and what is guaranteed (Verstegen, 2011). Considering this general process, how can educators ensure funding levels are determined and utilized to most benefit school-age children?

Legislative battles over funding levels and mechanisms are now leading experts to highlight and research the importance of addressing student needs in conjunction with fiscal congruency. A growing number of school finance experts now conclude that states should, instead, spend based on need. In other words, schools with heavier concentrations of poverty, and therefore, greater academic needs, should get more state money than schools where most students' parents are wealthy (Burnette, 2018).

To ensure spending mechanisms and student needs are highly efficient and effective, states are encouraged to use a combination of approaches to piecemeal together an overall school funding system. Most states use weighted approaches for these categories of need but eligibility requirements, whether the grant is inside or outside the major finance equalization grant, and other criteria for the receipt of aid can vary widely (Verstegen, 2011).

State policy change must begin with the provision of equitable and adequate funding to school districts, a prerequisite condition for all that follows. State policy must also follow

through with requirements that equity provisions built into state aid formulas, for targeting funds to needier districts and children, translate to district allocation provisions achieving similar targeting (Baker & Weber, 2016). In addition to providing appropriate funding levels, the research discusses finance adequacy.

Finance adequacy calls for states to begin developing curriculum content and student performance standards to identify the financial resources needed for students to meet those standards (Odden & Picus, 2008). The alignment of what is required to be taught and available resources to meet all student needs is a critical factor in ensuring fund adequacy.

The central concern of the equal conception is providing all learners with equal educational resources. Given equal resources, differences in students' achievement are said to reflect unequal ability, motivation, effort, parental inputs, family income, and other influences (Kornhaber, Griffith, & Tyler, 2014).

Public schools in states across the country rely heavily on local property taxes to meet the vast majority of school expenses. American schools tend to reflect the educational values and financial capabilities of the communities in which they are located. The representation of County and municipal regions where local controlled school districts and boards are enacted is reflective of the typical American educational system based on a community's values and financial capabilities. The regionalization approach to educating Mississippi's children supports the early constitutional notion in Mississippi of educating African American and non-African American children separately.

Education Finance Theory

Local community funding coupled with state baseline funding equates to the funding mechanism used to educate Mississippi citizens. This approach to education funding creates

local educational systems where more affluent locales create better schools due to a higher property tax base and more impoverished communities' educational systems suffer due to a lack of local funding (Verstegen, 2011). Mississippi's educational funding mechanism may be equal regarding student population but was far from equitable concerning student needs. Equitable funding implies resources are provided in areas of greatest need based on the specific needs of all children.

Mississippi's regionalized approach to local government further creates a barrier to ensuring school funding addresses the needs of all children. Regionalization is the separation of local governments within county lines (Simon, 2004). This notion of regionalization creates more of a problem for K-12 education in Mississippi due to the social issues often presented when considering how to determine resources required to meet the educational needs of children from poor locales. For example, in Rhode Island, when generating a new education policy, lawmakers considered students' needs and the resources necessary to ensure all children's needs were met, regardless of where they may attend the school. Views of equity inform educational policy and therefore inform the actions and resources that shape children's possibilities (Kornhaber et al., 2014).

According to (Cubberly, 1906), the foundation program for education finance theory contains several features:

1. Base amount of funding needed to meet a basic, minimum education - the foundation-
- was determined by the State.
2. Localities contributed to this amount with a uniform tax.

3. At the set rate, wealthy districts (with high property values) raise more funds and poor districts raise less. The State made up the difference from state revenue but only up to a point-the foundation level.
4. The local effort required under the plan was set at the tax rate needed in the wealthiest district to raise the total amount needed to fund the program. The wealthiest district (i.e., the key district) would receive no state funds.
5. Districts could exceed the foundation program through local tax-levy increases unmatched by the State.

This research seeks to determine if addressing funding levels based on the education finance theory, truly addresses the needs of all children?

Education Finance Systems

Mechanisms designed to allocate statewide funding have drastically shifted over the past one hundred and twenty years. Earlier data indicates states funding ranged from 21% in the early 1890s to now rising above 74%. A growing cost of public education, most of which, is derived from property taxes created a recognizable variation among school wealthy and poor school districts. During the 2012/2013 school year thirty-five states provided less funding for education than they had five years earlier (Leachman & Mai, 2014). To address this problem, states began to measure school needs by measuring instructional time and number of teachers against accountability results in an effort to measure effectiveness. Policies and resources aligned to an expansive view of equity are needed to foster more equal chances of school and life success for children from disparate circumstances (Kornhaber et al., 2014).

Kern Alexander testified in the summer of 1997 about the impact of the school inequity of at-risk children in St. Louis. Alexander (1997) stated, "the effect of [the loss of] \$1,000 per

pupil would have an important impact on the school classroom or a building, and it would be very difficult to maintain the present quality, whether it's student/teacher ratio or whatever, would go into the quality of the program with reduced resources per pupil...[The board] could not possibly continue the program that it has today... with the increase in the number of [low income] students and with the same or less resources." Alexander's statement articulates the complexity of educational funding systems and its effect on students and teachers' ability to maintain programs.

State Funding Methods

States across the United States utilize a variety of methods to fund public schools. Methods vary in strategies utilized to ensure all districts and students receive adequate and equitable funding. These typically involve tools to transfer resources from wealthy districts to poorer districts. These techniques include flat grants, foundation programs, reward for effort, categorical grants, and pupil weights.

Flat Grants

Early efforts of allocated school funding involved the implementation of flat grants. Flat grants-an identical amount of aid per unit of educational resource. In this method, States provided a fixed dollar amount, for example per teacher unit cost. This approach was beneficial to wealthier districts but created resource shortages for poor districts with large classes. Wealthier districts were able to supplement teacher salaries with additional local dollars.

Foundation Program

The foundation program approach developed in the early 1920s, was a new approach for distributing school funding the first attempt to ensure all schools received adequate support without placing a disproportionate tax burden on districts with limited taxable resources

(Augenblick et al., 1997). The foundation program required all school districts to ensure a specific minimum rate of property taxes thus guaranteeing a minimum per pupil revenue for schools. This approach remains popular in some variations today, in spite of its mythic approach. States who have entered into litigation concerning this approach have found courts determining the state foundational levels to be insufficient to guarantee an adequate education to all students (Augenblick et al., 1997).

Reward-for-effort

By the mid-1920s and even newer approach was introduced entitled, reward-for-effort designed to equalize the burden among the state taxpayers. This process guarantees a specific percentage of state funding through a process called percentage equalize or guarantee yield. This method allows states to provide more resources to poorer districts, while allowing school districts to make choices about revenue and tax levels. This process aligns with the states' ability to maintain the local control concept.

Categorical

Categorical programs are formula-based funding mechanisms designed to equalize state support for public schools while attempting to consider the differing needs from school district to school district. Districts with high portions of children in poverty or with severe disabilities require additional resources. The categorical program funding approach attempts to provide additional resources for specified purposes and mundane reasons such as textbooks.

Pupil-weights

The final approach offered is pupil weights. This approach recognizes specifically the needs of the children in determining the allocation necessary to support all children. The approach is sensitive to wealth by weighing local tax base differently. A pupil cost is determined

through a point system designed to recognize special education, compensatory education, English as a second language and other state determined student needs. This approach is sensitive to school districts of varying stages of wealth.

Measures of Adequacy

Across the nation, school funding formulas focused on adequacy to impose a duty upon state legislators to provide an education for all children. However, in many instances, state laws do not describe adequacy to the extent needed to support the improvement of student achievement based on student needs, rather as a tool for dispersing available state funds as designated by the state legislature. This is a confusing notion seeing that many state laws governing state educational funding were originally developed based on the need to educate "indigent" populations.

Another key issue related to funding formulae and the amount of funds provided per child is whether or not that amount is sufficient to teach all children to state standards, laws, and requirements (Verstegen, 2011). Challenges to the legality of states school on this plan contends that all students must have access to equal, efficient, and adequate educational options (King, Swannson, & Sweetland, 2005). Setting the national educational goal to educating *all* children to high levels of proficiency on state standards has transformed the orientation of school finance policy (King et al., 2005). This approach is best defined in the efforts of the No Child Left Behind Act of 2001, federal law requiring all children to reach proficiency by 2014. This unfunded federal mandate at face value insured all children's needs would be addressed. However, it failed to consider the financial impact on addressing the needs of *all* children.

As school districts across the country litigated adequate funding limits, courts have reached decisions on adequacy. Courts first determine whether the state education clause

establishes a minimum or optimal education standard. States are vulnerable in this area due to legislatures failing to determine the essential basic "education basket." Several options are available to states in establishing an adequate revenue target.

Successful School

Most states use "pupil weights" to determine school district allocations recognizing the cost of services by the individual student. Students are weighted based on their eligibility for special needs services, compensatory education, and English as a second language. Pupil weights are often used in the reward for effort approach and foundation plan method of school funding.

Combination

A combination of approaches has been developed in some states due to mandatory funding levels for all districts. The foundation level of funding is required for all districts and must be supported by local property taxes at a specified minimum rate. For example, in Kentucky, districts may choose to generate even more of their taxes at an even higher rate, but local taxes at this level are not equalized by the state (Augenblick et al., 1997).

Econometric Approach

This approach uses a variation of multiple regression, such as two-stage least square regression. A measure of the instructional costs per unit serves as the dependent variable. The independent variable includes measures of pupil performance, pupil characteristics, and district characteristics. Built on the set of relationships among variables in the sample, this treatment produces a regression quotation that yields a unique cost for each district for producing the desired level of achievement given the district's characteristics and those of its pupils (King et al., 2005). This approach does not consider the specificity of instructional delivery systems and other instructional costs.

Expert Design Approach

Also known as the professional judgment approach which relies heavily on educators and other experts to identify the resources needed to enable students to meet state standards and performance expectations. This approach focuses on creating an ideal delivery system without statistical or empirical inference from actual measured outcomes (National Conference of State Legislatures, 2017). One detractor of this approach is it produces costs in excess of existing funding. States using this approach typically embrace a modified expert design approach based on the cost of providing the services contained in a basic education basket. Parameters are status to ensure costs do not exceed certain levels for specified needs. It often results in a recommendation for much higher funding than is available. This approach requires large amounts of data, some of which may be difficult to obtain (Augenblick et al., 1997).

Historical Spending

The historical spending approach is the easiest approach to calculate because it is based on actual spending (Augenblick et al., 1997). This approach improves the predictability of state support; however, it looks at spending from the previous year, which may not be adequate for the current year. For example, Mississippi funding for special education teachers follows the historical spending approach. State funds are released to school districts annually based on the need presented for special education students in the previous year.

Additional Research

The question of adequacy has been debated for years in many states Supreme Court's. Court rulings of the 1990s challenged the definition of the term adequacy specifically in relation to addressing facilities inadequacies. Several studies have addressed state school funding formulas and funding equity in recent years. Dr. Michael Putnam (2011) analyzed the equity of

MAEP in providing funding based on a per pupil allocation. Putnam (2011) Putnam worked to inform legislators of the impact of MAEP as a mechanism for providing "adequate" support to Mississippi schools.

Putnam's (2011) quantitative study analyzed the level of equity of the Mississippi adequate education program funding by looking closely at the base per pupil allocation system (Putnam, 2011). Putnam worked to determine if MAEP met the criteria for horizontal equity by analyzing school funding levels over a four-year period and in doing so, discusses the vertical equity of MAEP. Finally, Putnam responds to the question of fiscal neutrality and discusses whether or not MAEP met the criteria for horizontal equity (range, arrange, standard deviation, and coefficient of variance). Putnam (2011) offered key recommendations to legislators in an effort of improving MAEP:

1. Due to the impact of the recent economic downturn commonly referred to as the Crash of 2008 in the state of Mississippi, the required four-year recalculation, due in 2012, of the Base Student Cost should be implemented immediately to ensure districts are receiving the resources necessary to meet the changing needs of students.
2. The Free Lunch Participant line item within the Base Student Cost portion of the formula only allots 5% extra funding for this category.
3. The minimum and maximum level of mills which districts may levy should be adjusted upwards to match the current rate of inflation of 2.7%.
4. Class Size Reduction, Capital Outlay, Bilingual Education, Early Childhood Education, and Technology should be funded as add-ons.

As recent as 2017, Dr. Avance Pittman researched MAEP and its impact on student achievement. Pittman (2017) observed MAEP, as it relates to school districts based on six

independent factors: (1) The district's base costs, are calculated for the representative districts (2) instructional costs, (3) administrative costs, (4) operational costs, (5) maintenance of plant costs, and (6) ancillary cost components. School funding levels were analyzed across a three-year period. The relationship between MAEP and student achievement in Mississippi school districts is measured to determine the role of school funding and its impact on student achievement. (Pittman, 2017) recommended further research be conducted on funding of schools on a differential basis to make schools more equitable in terms of their curricular dissimilarities. These studies are consistent with trends that find significant inequalities across school districts which are tenacious over long periods of time (Augenblick et al., 1997).

Conclusion

Are funding levels for school age children meeting a sufficient level to ensure the delivery of an adequate education to every child in Mississippi? This review revealed that the response to this question warrants a complex response much more than school funding levels. Mississippi's educational system originated, as did many other states, out of a desire to ensure its citizens were capable of understanding state laws. Today's educational systems designed to provide a free public education have considerably greater demands for all school-age children. Demands which require educators to consider the complex needs of all children and how those needs can be addressed in order to meet state academic standards.

There was strong evidence that states with school funding systems concretely linked to the actual cost of delivering their academic standards to all students, including those with additional programmatic needs, realize achievement gains benefiting students and strengthening the states' civic and economic health (Sciarra & Hunter, 2015). Mississippi's school funding system must consider funding resources that meet the needs of all children. The needs for

children who: speak English as a second language, have been identified for special educational services, face social and emotional problems, and require additional preschool and early learning supports – must be addressed if the states are to fulfill its commitment to provide an adequate free public education.

Researchers have shown the importance of policymakers being aware of mechanisms designed to measure equity and adequacy of school funding. Research should be conducted focusing on the impact current school funding levels have on Mississippi's children's academic success. Are school funding levels sufficient to ensure all children reach their potential with the least amount of waste?

The researcher might consider the adequacy of funding by individual programs. For example, in meeting the needs of children who speak English as a second language, are school funds provided to support English learner programs adequate? How does this level of adequacy impact the overall success of English learners? Are resources provided to support special education students being used most efficiently? To what extent does this level of adequacy support the proficiency of special needs students?

The researcher discusses a number of mechanisms designed to ensure state school funding was developed cognizant of student needs and funding efficiency. Additionally, the researcher will assist legislators in determining the most appropriate and efficient school allocation model; a model that was cognizant of equity, efficiency, and accountability. When states adopt and sustain resource accountability, they are building equitable opportunities that spur better outcomes for students with benefits that perpetuate into adulthood (Sciarra & Hunter, 2015).

Chapter III: Research Methodology

To what extent does the MAEP formula relate to economic and racial student achievement gaps in Mississippi? In other words, do differences in state funding, federal funding, and local funding levels have a relationship to variations in the levels of student performance gaps based on race and economic status? Increasing the amount of money a school district receives to educate children adequately was sometimes viewed as the primary change agent for improving educational outcomes, particularly in low-performing, high-poverty school districts. But in many instances, high levels of per pupil spending can lead to abysmally low measures of student performance (Podgursky, 2008). In recent years, state legislatures, state education departments, and advocacy groups in more than thirty states have sponsored education adequacy studies to objectively determine the funding needed to provide all students with the instructional resources necessary to produce an adequate education (Rebell, 2006). The constitution of many states requires its legislative body to provide the establishment, maintenance, and support of free public schools. However, clear definitive markers of a defining who or how “free public schools” are to operate are not outlined specifically within the law, leaving vague interpretations.

Because of variations in the ability of relatively wealthy and relatively poor school districts to raise local tax revenue, the Mississippi MAEP funding system and federal title grants seek to provide additional financial support to districts to provide for the education of underprivileged and high poverty students. Because of variations in the ability of relatively wealthy and relatively poor school districts to raise local tax revenue, the Mississippi MAEP

funding system and federal title grants seek to provide additional financial support to districts to provide for the education of underprivileged and high poverty students. After 25 years of MAEP, this research has assessed the current level of gaps in performance based on funding-type profiles (percent local, percent state, and percent federal).

Design of the Study

The purpose of the study was to assess the relationship between gaps based on race and economics in Mississippi utilizing the Mississippi Academic Assessment Program (MAAP) data, and total per pupil revenue broken down by funding source all (total district funding), local (property tax), state (MAEP funding), federal (ESEA funds), and student achievement. This correlational study will analyze the differences in resources based on source, federal, state, or local tax effort in Mississippi school districts. Considering the role of funding within Mississippi school districts and its impact on student achievement, the research seeks to measure the extent district funding profiles are related to the state's own constitutional mandate to provide adequate funding for all Mississippi children to attend a successful school.

The National Assessment of Educational Progress (NAEP) provides a common measure of student achievement across the country in mathematics, reading, science, and other subjects. Depending on the assessment, NAEP report cards provide national, state, and some district-level results, as well as results for different demographic groups. NAEP has reported national Achievement gaps have stubbornly persisted since the inception of the examination in the early 1970's (Barton & Coley, 2010). Achievement gap analysis identifies significant disparities in assessment proficiency between subgroups of Mississippi's student population (Mississippi Department of Education, 2019a). Academic achievement gaps scores within districts among Economically Disadvantaged students (AGSED) and African American (AGSAA) students will

serve as the two dependent variables. The study explored the relationship of school funding on academic achievement relative to African American and non-African American and Economically Disadvantaged and non-Economically Disadvantaged students.

Achievement Gaps Scores for African American (AGSAA): African American student achievement gap scores were examined for the school year 2019. Scores are reported by the Mississippi Department of Education identifying the gap (or difference) between the percentage of proficient African-American students and the percentage of proficient non-Economically disadvantaged students.

Achievement Gaps Scores for Economically Disadvantaged (AGSED): Students identified as Economically Disadvantaged achievement gap scores for the school year 2019 were studied. Scores are reported from the Mississippi Department of Education based on the gap (or difference) between the percentage of proficient Economically Disadvantaged students and the percentage of proficient white students (Mississippi Department of Education, 2019a).

The allocation of school district funds was associated with changes in both the level of academic achievement and achievement gaps between low-income children and their peers (Baker et al., 2016). According to Downes and Pogue (1994) student characteristics make a difference for costs. As concentrated poverty increases, the costs of achieving any given level of outcomes increase significantly. Therefore, the criterion variables for this study will be school district achievement gaps scores between African American and white students as well as the difference between Economically Disadvantaged students and non-Economically Disadvantaged students for all school districts in Mississippi using 2018-2019 achievement data. The predictor variables used to correlate with student achievement gap scores are the per pupil revenue across school district revenue based on (local, state, and federal funding) for the school year 2018-2019.

The predictor (independent) variables are defined as follows:

Total Per-pupil Revenue (TPR): Mississippi school district funding consists of three primary components - local (taxes base), state (MAEP), and federal funding. This continuous variable will be reported as a school district per student dollar amount based on the school district's total funding divided by the total student population.

Local Per-pupil Revenue (LPR): Mississippi school district local (tax base) funding will be used to report the per-student funding level based on local funding. This continuous variable will be reported as a school district per student dollar amount based on the school district's total local funding divided by the total student population.

State Per-pupil Revenue (SPR): Mississippi school district state (MAEP) funding will be used to report the per-student funding level based on MAEP funding. This continuous variable will be reported as a school district per student dollar amount based on the school district's total MAEP funding divided by the total student population.

Federal Per-pupil Revenue (FPR): Mississippi school district federal (ESEA funds) funding will be used to report the per-student funding level based on federal funding. This continuous variable will be reported as a school district per student dollar amount based on the school district's total federal funding divided by the total student population.

Combined dollars are utilized to provide resources for all instructional and operational needs. Regardless of the state allocation, a school district's resources can be impacted drastically based on local tax levels and poverty levels that drive federal funding amounts. Data elements used to assess adequacy will be (1) school district academic achievement gaps based on race and economics, (2) school district per pupil dollar amount for the school year 2018-2019 based on total (all school district revenue), federal, state, and local funding revenue. The research seeks to

determine the impact of the school district revenue on Mississippi school districts' achievement gaps amongst African American and Economically Disadvantaged students.

Research Questions

The following research questions guided the data collection and analyses in this research:

Question One:

To what extent was there a relationship between Mississippi school districts' total per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged students.

Question Two:

To what extent was there a relationship between Mississippi school districts' total per pupil revenue and the achievement gaps among African American students and Non-African American students?

Question Three:

To what extent was there a relationship between Mississippi school districts' federal per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged Students?

Question Four:

To what extent was there a relationship between Mississippi school districts' federal per pupil revenue and the achievement gaps among African American students and Non-African American students?

Question Five:

To what extent was there a relationship between Mississippi school districts' state per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged Students?

Question Six:

To what extent was there a relationship between Mississippi school districts' state per pupil revenue and the achievement gaps among African American students and Non-African American students?

Question Seven:

To what extent was there a relationship between Mississippi school districts' local per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged Students?

Question Eight:

To what extent was there a relationship between Mississippi school districts' local pupil revenue and the achievement gaps among African American students and Non-African American students?

Population

School districts operating in Mississippi during the 2018-19 school years were used for this study. According to the Superintendent's Annual Report 2020-2021 (Mississippi Department of Education, 2022), Mississippi has 139 public school districts. Mississippi school districts are spread across 82 counties and, as in many states, have decreased in number from 151 districts in 2014 to 139 in 2019 due to consolidation (Mississippi Department of Education, 2019). School districts operate as a city or county, often serving as a dividing line between ethnic groups.

Generally, city school districts are predominantly African Americans. Whereas most county school districts have more of a mixed or mostly Caucasian student population. 31,856 teachers provide instruction to students across the state, and they operate on an average per pupil expenditure of \$12,107. Although largely rural, the state has two urban areas which contain the largest school districts – DeSoto County and Jackson Public Schools. The state has six charter schools, one agriculture school, and eight State Special Schools were excluded from the active list of schools and not used in this study. The NCES data table also excluded seven schools reported as not applicable. School accountability was measured through the Mississippi Statewide Accountability System, which annually assigns a performance rating of A, B, C, D, and F for each school and district based on established criteria regarding student achievement, individual student growth, graduation rate, and participation rate (Mississippi Department of Education, 2021).

Data Analysis

The researcher used data from the Mississippi Department of Education (2020) and Mississippi State Legislature PEER Reports. All information will be retrieved from public reports offered by the Mississippi Department of Education. The 139 Mississippi public school district's total revenue will be obtained and used along with student achievement gap analysis to determine a school district's achievement gap performance. The National Center for Educational Statistics (National Center for Education Statistics, 2021) – Common Core of Data will also be used as a resource for obtaining federally reported school district data.

Many research questions in education, philosophy, and other behavioral fields deal with whether two variables are related and, if they are, determine the direction and strength of the relationship (Dimitrov, 2008). The researcher used the Pearson's correlation analysis to

determine if there was a relationship among the variables observed in this study. Using the correlation process helped the researcher determine if variables within the stated hypotheses indicate a relationship and, if so, to what extent was this relationship significant or not.

Inferential statistics requires the researcher draw conclusions about a population based on information regarding population characteristics (Miles & Roza, 2006). A simple Pearson's correlation coefficient was used to determine the relationship between school district per pupil funding (local, state, and federal) and academic achievement gaps for African American and Economically Disadvantaged students. According to Creswell and Creswell (2017), the process to determine which statistical test to use was based on the type of research questions, the scale used to measure the variables, and the school district listing distribution. As previously stated, all 139 Mississippi school districts will be used to conduct the analysis. Descriptive statistics will be used to identify school districts' characteristics and provide a general overview of the study population. The power analysis tool G*Power was used to determine the significance of the four predictor variables. Power was sufficient for this study, $1 - \beta > .60$; given the sample size of $n = 139$, the statistical significance would be detected for a small effect size, $R^2 > .08$.

Summary

The research methodology will allow the researcher to determine to what extent Mississippi public schools are provided enough funding to ensure all children receive an adequate education. A quantitative analysis of the MAEP allocations and student achievement gaps across the 139 Mississippi School Districts will determine the extent of their relationship. Chapter 4 will include the results, the findings, and the study limitations.

Chapter 4: Findings

Introduction

This research explored the extent of the relationship between district-level achievement gap scores in ELA and Math for Economically Disadvantaged and non-Economically Disadvantaged students, and school district per pupil revenue for local, state, federal, and total funding levels. In addition, the researcher observed the relationship between district level achievement gap scores in ELA and Math for African American students and non-African American students. This study expands the research discussion on the impact of funding on closing achievement gaps by examining Mississippi school district financial and academic data for the 2019 academic year. District-level economic and race achievement gaps in Mississippi districts provided the criterion variable data, and district levels of per pupil revenue (local, state, federal, total) provided the predictor variable data. This chapter presents a narrative and tables to show and describe the relationship noted in each research question.

Mississippi school district revenue per pupil data was retrieved from the Common Core of Data, National Center for Education Statistics (2019). Student achievement gap analysis reports for the academic year 2018-2019 were retrieved from the Mississippi Department of Education website (Mississippi Department of Education, 2019). Per the Mississippi Department of Education (2019) technical notes, a gap analysis identifies any disparity in assessment proficiency between student subgroups. For example, the gap (or difference) between the percentage of proficient African American students and the percentage of proficient White students.

% Proficient White students (reference) = 51.3

% Proficient African-American students = 22.4

Gap: $22.4 - 51.3 = -28.9\%$

A negative gap indicates lower performance in the comparison subgroup when compared to the reference subgroup. A positive gap indicates higher performance in the comparison subgroup when compared to the reference subgroup. Achievement gap scores display the level of performance between subgroups of Mississippi children in ELA and Math scores assessed grades 3-8. The gap indicates the difference between the two comparison groups for each criterion variable (Economically Disadvantaged and African American).

Achievement gap analysis scores are only reported in school district's where the student sample size is sufficient for the calculations – 10 or more students within each subgroup. Therefore, of the 139 active school districts, 52 were considered nonqualified districts because the school districts contained insufficient numbers of poor children for the Economically Disadvantaged achievement gap calculation. The African American student subgroup noted 17 nonqualified districts because of an insufficient number of African American students eligible to be included in the achievement gap score calculations. The research question suggested increased local, state, and federal funding will narrow the achievement gap. In the results, this will be indicated by a negative correlation indicating a relationship existing between higher per pupil funding and lower achievement gaps.

A quantitative analysis was designed and used to report the Pearson's correlation coefficient and determine if there is a significant relationship between school district funding relationship between school district funding and the achievement gap scores in Mathematics and Language Arts among the criterion and predictor variables. Pearson's correlation coefficient is a

statistical measure of the strength of a linear relationship between paired data (Hinkle, Wiersma, & Jurs, 2003).

The descriptive statistics (Table 1) display 87 school districts' means and standard deviations for Economically Disadvantaged children in Mathematics and the same information is reflected for English Language Arts in Table 2. Descriptive statistics (Table 3) displays 122 school districts' means and standard deviation for African American children in Mathematics and the same information is reflected for English Language Arts in Table 4. Charter, Agriculture, and State Special Schools and schools listed as “data not applicable” were excluded from the active list of schools according to the 2018-19 NCES data report.

Table 1

Descriptive Statistics Economic Gap Math

Variable	n	Mean	Std. Deviation	Min.	Max.
Dependent Variable: Economic Gap Math	87	18.7	12.4	-33.6	53.9
Independent Variables:					
Local Sources per pupil	87	3432.7	1409.76	1565.00	10578.00
State Sources per pupil	87	5318.3	417.48	4331.00	6382.00
Federal Sources per pupil	87	1372.6	440.03	655.00	3313.00
Total Sources per pupil	87	10123.5	1426.44	8453.00	17535.00

Table 2

Descriptive Statistics Economic Gap English Language Arts

Variable	n	Mean	Std. Deviation	Min.	Max.
Dependent Variable: Economic Gap ELA	87	21.1	10.9	-18.8	52.2
Independent Variables:					
Local Sources per pupil	87	3432.70	1409.76	1565.00	10578.00
State Sources per pupil	87	5318.35	417.47	4331.00	6382.00
Federal Sources per pupil	87	1372.60	440.03	655.00	3313.00
Total Sources per pupil	87	10123.5	1426.4	8453.0	17535.0

Table 3*Descriptive Statistics Race Gap Math*

Variable	n	Mean	Std. Deviation	Min.	Max.
Dependent Variable: Race Gap Math	122	20.2	9.7	-13.6	40.7
Independent Variables:					
Local Sources per pupil	122	3595.14	1413.27	1565.00	10578.00
State Sources per pupil	122	5327.93	453.28	4331.00	6724.00
Federal Sources per pupil	122	1617.02	595.83	655.00	3632.00
Total Sources per pupil	122	10540.00	1590.59	8453.00	17535.00

Table 4*Descriptive Statistics Race Gaps English Language Arts*

Variable	n	Mean	Std. Deviation	Min.	Max.
Dependent Variable: Race Gap ELA	122	23.2	9.2	-2.7	47.4
Independent Variables:					
Local Sources per pupil	122	3595.14	1413.27	1565.00	10578.00
State Sources per pupil	122	5327.93	453.28	4331.00	6724.00
Federal Sources per pupil	122	1617.02	595.83	655.00	3632.00
Total Sources per pupil	122	10540.00	1590.59	8453.00	17535.00

Findings

Correlation coefficients are used to determine the degree of association between two variables. The 16 correlations identified in this study ranged from an r value of .249 to a -4.75. Eight correlations were significant at the .05 level of significance. Using Cohen Statistics (Cohen, 1988) rating scale (+/- .1 to .3 – small; +/- .3 to .5 = medium; and +/- .5-1.0 = large), two of the negative correlations had a medium to large relationship and the remaining four negative correlations along with the two positive correlations indicated small relationships. Marzano et al. (2005) provided an example of why small correlations are often meaningful in education. The relationship of funding level as independent variable and achievement gaps, is

similar to Marzano et al.'s (2005) explanation of the impact of a .25 correlation coefficient between school level leadership and student learning:

To interpret the .25 correlation, assume that a principal is hired into a district and assigned to a school that is at the 50th percentile in the average achievement of its students. (See Technical Note 1, p. 124, for further explanation.) Also, assume that the principal is at the 50th percentile in leadership ability. We might say that we have an average principal in an average school.

Now assume that the principal stays in the school for a few years. Our .25 correlation tells us that over time we would predict the average achievement of the school to remain at the 50th percentile. But now let's increase the principal's leadership ability by one standard deviation—from the 50th percentile to the 84th percentile.... Our correlation of .25 indicates that over time we would predict the average achievement of the school to rise to the 60th percentile. (p. 10)

Simply, in this research the relationship between funding level and type, and racial and economic achievement, is cumulative throughout a child's 12-13 years in public schools.

Total per pupil

Research question number one is, "To what extent is there a relationship between Mississippi school districts' total per pupil revenue and achievement gaps among Economically Disadvantaged and Non-Economically Disadvantaged students?" A Pearson's correlation analysis indicated there was a small positive and non-significant correlation between total per pupil revenue and achievement gap scores for Economically Disadvantaged students in Mathematics ($r = .13$, $n = 87$, $p = .24$) and a small positive and non-significant correlation in English Language Arts ($r = .15$, $n = 87$, $p = .18$). Thus, the total per pupil amount is not

associated with academic gains in Mathematics and English Language Arts of children who live in poverty (Table 5).

Table 5

Pearson's Correlation

Variables			Local per pupil	State per pupil	Federal per pupil	Total per pupil
Economically Disadvantaged	Math	<i>r</i>	0.249*	-0.158	-0.229*	0.129
		p-value	0.02	0.143	0.033	0.235
	ELA	<i>r</i>	-0.243*	0.26*	-0.133	0.145
		p-value	0.023	0.015	0.22	0.18
African American	Math	<i>r</i>	-0.025	-0.174	-0.475***	-0.25**
		p-value	0.782	0.055	<.001	0.005
	ELA	<i>r</i>	-0.218*	0.092	-0.408***	-0.133
		p-value	0.016	0.314	<.001	0.144

* $p < .05$, ** $p < .01$, *** $p < .001$

Research question number two is, "To what extent is there a relationship between Mississippi school districts' total per pupil revenue and the achievement gaps among African American and Non-African American students?" A Pearson's correlation analysis indicated there was a small, negative correlation between total per pupil revenue and achievement gap scores for African American students in Mathematics ($r = -.25, n = 122, p < .01$) (Table 5). The correlation between total per pupil revenue and English Language Arts is a small, negative and nonsignificant ($r = -.13, n = 122, p = .14$) (Table 5). Thus, a school district's total per pupil revenue has a small association with achievement gap scores for African American students in Mathematics and English Language. Furthermore, the association between African American students and total per pupil funding has a significant impact on academic achievement in mathematics (Table 5).

Federal per pupil revenue

Research question number three is, "To what extent is there a relationship between Mississippi school districts' federal per pupil revenue and the achievement gaps among

Economically Disadvantaged and Non-Economically Disadvantaged students?" A Pearson's correlation analysis indicated there was a small, negative association between federal per pupil revenue and achievement gap scores for Economically Disadvantaged students in Mathematics ($r = -.23, n = 87, p < .05$) (Table 5). A very small, negative and non-significant correlation in English Language Arts ($r = -.13, n = 87, p = .22$) was noted (Table 5). Thus, federal funding has an impact on improving academic achievement between Economically Disadvantaged and non-Economically Disadvantaged children as funding levels increase; however, English language Arts improve at a slower rate than Mathematics.

Research question number four is, "To what extent is there a relationship between Mississippi school districts' federal per pupil revenue and the achievement gaps among African American and Non-African American students?" A Pearson's correlation analysis indicated there was a moderate negative correlation between federal per pupil revenue and achievement gap scores for African American students in Mathematics ($r = -.48, n = 122, p < .001$) and in English Language Arts ($r = -.41, n = 122, p < .001$) (Table 5). A negative relationship was found between federal revenue and African American student achievement gap scores in Mathematics and English Language Arts, indicating that as federal funding increases, achievement gap scores close between African American and White students.

State per pupil revenue

Research question number five is, "To what extent is there a relationship between Mississippi school districts' state per pupil revenue and the achievement gaps among Economically Disadvantaged and Non-Economically Disadvantaged students?" There was a small positive correlation between State per pupil revenue and achievement gap scores for Economically Disadvantaged students in English Language Arts ($r = .26, n = 87, p < .05$).

However, the correlation noted a small negative and nonsignificant relationship in Mathematics ($r = -.16, n = 87, p = .14$) (Table 5). Thus, as state funding increases, achievement gaps between poor and wealthy children are reduced in mathematics. However, in English Language Arts, state funding has a significant impact on achievement gap scores but in an adverse manner.

Achievement gap scores increase and decrease at or near the same rate in English Language Arts.

Research question number six, "To what extent is there a relationship between Mississippi school districts' state per pupil revenue and the achievement gaps among African American students and Non-African American students?" A Pearson's correlation analysis indicated there was a small, negative and nonsignificant correlation between state per pupil revenue and achievement gap scores for African American students in Mathematics ($r = -.17, n = 122, p = .06$), and a very small, positive and nonsignificant correlation is found in English Language Arts ($r = .09, n = 122, p = .31$) (Table 5). Thus, as state funding increases, the achievement gap between African American and non-African American students closes in English Language Arts, however, at a slow rate. State funding is provided at a rate that reveals African American and non-African American student achievement gap scores remain consistent in mathematics (Table 5); therefore, as African American student achievement gap scores increase, non-African American student scores go up at the same rate. This phenomenon is the same as achievement gap scores decrease among both groups.

Local per pupil revenue

Research question number seven, "To what extent is there a relationship between Mississippi school districts' local per pupil revenue and the achievement gaps among Economically Disadvantaged students and Non-Economically Disadvantaged students?" A Pearson's correlation analysis indicated there was a small, positive correlation between local per

pupil revenue and achievement gap scores for Economically Disadvantaged students in Mathematics ($r = .25, n = 87, p < .05$) (Table 5) and a small, negative correlation between local per pupil revenue and achievement gap scores for Economically Disadvantaged students in English Language Arts ($r = -.24, n = 87, p < .05$) (Table 5). Thus, a significant relationship is noted among economically disadvantaged students in Mathematics and English Language Arts, observing the impact of local funding on its ability to close the achievement gap between poor and wealthy students.

Finally, research question number eight, "To what extent is there a relationship between Mississippi school districts' local per pupil revenue and the achievement gaps among African American students and Non-African American students?" A Pearson's correlation analysis indicated that there was a very small, negative correlation between local per pupil revenue and achievement gap scores for African American students in English Language Arts ($r = -.22, n = 122, p < .05$) (Table 5) a very small, negative nonsignificant correlation as noted in Mathematics among the same comparison groups ($r = -.03, n = 122, p = .78$) (Table 5). Thus, the negative coefficient in English Language Arts and Mathematics indicates local funding is related to the achievement gap school between African American and non-African American students. However, achievement gap scores in mathematics do not have the same relationship for African American students as in English Language Arts when compared to their non-African American counterparts.

Summary

In summary, federal and local per pupil funding in Mississippi schools has a more significant impact on closing achievement gaps between African American and non-African American students and poor and wealthy students. State-level per pupil revenue has the smallest

significant relationship among all predictor variables, while federal per pupil revenue has the strongest significant relationship, albeit medium to small. State funding is reported to only have a significant impact on English Language Arts among Economically Disadvantaged students. This study was developed to show the relationship between school district funding and achievement gap scores. A small to medium correlation indicates that per pupil revenue is not a large contributor to widening achievement gaps. The relationship is small but positive in five of the eight research questions. The analysis found the per pupil revenue of Mississippi school districts across all revenue sources has a marginal impact on achievement gap scores, widening the argument that more money is not the only solution needed to reduce the achievement gap.

Chapter 5: Summary, Implications, Recommendations, and Future Research

Summary of Research

This chapter includes a summary and analysis of the findings, implications, and recommendations to policy makers and school leaders, and suggests areas for further research. Controversies about public spending on elementary and secondary education have grown since the early 1990's as states have adopted performance standards intended to ensure every child will learn enough to become an independent productive citizen (Roza, 2008). According to the Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER) (2021), the Mississippi Adequate Education Program (MAEP), MISS. CODE ANN. § 37-151-5 (a) (1972), "adequate education program," is a program established to provide adequate funding necessary for school districts' to implement programs capable of meeting a "C" grade in the accreditation system established by the State Board of Education. The state accountability system seeks to identify the adequate level of revenue needed to provide a basic education for Mississippi children. The opportunity for a sound basic education will equip students for their roles as citizens and enable them to succeed economically and personally (Napier, 1997). This study was conducted to determine the relationship between district levels of per pupil spending per source (local, state, federal, and total) and district level achievement gaps based on race and economic sub-groups (African American and Non-African American, and Economically Disadvantaged and Non-Economically Disadvantaged).

The results indicated there are important relationships between higher levels of some types of revenue, and lower achievement gaps. In understanding these correlational relationships, it is important to note these results do not indicate the type of revenue is causing the corresponding level of achievement. Thus, while there is a significant, negative, moderate relationship ($r = .48, p < .001$) between district spending of federal funds and the African American compared to Non-African American achievement gap, we cannot assume the higher funding is causing the gap to narrow. We can, however, assert there is a relationship between federal spending and this gap.

Of the 16 variable combinations measured, eight had significant relationships (five at the $p < .05$ level, one at the $p < .01$ level, and two at the $p < .001$ level):

1. Economically Disadvantaged/Economically Non-Disadvantaged **Math Scores** and **Local Per Pupil Revenue**: ($r = .25, p = .02$) Higher local revenue is related to a **slightly higher** economic achievement gap in Math.
2. Economically Disadvantaged/Economically Non-Disadvantaged **ELA Scores** and **Local Per Pupil Revenue**: ($r = -.24, p = .02$) Higher local revenue is related to a **slightly lower** economic achievement gap in ELA.
3. African American/Non-African American **ELA Scores** and **Local Per Pupil Revenue**: ($r = .22, p = .02$) Higher local revenue is related to a **slightly lower** racial achievement gap in ELA.
4. Economically Disadvantaged/Economically Non-Disadvantaged **ELA Scores** and **State Per Pupil Revenue**: ($r = .26, p = .02$) Higher state revenue is related to a **slightly higher** economic achievement gap in ELA.

5. Economically Disadvantaged/Economically Non-Disadvantaged **Math Scores** and **Federal Per Pupil Revenue**: ($r = -.23$, $p = .03$) Higher **federal** revenue is related to a **slightly lower** economic achievement gap in ELA.
6. African American/Non-African American **Math Scores** and **Federal Per Pupil Revenue**: ($r = .48$, $p = .001$) Higher federal revenue is related to a **moderately lower** racial achievement gap in **Math**.
7. African American/Non-African American **ELA Scores** and **Federal Per Pupil Revenue**: ($r = .41$, $p = .001$) Higher federal revenue is related to a **moderately lower** racial achievement gap in ELA.
8. African American/Non-African American **ELA Scores** and **Total Per Pupil Revenue**: ($r = -.25$, $p = .005$) Higher total per pupil revenue is related to a **slightly lower** racial achievement gap in ELA.

This chapter will discuss the ramifications and meaning of the significant relationships. In addition, eight of the variable combinations did not indicate a significant relationship. Non-significant correlations were noted primarily in state and total per pupil revenue in relation to student achievement gaps. When considering student subgroups of race and socioeconomic backgrounds, state per pupil revenue had the lowest relationship with Math achievement gaps. Total per pupil revenue was least significant in ELA when observing the same subgroups indicating a lack of evidence total per pupil revenue is related to the achievement gaps. Other areas of funding did indicate a relationship to the level of achievement gaps in the state.

The strongest and consistent correlation coefficients were noted among federal per pupil revenue in relation to student race-based achievement gaps in Math ($r = -.48$) and ELA ($r = -.41$). While the nature of this relationship is beyond the scope of this study, the relative strength of these coefficients indicates some level of efficacy resulting from federal funding. Title I

funding is intended to address issues of equity and adequacy in public school funding needs. Federal dollars supplement state resources by narrowing funding gaps for at-risk students (Peter G. Peterson Foundation, 2022). These federal dollars are allocated based on the school districts number of children living in poverty and are also designed to address children that have the greatest academic need, which are generally poor children; this might explain why federal funding appears to have a more significant relationship with racial achievement gaps than other revenue sources.

Federal per pupil revenue when related to Economically Disadvantaged students, showed a significant negative, small ($r = -.23$) correlation in Math. As in the race-based correlations with federal per pupil revenue, Economically Disadvantaged children have a small but significant relationship with lower achievement gaps and federal per pupil funding. Federal dollars are allocated based on the economic background and racial makeup of children attending the school. While federal per pupil revenue makes up only seven percent (Peter G. Peterson Foundation, 2022) of the school's total per pupil revenue, it still has a positive relationship with lower economic achievement gaps. Perhaps this is because the dollars are earmarked for programs targeting towards meeting the needs of underserved students.

The results also indicated a significant small, positive correlation coefficient ($r = .25$) between local per pupil revenue and the achievement gap for the socioeconomic subgroup. This raises the question of why districts with higher levels of local support for per pupil funding tend to have larger economic achievement gaps in Math. Local support is typically a combination of local capacity (per pupil assessed property value) and effort (taxation level). Thus, they tend to be wealthy districts with political support for public education. One possible explanation is that

wealthier districts may have resources available and the political will to provide more advanced programs and courses in mathematics. This finding warrants further investigation.

The opposite relationship was found with local per pupil local revenue and the ELA economic achievement gap. For these variables, a significant small negative correlation ($r = -.24$) was found between local effort and the economic achievement gap. In this case, it may be higher local efforts contributes to increased efforts towards early childhood literacy; yet there is no way to know within the scope of this study. A negative correlation ($r = -.22$) between local per pupil revenue and the achievement gap for African American and ELA scores was also found. Local revenue was the only revenue correlational group where there was a significant negative relationship in a single content area for both student racial and socioeconomic subgroups. A possible explanation for the phenomenon may be found in teacher shortages, particularly in math and science content areas. Poor children or more likely to be found in small rural schools where it is difficult to identify and retain highly qualified math and science teachers. In the absence of quality instructions, closing achievement gaps across racial and economic subgroups groups can be difficult to close. Again, further research is needed to understand why there is a difference between Math and ELA in the relationships between local funding and achievement gaps.

A significant relationship was found between the state per pupil revenue and the economic achievement gap in ELA. This small, positive correlation ($r = .26$) in ELA is the only significant relationship found across all variable relationships when paired with state per pupil revenue. Unlike Title I funding, MAEP offers an allocation formula weighted by a school district's average daily attendance to determine the level of state per pupil revenue made in each Mississippi public school (Mississippi Department of Education, 2019b). The weight of the at risk component of the MAEP funding formula may not be providing enough resources to

positively impact student achievement gaps, specifically when considering the impact of racial and socioeconomic subgroups' performance in math and ELA noted in this research.

The relationship between the total per pupil revenue and student subgroups based on race and economics was only significant in the racial subgroup when considering student achievement gaps in Math. A significant small, negative correlation ($r = -.25$) was noted among African American students in Math and total per pupil revenue. In recent years, the Mississippi Department of Education has increased the awareness and funding support for advanced coursework in STEM related programs. The Mississippi STEM Alliance network is a network of education, business and nonprofit leaders working together to expand interest in and access to high-quality learning opportunities in science, technology, engineering and math (Mississippi STEM Alliance – An online community advancing STEM learning and opportunity in Mississippi, 2023). A greater focus on math and science programs may be related to the significant relationship found between total per pupil revenue and African American achievement gaps in Math.

The lack of medium to large significant relationships does not suggest that there is no relationship between the criterion and predictor variables. Marzano and Walter (2005) caution researchers against interpreting correlational coefficients solely based on the significant or non-significant relationships. The majority of the relationships noted in this study have coefficient strengths of small to medium. However, when considering Marzano and Walter's (2015) observation of correlation coefficients over time, the findings in this research may be viewed as evidence of important connections between funding source and types and levels of achievement gaps.

The method used in this study was a quantitative, correlational design. The dissertation research examined the relationship between the Mississippi public school per Pupil revenue by district, disaggregated by funding source (total, federal, state, local), and student academic achievement gaps within each school district based on poverty and race. A quantitative method was used because school district revenue and student academic performance data are reported in quantifiable terms. The study used data from the 2018-2019 academic year, including a population of all 139 Mississippi school districts.

The relationship between a school district per pupil revenue and student achievement gap scores for Economically Disadvantaged and African American students was examined to determine the existence of a correlation. Achievement gap scores are based on student academic assessments in grades 3-8 in Math and ELA. The degree of relationship was reviewed and reported.

Implications

Implications of the research findings are consistent with prior research on the relationship between school funding and academic performance. Putnam and Cabrera (2015) determined the 2015 MAEP funding formula was based on 1993 financial variants, which resulted in gains in horizontal equity but a regression in vertical equity. Horizontal equity is evident when all students receive the same type and quality of educational support, i.e., high quality instruction by highly qualified teachers and administrators. Whereas vertical equity ensures sufficient resources are available to children with learning deficiencies to have the ability to make educational gains at the same rate as children without learning deficiencies, i.e., English learners are provided sufficient educational tools and resources to make gains in academic achievement on par with

native English-speaking children. There is evidence in this research that federal, state, and local efforts to increase vertical equity may positively impact achievement gaps.

As noted in the literature review, Sciarra and Hunter (2015) found strong evidence that states with school funding systems concretely linked to the actual cost of delivering their academic standards to all students, including those with additional programmatic needs, realize achievement gains benefiting students and strengthening the states' civic and economic health. Money alone may not be the answer, more equitable and adequate allocation of financial inputs to schooling provides a necessary underlying condition for improving the equity and adequacy of outcomes (Baker, 2021). The reported correlational observations of this study are consistent with other studies that indicated school revenue is associated with student performance; however, be it limited (Baker, 2021; Pittman, 2017; Putnam & Cabrera, 2015; Sciarra & Hunter 2015). The results of this study indicate medium to small relationships among student achievement scores of African American/Non-African American and Economically Disadvantaged/Non-Economically Disadvantaged students and per pupil revenue, especially at the local and federal levels. Significant relationships were noted among local/federal per pupil revenue among African American/Non-African American and Economically Disadvantaged/Non-Economically Disadvantaged students.

Recommendations

School revenue should be a priority in all state supported school districts, particularly schools that serve poor minority students. Students who live in homes of lower socioeconomic backgrounds and are black and brown generally attend schools that have limited financial and human resources, specifically supports most critical to improving student achievement: high-quality instruction, qualified teachers, early education programs, and social and emotional

counseling. Mississippi educators should not focus on increasing school district revenue in isolation of providing meaningful resources designed to improve student achievement. Fully funding MAEP should be the first in a series of steps designed to not only increase revenue but also ensure resources are adequately provided based on the specific needs of children. Mississippi PreK-12 funding formula could be adjusted to target more underprivileged children based on academic and socioeconomic needs.

School administrators and teachers need to be more creative in developing educational supports designed to augment the individual needs of all Mississippi children, specifically those attending schools with large margins of achievement gaps among poor minority students.

For policymakers, the disconnect between providing revenue and inherently addressing the needs of individual children could be improved by developing community incentive programs designed to reward communities where education-focused networks are developed and implemented among school, community, and business leaders. A well-informed body of school stakeholders, supplied with an awareness of student and community needs, can work to positively influence policymakers concerning student needs. Finally, policymakers should consider updating the MAEP formula to include indicators designed to better address the needs of disadvantaged student groups not currently supported, (i.e., English Learners, student in foster care, and neglected and delinquent youth).

Rokosa (2011) recommends Congress boost funding for federal programs with a track record of bringing kids out of poverty and helping them become successful. Children living in poverty are more likely to fall behind academically, but Rokosa, suggested that by congress increasing the availability of early childhood education, or preschool, the academic lag of children living in poverty could be improved (Rokosa, 2011). The findings in this research of

significant relationships between local, state, and federal per pupil funding levels and achievements gaps across poverty and racial subgroups in ELA and Math is reflected in how these dollars specifically target student reading needs through district-funded instruction coaches, state-funded early learning collaboratives, and federally funded government programs like Title I.

Limitations

The research is limited in several areas. According to Hinkle et al. (2003), correlational studies are designed to illustrate the relationship between two variables. The inability to assume causality in the correlation limits the researcher's in determining if increased spending (regardless of level) reduces the achievement gap.

The need to reduce the sample size created a limitation. State reporting of achievement gap scores requires a base number of students within a calculated subgroup Mississippi Department of Education (2019a). The researcher removed 18 school districts because they did not have more than 10 non-Economically Disadvantaged students, and 52 districts were removed because they did not have more than 10 non-African American students. These districts tend to have the highest needs and low achievement; yet, they do not have sufficient economic or racial diversity to calculate an achievement gap.

This research was conducted in a specific population of school districts in Mississippi, which has a unique context of racial and economic conditions. Thus, the findings may not be generalizable to other states.

District resource allocation may vary regarding the relationship between funding sources on spending, i.e., having federal funding support reading programs may allow a district to lower the amount of local and state funding allocated to reading programs. Federal resources are

designed to supplement state and local dollars (Peter G. Peterson Foundation, 2022); therefore, the infusion of federal funding does allow a school district to prioritize programmatic implementation decisions—many of these decisions or made at the local school level. This research did not consider funding decisions made at the individual school level.

Future Research

This study was conducted to add to the current literature related to school funding and academic achievement. The argument for increasing funding is often made independent of a full awareness of student needs. State legislative leaders generally began discussions on education funding levels with the available funds within the state budget rather than beginning with student needs in mind. Further research may help others gain a deeper understanding of the relationship between school funding and academic achievement, specifically for poor and minority children, where educational needs go well beyond classroom instructions.

Considering the focus of this research was to observe the relationship between funding and achievement gap scores across two student subgroups (African American and Economically Disadvantaged), future studies might consider observing per pupil funding to changes in achievement and achievement gaps over a specified period of time or event. Expanding the research to include other states with comparable school districts may be another way of observing the relationship of funding on student achievement gaps.

A future researcher might want to focus on other performance variables to measure the impact of funding sources in high poverty, predominately African American school districts. School attendance rates or success rates on 3rd grade reading exams might give a researcher relational information leading to stagnant or widening achievement gap scores.

Future research would consist of conducting a multiple regression analysis between Mississippi school district funding and key characteristics impacting academic performance. Exploring the relationship between school district per pupil funding and socioeconomic supports such as student counseling services and parental engagement activities may lead to a deeper understanding of the importance of educational support beyond the classroom.

Finally, additional research might be conducted on a review of PreK school funding levels across states that are similar in population, size, and ethnic makeup to determine how the relationship between state-level funding and academic achievement compares across states. Information of this nature might influence policymakers to consider the usages of policies found to be positively impacting student achievement.

Conclusion

Nationally, funding inequities continue to be large. The highest state per pupil revenue in our country is approximately \$24,269 more per student than the lowest state per pupil revenue. Mississippi ranks in the bottom six of the 52 reported state and US territories (including the District of Columbia and Puerto Rico) with the lowest per pupil revenue rate (National Center for Education Statistics 2019). This research echoes the impact of funding inequalities. K-12 education is a state responsibility; however, this research noted there was minimal to no correlation found between state per pupil revenue and achievement gaps based on poverty and race. State funding, according to the MAEP funding formula, maybe, by definition adequate, but persistent large achievement gaps indicate a lack of adequacy. This is more symptomatic of a funding equity issue.

The variations in student needs and characteristics create problems when discussing equity and adequacy of educational funding. This problem exists primarily due to the difficulty

in measuring adequacy and equity of funding (Augenblick, Myers, & Anderson, 1997). The cost of educating Mississippi children goes beyond an infusion of revenue and demands parents, teachers, administrators, community leaders, and policymakers to consider all aspects of student needs.

To achieve the goal of providing an adequate education to all Mississippi children, one must consider the needs of all children and how to effectively and efficiently address student needs. Educating Mississippi children is connected to the future development and growth of the state and nation. The state educational system can be no stronger than its smallest components.

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Professional Licensure

- AA (486) Licensed Administrator May 2012
- AA (436) Licensed Guidance Counselor (K-12) September 2010
- Licensed Ordained Minister April 2004

Education

Ph.D., Educational Leadership, University of Mississippi (2023)

M.S., Educational Guidance and Counseling, Jackson State University (1996)

B.S., Career and Humanities, Tougaloo College, (1994)

Research Interest

Investigations designed to improve resources needed to ensure high academic achievement of underprivileged children.

Skills

- Experienced professional presenter and facilitator
- Grant writer and reviewer
- Experience in state and federal contractual processes and procedures
- Computer literate in the following computer programs: Word, Excel, PowerPoint, Access, and Microsoft Publisher.
- Experienced with eGrants System used for submission of federal, national and community based grant proposal
- Proficient oral and written communication skills. Well-rounded interpersonal skills and great communicator.
- Skills in team building and group collaboration

Experience

Chief Program Officer (February 2017 – Current)

National Association of ESEA State Program Administrators

Serving as the primary manager of program operations for the National Association of ESEA State Program Administrators (NAESPA). Lead and coordinate committee goals and strategies in accordance with the association strategic plan. Implement and develop through collaboration

with association members and outside organizations all program related activities designed to improve academic achievement of underprivileged youth across the country. Work in collaboration with NAESPA Board of directors to ensure the National ESEA Conference is planned and implemented successfully by meeting program goals and targets while utilizing technological resources to ensure the association memberships expertise guides the overall Association work.

- Develop and implement quarterly regional meetings designed to ensure members leverage collective expertise in support of their state assigned roles and responsibilities.
- Work in collaboration with the U.S. Department of Education to communicate policies, procedures, and best practices related to federal ESEA Programs to state and local educators across the county.
- Convene monthly meetings with NAESPA Board of Directors and assigned association committees to ensure association goals and strategies are met.
- Work to ensure the National ESEA Conference sessions and programs are populated with relevant sessions designed to highlight the development and implementation of ESEA grant programs and reporting at the State and local level.
- Develop and implement recognition program honoring an individual who has made a major contribution to the field of education, while working with ESEA programs in their school, community, state, or across the nation.
- Annually develop and implement the National ESEA Distinguished Schools Program by collaborating with state and local school district officials to identify and publicly recognized successful schools utilizing federal resources to improving student academic achievement.

Institutional President (November 2019 – Current)

Mississippi Baptist Seminary and Bible College

Serving as the institutional supervisor offering direction and oversight to all institution affairs for a theological institution. Operates as Chief Operating Officer of the Seminary in all general and active management operations of the institution. Works in collaboration with a 15 member board of directors to ensure financial and educational goals are met in accordance with institutional policy and procedure.

- Managing all part-time and volunteer staff and instructors
- Primary fundraiser to ensure financial stability
- Coordinates with state officials from the institution of higher learning to ensure instructor professional credentials and institutional policies and procedures are aligned to state law.
- Collaborate with sister organizations and institutions to ensure resources are available 4 student growth.

Executive Director of Federal Programs (April 2015 – September 2016)

Mississippi Department of Education

Managed and supervised the Office of Federal Program staffing, programming, reporting and monitoring of \$245 million federal dollars across 10 distinct discretionary and competitive grants including Title I, Part A; Part C, Migrant Education Program; Title I, Part D, Neglected/Delinquent Programs Subparts I & II; Title II, Part A Improving Teacher Quality; Title III, English Language Learners and Immigrant; Title IV B, 21st Century Community Learning Centers; Title VI, Rural and Low-Income; Title X Homeless Education. Providing supervision to all staff on program implementation and evaluation:

- Manage, approve, and recommend all financial/budget request and expenditures in accordance with state and federal procurement policies and procedures.
- Standing member of Chief Academic Officer (CAO) leadership management team
- Select and maintain Federal Program Committee of Practitioners which consist of several sub committees specific to program office needs i.e. Federal Program Steering Committee, English Learners Steering Committee
- Preparation and certification of annual CSPR (Consolidated State Performance Report) data collection and certification
- Working collaboratively across agency offices to ensure seamless approach to local educational agency instructional programs, plans, and evaluations.
- Serving as a liaison between Mississippi Department of Education and United States Department of Education
- Maintaining a thorough knowledge of the Elementary Secondary Education Act, of 1965 to ensure compliance and inform agency policy decision around instruction, accountability, assessments, and educator effectiveness.
- Provide leadership to Office of Federal Programs to align all task for the support and accomplishment of the Mississippi Department of Education strategic planning and state/federal educational goals.

Interim-Director of Federal Programs (March 2014 – March 2015)

Mississippi Department of Education

Managed and supervised the Office of Federal Program staffing, programming, reporting and monitoring of \$245 million federal dollars across 10 distinct discretionary and competitive grants including Title I, Part A; Part C, Migrant Education Program; Title I, Part D, Neglected/Delinquent Programs Subparts I & II; Title II, Part A Improving Teacher Quality; Title III, English Language Learners and Immigrant; Title IV B, 21st Century Community Learning Centers; Title VI, Rural and Low-Income; Title X Homeless Education. Provided supervision to all staff on program implementation and evaluation:

- Managed, approved, and recommend all financial/budget request and expenditures in accordance with state and federal procurement policies and procedures
- Member of Chief Academic Officer (CAO) leadership management team
- Maintained the Federal Program Committee of Practitioners which consist of several sub committees specific to program office needs i.e. Federal Program Steering Committee, English Learners Steering Committee
- Certified annual CSPR (Consolidated State Performance Report) data collection and certification

Bureau Director Office of Federal Programs (January 2013 – March 2014)

Mississippi Department of Education

Provided leadership to all mid-level supervisors in the areas of instructional support and fiscal accounting/budgetary management while serving as the Assistant Director of Federal Programs; Support state-wide school improvement efforts through the development and implementation of the School Effectiveness Review Process (SERP) to enhance supports and oversight of lower-performing schools and districts, and maintained required actions to develop and implement an on-line application system. Supervised staff to ensure all ESEA Programs were implemented with fidelity and in compliance to support the most appropriate instructional supports for high-risk youth, (i.e. EL, Migrant, Homeless, Neglected, and students generally in need of academic assistance)

Office Director of Title Programs (December 2011 – January 2013)

Mississippi Department of Education

- Supervised and directed state level Title Programs. Managed six programs with a combined annual budget of 65 million dollars
- Formulated, directed, and controlled the operations of the Title Office through subordinate personnel
- Performed personnel management function by assisting upper management in overseeing all federal programs; Supervised eight direct reports and 12 indirect reports to accomplish Title Program goals

Division Director Title I, Part A (August 2005 – December 2011)

Mississippi Department of Education

- Advised all local educational agency officials on programmatic and fiduciary responsibilities as they relate to Title I, Part A and subordinate Title programs to include the American Recovery and Reinvestment Act (ARRA) of 2008; Title II, Improving Teacher Quality; Title III, English Language Learners; Title I, Part D Subparts I and II, Neglected/Delinquent Programs; and Title IV A & B, 21st Century Community Learning Centers and Safe and Drug Free School Programs;
- Developed, and conducted state level training for implementation of annual state level Consolidated Federal Programs Application (CFPA) to include the internal review and approval process

- Monitored for compliance of Title I, Part A programmatic and fiscal issues by evaluating school district financial profiles, needs assessments, program applications and conducting onsite-monitoring visits of the state's local school districts
- Knowledgeable of the United States Department of Education's (USDE) calculation process for the Title I, Part A school district allocations using federal law and interoffice excel data spreadsheet

Education Specialist, Sr. Rural & Low-Income Program (November 2003 – August 2005)
Mississippi Department of Education

Coordinated the programmatic, fiscal, and monitoring activities required to maintain services of the Rural and Low-Income Schools (Title VI) program to eligible school districts by providing training and technical support;

- Reviewed and recommended approval of Rural and Low-Income Schools (Title VI) program applications and amendments
- Organized, designed and maintained records for the Rural and Low-Income Schools (Title VI) program for the classifying, retrieving and disposing of records, applications, and correspondence

Assistant Director, Upward Bound Math & Science (September 2001 – November 2003)
Tougaloo College

Provided leadership in the development and implementation of Mississippi's first Upward Bound Math & Science proposal, resulting in five-year funding;

- Developed summer research curriculum for fifty participants;
- Supervised and initiated personnel actions such as promotions, transfers, discharge, or disciplinary measures:

Other Professional Employment

True Light Missionary Baptist Church, March 2006 – Present

- Pastor - Provide pastoral leadership and supervision through preaching; worship planning, visitation, pastoral care, counseling, and administration
- Manager church budget by providing oversight to finance committee and leadership team
- Develop and implement church Vision, Mission, Theme and plans to provide direction and guidance to parishioners

Mississippi Army National Guard, 1989 - 2000

- 2nd Lieutenant Engineer Officer (Platoon level supervisor for forty-two soldiers)

Delphi Automotives, 2000 - 2001

- Production Supervisor (general department supervisor for twelve member team)

Tougaloo College, 1996 - 2000

- Assistant Director, Educational Talent Search

Recognition

- President, National Association of State Title I Directors (NASTID), January 2015

- Vice-President, National Association of State Title I Directors (NASTID), January 2013
- State Leadership Award, Presented by the National Association Federal Education Program (NAFEPA) March 2013
- Mississippi Alternate Path to Quality School Leadership (MAPQSL), May 2012
- Board Member of the National State Title I Directors Association (NASTID), July 2011
- Member of the National State Title I Directors Association (NASTID), June 2005
- Member of the National Association Federal Education Program (NAFEPA) May 2007
- 1st Vice-President Jackson District Association of Baptist Churches, June 2007

Accomplishments

- Maintain institutional conditional accreditation, *June 2022*
- Initiated MEC Educational Solutions, LLC, *September 2016*
- National Member of Negotiated Rule Making Committee for Every Student Succeeds Act (ESSA), US Department of Education, *March 2016*
- Initiated and implemented Office of Federal Program (OFP) Highlights and OFP University as primary communication and training tools for school district federal program directors/key stakeholders, *March 2014*
- Implemented a new Regional Service model designed to centralize district support into one common thread across the Office of Federal Programs
- President, National Association of State Title I Directors (NASTID), *February 2015*
- Implemented on-line application system for ESEA and IDEA Programs at cost of \$984,000.00 over a five-year period, *February 2015*
- Development and implementation of SERP (School Effectiveness Review Process); new initiative designed to provide oversight and support to low-performing schools receiving Title I, Part A funds, *February 2014*
- Maintain Office of Federal Program primary operations while experiencing 50% staff reduction by streamlining processes and reassigning staff duties *March 2014*
- Earned 48 credit hours toward the doctoral degree in Educational Leadership while maintaining family responsibilities, full-time job, and Pastoral duties, *January 2013*

References

Available upon request

Presentations

- *January 2015*, “**OFP News You Can Use**” Session designed to offer an update on mid-year program initiatives for all federal grants administered through the OFP.

- *January 2015, “**Program Planning and School Effectiveness: What does this really mean?**”* Presented session to Federal Program Directors, Business Managers, Principals, Instructional Coaches, and Student Support Services Personnel to discuss the importance of measuring the effectiveness of activities supported by federal and state dollars and their impact on student achievement. \
- *October 2014, “**Using Student Achievement Data to Support Instructional Decision Making**”* New directors training for school district federal program directors with less than three years of service in their current capacity. Session offered an understanding of how to collect data from various sources, provided models for reviewing data and offered key problem solving steps that may be addressed through data usage. Offered deep discuss of school-wide planning and the role of leadership in using data.
- *August 2014, “**Grants Management 101,**”* Sessions offered 21st Community Learning Center and Homeless Education grantees an overview focused on gaining an understanding on the legal background of grant administration. The session addressed determining allowable costs, sub-grantee vs. contract, supplement not supplant, federal cost principles, financial management and procurement procedures.
- *March 2010, “**Private School Services,**”* Facilitated training for school district federal program directors and private school administrators. Training was conducted via webinar to aid participants in their ability to implement, monitor and evaluate Title I programs for eligible children attending private schools.
- *September 2009, “**Use of Title I Part A ARRA Funds,**”* Training session for Superintendents, Federal Program Directors and district personnel affiliated with the Title I program. Provided school officials across the State of Mississippi on proper usage and Title I Part A, ARRA funds.
- *July 2009, “**Title Part A ARRA Wavier Guidance,**”* Developed and presented information on the major components of the ARRA wavier Guidance.
- *June 2009, “**Consultation and Third Party Providers,**”* Training designed for school district Federal Program Directors and covered federal law, programmatic procedures, state policy, evaluation procedures, and resources used to develop and maintain effective Title I Programs in Private Schools across the State.
- *February 2008, “**Private School Services and Conducting Comprehensive Needs Assessments,**”* Facilitated training for school district federal program directors. Training focused on allowable Title I

services provided by school districts to local Title I eligible private school children.

- *August 2007, “**Designing and Implementing School wide Programs.**”* Conducted training session during Mississippi Association of Federal Program Director (MAFEPD) conference. Training designed to enable school principals and their staff to effectively develop Schoolwide plans.
- *May 2007, “**Consolidated Federal Programs Application (CFPA) Training.**”* Training targeted the “new” Consolidated Federal Programs Application. Designed to inform school district personnel about changes and additions to the SY2007-08 CFPA completion and submission process.