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**Albuquerque Public Schools v. Southwestern Regional
School Districts: How Does Spending and Student
Performance Stack Up?**

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June, 2020

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Abstract

The main goal of this report is to identify differences in spending patterns, funding mechanisms and revenue streams, teacher certification policies, and performance outcomes between Albuquerque Public Schools (APS) and other school districts of similar size in the region and to evaluate the relationship between spending and performance. A 2018 court ruling found New Mexico's school systems in violation of students rights to a sufficient education, and New Mexico lawmakers have responded by suggesting increased spending for education across the state. This research will seek to evaluate the effectiveness of this response by drawing comparisons between similarly sized school districts and identifying how Albuquerque students perform relative to their out-of-state counterparts.

I. Introduction

Public education is often seen as the backbone of the economy and society at large, as the quality of public education in America greatly affects the opportunities of future generations. The debate about educational quality has focused largely on how much states and local educational agencies spend on K-12 education. In New Mexico, a state with one of the lowest student performance levels in the country, the state legislature has increased the education budget in recent years in hopes of improving student outcomes. However, there is more to the picture than overall funding amounts.

In 1966, the then U.S. Department of Health, Education, and Welfare sought to gather more information on education inequities since the enactment of the 1964 Civil Rights Act. In fact, such information was required by section 402 of the Act. The Education Department commissioned James Coleman, a sociologist and researcher from Johns Hopkins, to conduct the two-year long study. The result was a massive, nearly 800 page document that outlined the discrepancies in educational opportunities within the American education system. Coleman also took his research a step further and analyzed the effects of teachers, funding, and physical infrastructure of school buildings on student outcomes.¹

This study has come to be known as “the Coleman Report” and laid the foundation for a robust field of empirical analysis on educational opportunity and student outcomes, which had not been studied at length before. One component of this study was the focus on using empirical evidence on educational outcomes to inform public policy. One surprising conclusion from the Coleman report found that “variation in school resources (as measured by per-pupil spending and

¹ Elizabeth Evitts Dickson, “Coleman Report Set the Standard for the Study of Public Education,” *Johns Hopkins Magazine*, Johns Hopkins University, Winter 2016.

student-to-teacher ratios) [were] unrelated to variation in student achievement on standardized tests.”² This unexpected result led to an increase in research about the relationship between public education funding and student outcomes.

This report will seek to build on existing research about education funding and student performance by identifying comparably-sized Southwestern school districts and evaluating any differences in funding mechanisms, revenue and expenditure categories, and overall spending amounts. This information will be compared to a variety of performance proxies to assess whether or not a relationship exists between funding and student performance.

II. Results of Literature Review

A review of existing research on the factors that influence student success reveals that teachers, revenue sources and expenditure categories, and funding for low-income students are among the most important funding-related variables that impact student performance. Research suggests that “among school-related factors, teachers matter most [w]hen it comes to student performance on reading and math tests,” in particular.³ Generally, teacher salaries are a school district’s largest expense and higher teacher salaries attract more experienced and generally more qualified teachers. Furthermore, studies have found that teachers have a steep learning curve during the first few years of teaching and reach their peak-effectiveness after 5 years on the job.⁴

Existing literature also discusses the impact of policy and funding mechanisms on local educational entities. One report notes that “states and districts share the cost of funding education on paper. But state governments have much greater power to influence the distribution of funds across school districts, by setting policies that may affect both the state and local contributions to public education.”⁵ One of the primary policy tools used to determine funding levels across school districts are education funding formulas, which seek to determine the share of state and local contributions towards education budgets. States may also implement policies that level tax rates across districts to ensure equity for the taxpayer. Conversely, they may implement policies that ensure equitable access to resources for all students, which may entail providing more resources to economically or socially disadvantaged students, regardless of the district they live

² Kirabo Jackson, Rucker C Johnson, and Claudia Persico, “Boosting Educational Attainment and Adult Earnings,” *Education Next*, (2015) 69-76.

³ Isaac M. Opper, “Teachers Matter: Understanding Teachers’ Impact on Student Achievement,” Santa Monica, CA: *RAND Corporation* (2019).

⁴ Helen F. Ladd, “Value-Added Modeling of Teacher Credentials: Policy Implications,” 2008.

⁵ *ibid*

in. Each state may have a different definition of equitability and thus may structure their funding delivery methods accordingly.⁶

The literature identifies two primary streams of state funding-- base, or foundation, funding and categorical funding. Base funding is the broad category that includes operational, capital, and administrative costs. Local districts have the most discretion over these funds. Categorical funds, on the other hand, are reserved for specific groups or programs, fulfilling directed and narrow policy objectives. States rely on each of these categories to varying degrees. While individual district's have less flexibility using categorical funds, this allows lawmakers a means to accomplish state-wide objectives in municipalities. However, heavy reliance on categorical funds can hinder the ability of districts to serve the unique needs of their students as they see fit.⁷

Base funding can be delivered in several types of ways-- Foundation Aid, Guaranteed Tax Base, and Centralized Funding. In the Foundation Aid funding model, states establish minimum per-pupil spending requirements and then determine each districts' ability to pay this amount, generally according to property taxes. The state makes up for the difference in funding amounts for districts that are unable to come up with the minimum amount. Under the Guaranteed Tax Base model, local districts are incentivized to spend more, because they essentially get a "match" in funding from the state for increases in property tax revenues that go towards education. Oftentimes, this model is used in conjunction with the Foundation Aid model. The last broad funding model is the Centralized Funding model, in which states set a single property tax rate across all districts and guarantee equal per-pupil funding. Each of these three models offers varying degrees of coerciveness, incentives, and flexibility for local school districts to raise education funds.⁸

While conducting the literature review, the importance of federal-level education policy also became apparent. Specifically, the literature discusses the impact of legislation such as the Elementary and Secondary Education Act (ESEA), part of which reserves federal funds for low income students. Some argue that the implementation of such funding does not actually accomplish the intended goal of reaching low-income students, however. Title I of the ESEA requires schools to offer comparable education in high and low-poverty areas in order to receive Title I funding. However, federal law prohibits schools from comparing actual spending amounts for Title I and non-Title I schools. So, schools can, for example, prove that they provide the same

⁶ Kristin Blagg and Matthew M. Chingos, "Making Sense of State School Funding Policy," *Urban Institute*, November, 2017.

⁷ Capinpin, Fatima, Gasparian, Hovanes, Perry, Nicholas and Smith, Joanna. "Categorical Funds: The Intersection of School Finance and Governance," *Center for American Progress*. November 18, 2013.

⁸ Blagg and Chingos, "Making Sense." Urban, 2017.

number of teachers to a high and a low poverty school, thus satisfying the comparability requirement. However, reporting on the level of experience and salaries of these teachers is not required. This is called the “comparability loophole.”⁹ A more comprehensive discussion of federal level education policies can be found later on in this report.

III. Methodology & Limitations

A. Methodology

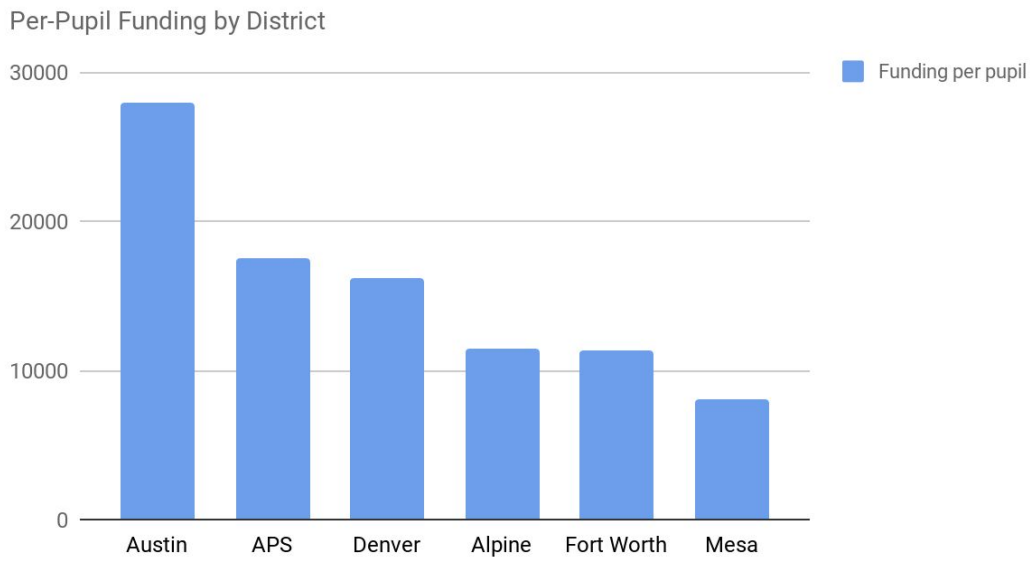
To evaluate the relationship between district spending and student performance, I first conducted a literature review identifying various budget-related factors that may impact student performance. As noted above, more important than overall funding amounts for school districts is the source and distribution of funds. Further, teachers are arguably the most important school-related factor that impacts student performance and their salaries are generally the largest expenditure in a district’s budget. Thus, for each school district included in this report, I identify overall budget amounts for the most recent fiscal year that data was available, revenue sources, and major expenditure categories. Additionally, I have identified teacher licencing standards and qualifications in each of the five states to evaluate any differences in how teachers gain and retain licensures in each state.

Next, I identified five school districts in four Southwestern states to compare to Albuquerque Public Schools (APS). I selected districts in Texas (Austin Independent School District and Fort Worth Independent School District), Colorado (Denver Public Schools), Utah (Alpine School District), and Arizona (Mesa Unified School District) that are of similar size to APS and, when possible, of similar demographic breakdown. You can find the demographics of each school district in Table 1 below. School district size was the most important factor because economies of scale makes larger districts more cost efficient and thus, I wanted to ensure that all districts in the report were similarly sized to allow for a fair comparison across districts. For each district, I calculated the per-pupil funding amount by dividing the *total* district expenditures by the number of students in the district. This is an important detail, as many studies that report per-pupil spending calculate this figure by dividing only *operational* expenditures by the total number of students. I use total expenditures as opposed to operational expenditures because, in theory, 100% of a school district’s expenditures should go towards helping students, directly or indirectly. Per-pupil expenditures for each district can be found in Figure 1 below.

⁹ Brown, Catherine, Hanna, Robert and Marchitello, Max, “Comparable but Unequal: School Funding Disparities,” *Center for American Progress*. May 18, 2015.

In order to compare student performance across school districts, I also identified various measures of successful schooling by using national and state assessment scores and graduation rates as proxy measures for student performance. For national and state assessments, I have

Figure 1



reported the percentage of students who scored at or above proficient. I used both national and state level assessments only because the national assessment did not report scores for two of the school districts I identified (Mesa and Alpine). Figures 3 and 4, found in the Findings section below, show the percentage of students who scored at or above proficiency on state or national assessments.

After gathering budget, teacher certification, and student performance data and reporting the various funding mechanisms and teacher certification requirements for each state/district, I compare the findings. For the purposes of this report, my goal is to identify variations in revenues and expenditures as well as differences in the teacher licensure procedures across states and districts and to compare these findings to student performance proxies. Note that this report does not seek to identify *why* performance varies across districts or prescribe recommendations on how APS can improve their student performance.

Table 1

	APS	Fort Worth ISD¹⁰	Austin ISD¹¹	Denver*¹²	Alpine¹³	Mesa¹⁴
Race						
Native American/ Alaska Native	5.5%	0.1%	0.1%	0.7%	-	4.1%
Asian	2.3%	1.8%	4.2%	3.2%	1%	1.2%
Black	3.2%	22.7%	7.3%	13.2%	1%	4.8%
Hispanic	65.8%	62.4%	56.7%	53.8%	12%	44.6%
White	22.9%	11.3%	28.5%	24.7%	81%	41.8%
English Learners	16.6%	30.3%	29.2%	36.3%	4%	26%
Free/Reduced Price Lunch Eligible	68.2%	77.7% (Economically disadvantaged)	53.4% (Economically disadvantaged)	65%	22% (Economically disadvantaged)	-

* Data from October, 2018

B. Limitations

This report has three main limitations; data limitations, lack of statistical rigor, and a narrow scope. As mentioned above, I gathered both national and state assessment data because national data was not available for all six districts identified in this report. The national assessment, called the National Assessment of Educational Progress (NAEP), tests a representative sample of students on a variety of subjects each year and reports data on that sample, broken down by state, district, grade level, and subject. The most recent NAEP sample included students from APS, Austin, Fort Worth, and Denver, and thus those student populations are recorded here.

¹⁰ “Snapshot 2018: District Detail,” Texas Education Agency, 2018, <https://rptsvr1.tea.texas.gov/cgi/sas/broker> (Accessed January, 2020).

¹¹ “Snapshot 2018: District Detail,” Texas Education Agency, 2018, <https://rptsvr1.tea.texas.gov/cgi/sas/broker> (Accessed January, 2020).

¹² “Facts & Figures: DPS by the Numbers.” Denver Public Schools, 2020, <https://www.dpsk12.org/about/facts-figures/#1568924617466-87cf7a59-262d> (Accessed March, 2020).

¹³ “Alpine District: Profile.” Utah State Board of Education, <https://utahschoolgrades.schools.utah.gov/home/DistrictProfile/?DistrictID=122> (Accessed April, 2020)

¹⁴ Mesa Public Schools, “Mesa Public Schools Demographics,” October, 2019.

However, Mesa school district in Arizona and Alpine school district in Utah were not included in the NAEP sample and thus I have reported results from state-level assessments for those two districts. Simply put, this means that students from APS, Fort Worth, Austin, and Denver all took the same test while students from Mesa and Alpine took different tests. Thus, results from Mesa and Alpine are not totally comparable to results from the other districts. Further, NAEP scores are recorded by grades 4 and 8 as indicated by Figure 4 and Figure 5 below. However, Alpine only reported the percentage of students that scored at proficiency for grades 3, 5, and 8. Thus the percentages shown in Figures 4 and 5 for Alpine are the 5th and 8th grade averages on the Utah state assessment, respectively.

In addition to limitations in assessment data, Mesa school district did not have publicly available budget information for FY2020. Thus, all budget figures reported for Mesa are from FY2019 or FY2018, depending on what data were available. Given the budget and assessment challenges described above, the majority of this report will focus on drawing comparisons between APS, Fort Worth, Austin, and Denver.

The final two data limitations are lack of statistical rigor and a narrow scope. As described in the Methodology section, any conclusions made in this report are based on a qualitative literature review and publicly available funding and budget information. This report does not attempt to use rigorous statistical analysis to evaluate the relationship between spending and student performance. Rather, the goal is to identify if a relationship seems to exist between funding and performance at face value. Additionally, this report focuses only on factors impacted by or related to a school district's budget that can impact student performance. There are certainly other important variables, such as parental involvement or student attendance rates, that also impact how students perform on assessments that are not evaluated here.

IV. State Profiles

A. New Mexico

1. Funding Mechanism and Budget information

New Mexico uses a foundation formula funding mechanism to allocate funds to districts, meaning that each district has broad discretion over how to spend the funds allocated to it by the state. State contributions to district-level operational funds come primarily from the General Fund and the Current School Fund, including revenue from taxes, oil and gas, interest, license fees, and land income. These funds are then appropriated to three different categories, with the State Equalization Guarantee (SEG) making up for most of the distribution.¹⁵ The Albuquerque

¹⁵New Mexico Public Education Department, "How New Mexico Public Schools are Funded," Prepared by Hanna Skandera and Paul Aguilar, April, 2016.

Public Schools (APS) district also gets additional revenue from local property taxes and federal grants, although over 70% of APSs revenues come from state sources.¹⁶

The SEG determines the amount of operational funds that are guaranteed to each school district from the state. This formula multiplies a predetermined cost differential by “student full-time equivalency in a particular grade or a program full-time equivalency,” which generates a number of units (a proxy for students). These units are added together with program-specific units (such as units generated by at-risk factors) and the total of all units is multiplied by the unit value for that given school year. This funding formula was developed in 1974 with the purpose of ensuring the equitable distribution of state funds across districts.¹⁷

APS, New Mexico’s largest school district, spends more than half of its operational budget on individual schools; including salaries for teachers, teaching assistants, librarians, secretaries, and custodians, as well as other administrative costs of running schools. The next largest expense in the operational fund of APSs budget is special education, which pays for teacher salaries, counselors, and therapists. Less than 10% of the budget is allocated to other school departments such as fine arts, ROTC and nurses and school counselors. The remaining 17% of the operational budget for APS goes towards district-wide costs, as opposed to individual schools within the district.¹⁸

As mentioned above, about half of the most recent budget for APS is operational funds, which come primarily from the SEG. The next largest spending category is the capital fund, which makes up about 20% of the total budget. The capital fund finances construction projects, infrastructure improvement, and facility maintenance and equipment. It is worth noting that APS has been scrutinized by citizen groups and the media for spending large sums of its budget on new construction projects in recent years.¹⁹

APS is broken down even further into seven districts and four “learning zones,” which each include about four high-schools and their corresponding feeder middle and elementary schools, broken down by geographic area.²⁰ Once APS determines its total budget, money is allocated to individual schools depending on the number of enrolled students and the number of low-income students, primarily determined by eligibility for free or reduced price lunches.

¹⁶Albuquerque Public Schools, “Budget Executive Summary Fiscal Year 2020,” July, 2019.

¹⁷NMPED, “How New Mexico Schools,” Skandera and Aguilar, 2016.

¹⁸ APS, “Budget Fiscal Year 2020,” 2019.

¹⁹ Paul Gessing, “A Few Data Points on Albuquerque Public School’s Tax Hike.” *Errors of Enchantment* (blog), November 14, 2018, <https://errorsofenchancement.com/a-few-data-points-on-albuquerque-public-schools-tax-hike/>

²⁰ “Welcome to the LZ!” Albuquerque Public Schools, <https://www.aps.edu/academics/academic-master-plan/welcome-to-the-lz> (Accessed January, 2020).

Larger schools generally get less money per student than smaller schools because economies of scale make it cheaper to operate a larger school. Each school within APS also has the opportunity to apply for additional federal grants or utilize local funding sources to generate further revenue.²¹

2. Teacher Certification Requirements

All teachers in New Mexico are required to have at least a Bachelor's degree and must complete a teacher preparation program as well as the appropriate assessments given the grade level(s) that they intend to teach. There are two main routes for initial licensing-- a traditional route for those who received their undergraduate degree in Education and an alternative route for those who did not.²² Teachers with a Bachelor's degree in Education generally have completed a substantial amount of classroom hours as part of their degree requirements, and thus the alternative route ensures that those who did not receive their undergraduate degree in Education have a similar level of teaching experience as those that did.

The New Mexico teacher licensing system is broken down into three tiers. Teachers can advance through the tiers in a variety of ways, but are only required to advance to a level II license after five years. Once they have reached level II, there are no state requirements to advance further. Additionally, while individual schools are required to provide opportunities for professional development/continuing education, there are no state requirements for teachers to demonstrate that they have completed such courses to renew their license or advance to the next tier.²³

B. Texas

1. Funding Mechanism and Budget Information

Texas also uses a foundation formula funding mechanism to allocate state funds to individual school districts. Texas state law requires that each district must have at least \$4,765 per student in their budget.²⁴ Less than 50% of all education revenue comes from state sources, which is a much greater proportion than New Mexico where over 80% of revenue comes from the state.²⁵ In Texas, school districts levy property taxes to raise revenue for educational expenditures. To calculate the state contribution, local tax revenues are accounted for first, and

²¹ Jon Swedien, "Counting the Dollars at APS High Schools," *Albuquerque Journal*, January 19, 2015.

²² "Licensure," New Mexico Public Education Department, May 12, 2020, <https://webnew.ped.state.nm.us/bureaus/licensure/> (Accessed April, 2020)

²³ Sandy Beery (Director of Connections Academy Charter School, Educational Consultant, and former Public School Teacher, Principal, and Assistant Principal), in discussion with the author, December 12, 2019.

²⁴ "K-12 Funding: State Profile- Texas," Education Commission of the States, August, 2019, <https://c0arw235.caspio.com/dp/b7f930001672ccc677794efbbec3?state=Texas> (Accessed December, 2019).

²⁵ Blagg and Chingos, "Making Sense." Urban, 2017.

then the state makes up the difference to reach the \$4,765 per student required by statute that the district was unable to raise through tax revenue.

The formula used to calculate the state contribution is called the Foundation School Program (FSP). Each school district is required to participate in the FSP and to raise local tax revenue for their schools before they can receive state funding. The FSP is broken down into two “tiers” of entitlement, tier I determined by student characteristics within each district and tier II determined by the tax rate that each district sets in relation to the minimum rate established by law. The state determines how much state-level funding each district will receive for each tier after accounting for the districts’ contribution. Therefore, state funding amounts are determined primarily by student enrollment, property values, and property tax rates.²⁶ The FSP has been criticized by Texans for decades, resulting in several lawsuits alleging that the formula is burdensome to taxpayers, particularly with the rise of property values, and does not offer an equitable distribution of funds across districts.²⁷

Fort Worth Independent School District (FWISD) uses three different funding sources for all expenditures. General funds are financed through the FSP and cover instructional costs such as teacher salaries. Special revenue funds come from state and federal sources and fund programs for special education and low-income students. The final funding source is the debt services fund, which is collected through local property taxes and is used to fund capital improvement projects.²⁸ 40% of FWISDs revenues come from state sources while most revenue, 52%, comes from local sources. As for expenditures, two of FWISDs largest spending categories are instruction costs, which make up 50% of their overall budget and capital costs, which make up an additional 10% of the overall budgeted expenditures.

Austin Independent School District (AISD) also uses three different funding sources for expenditures. A general fund, which is required to maintain at least 20% of operating funds as established by the AISD Board of Trustees, pays for things like teacher salaries, campus landscaping, and other costs that help a school run on a day-to-day basis. The food service fund pays for the district’s food services, and the debt service fund pays for bond debts. As with FWISD, AISD also spends about 50% of its total budget on instruction costs. Most of their revenue comes from property taxes, but because of a state “recapture” policy that caps amounts of revenue collected by a district, AISD redistributes some of those funds back to the state.

²⁶ Texas Comptroller, “Texas School Finance: Doing The Math On The State’s Biggest Expenditure,” United States, Texas: Office of Texas Comptroller of Public Accounts, 2019.

²⁷ Aliyya Swaby, “Texas' school finance system is unpopular and complex. Here's how it works.” *Texas Tribune*, February 15, 2019.

²⁸ Texas Education Agency, “Finance Summary 2017-18,” *Fort Worth ISD*, <https://txschools.gov/districts/220905/finance?v=2.0.0>

Overall, only 4% of AISDs revenue comes from state sources, while the majority, 89%, of revenue comes from local sources.²⁹

2. Teacher Certification Requirements

Texas has a five-part teacher certification process for new classroom teachers. All teachers must hold a bachelor's degree, complete a state-approved Educator Preparation Program, pass state certification exams, and complete an application and background check. Texas also offers an alternative certification route that allows participants to teach while fulfilling certification requirements.³⁰ Teachers who meet all certification requirements receive a standard certification, which must be renewed every 5 years.

Texas teachers who wish to renew their standard certifications must complete a minimum of 150 hours of continuing professional education (CPE) credits hours. CPE course providers must be approved by the Texas Education Agency (TEA) and a minimum of 80% of CPE hours must be directly related to the particular certificate being renewed (including subject area knowledge). Teachers are not required to submit proof of completed CPE credits as part of their certification renewal, though they must sign an affidavit stating that they have completed all CPE hours and have all supporting documentation.³¹

C. Colorado

1. Funding Mechanism and Budget Information

Colorado also utilizes a foundation formula funding mechanism where each district must obtain at least \$6,951.53 per student before any weighted contributions for low income or disabled student populations.³² Local sources, such as property taxes, must make up as much of this funding as possible, with the state making up the difference. Across the state, more than 50% of education funding comes from local sources.³³ This is about the same composition of funding sources as is found in Texas. The 'Total Program,' which is the term used to describe the total amount of money each school district receives, is determined by the total number of students and

²⁹ Austin Independent School District, "Austin Independent School District Official Budget," FY2020 Official Budget Report, June 17, 2019.

³⁰ "Becoming a Classroom Teacher in Texas," Texas Education Agency, <https://tea.texas.gov/texas-educators/certification/initial-certification/becoming-a-classroom-teacher-in-texas> (Accessed April, 2020)

³¹ "Continuing Professional Education Information," Texas Education Agency, <https://tea.texas.gov/texas-educators/preparation-and-continuing-education/continuing-professional-education-cpe> (Accessed April, 2020)

³² Education Commission of the States. "K-12 Funding: State Profile- Colorado." *Individual State Profile*. Last Modified August, 2019. <https://c0arw235.caspio.com/dp/b7f930001672ccc677794efbbec3?state=Colorado>

³³ Blagg and Chingos, "Making Sense." Urban, 2017.

adjusted based on cost of living, size of the school district, and an additional factor called the budget stabilization factor. The budget stabilization factor was added to the funding formula in 2010 as a tool to reduce the state's contribution to the Total Program due to pressures on the state budget from the 2008 recession.

Colorado's Public School Finance Act permits two types of revenue streams for local school districts to come up with their share of the Total Program; property and vehicle registration taxes. Property taxes account for the majority of the local share across the state, making up more than 30% of the Total Program. Each district is required to impose property taxes to raise revenue for public schools, but the state caps the total tax rate at 0.27%. Vehicle registration taxes are distributed to school districts by the counties and each district's allocation is determined based on the actual amount received in the prior year. If district's are unable to fund their Total Program using local revenue sources, the state provides monthly disbursements to make up the difference. Districts may also receive additional funding from federal and local sources, such as grants or bonds.³⁴

Denver Public Schools (DPS), Colorado's largest school district, receives about 60% of its total revenue from property taxes, including tax overrides and bond redemptions approved by Denver voters via ballot referendums. An additional 20% of DPS funding comes from the state, as local sources are not sufficient to fund the minimum Total Program required by law. The remaining 20% of revenue for DPS comes from federal sources, such as Title I funds for low-income student populations, and various local grants. DPS allocates funds to schools within the district using a weighted formula that allocates a base amount to each school based on the number of students, with additional funds for schools with ESL or free- or reduced-price lunch eligible students. Once funds are allocated to each school, school leadership has discretion over how to distribute the funds at the school level.³⁵

2. Teacher Certification Requirements

Colorado has three levels of licensing-- the initial license, the professional license, and the masters certification. The initial license requires a Bachelor's degree, completion of an approved teacher preparation program, demonstration of content-area knowledge either through an assessment or completion of a degree, and student teaching experience. The initial license is issued for three years and must be renewed if the license holder doesn't continue on to a professional license. A professional license requires completion of an initial license and a state-approved induction program and is issued for five years before renewal or advancement.

³⁴ Colorado Department of Education, "Understanding Colorado School Finance and Categorical Program Funding," October, 2018.

³⁵ Denver Public Schools, "Citizen's Guide to Understanding the DPS Budget: 2019-20," 2019.

The final level of licensing, the master certificate, requires a professional license and a National Board for Professional Teaching Standards certificate.³⁶

Each level of licensing requires renewal at various year intervals. For renewal, teachers must complete and submit proof of at least 90 hours of professional development or continuing education units (CEUs). CEU activities are not pre-approved by the state, but rather are approved on an ad-hoc basis as teachers submit their renewal applications. The entity holding the CEU program must provide a certificate or letter of completion to participants including the name of the program and number of hours earned.

D. Arizona

1. Funding Mechanism and Budget Information

Arizona also utilizes a foundation formula funding mechanism and requires a minimum expenditure amount of \$4,150.43 per student.³⁷ The state provides this base funding amount, increasing the amount for schools with students with disabilities, english language learners, or depending on grade level, as higher grade levels cost more to operate than lower grade levels. School districts can raise additional revenue through bond referendums or federal grant programs.³⁸

Arizona's equalization funding formula is made up of three main components. The first component is the base funding amount, part of which is established by statute and identifies the minimum per-pupil spending that must be met by each district. This amount is multiplied by the weighted student count and serves as the basis for the funding formula. The formula establishes an expenditure limit, but districts can increase that limit by including certain line items in their budgets, such as transportation, for example. The second component of the funding formula is a per-pupil amount for soft and unrestricted capital expenditures. The final component of the formula is qualifying levies multiplied by property tax values.³⁹

In FY2018, just over 30% of total revenue for Mesa Unified School District, Arizona's largest district, came from property taxes. An additional 46% of revenues for the district are direct state aid. The remaining 24% of revenues come from various federal, county, and state

³⁶ "General Requirements for Licenses & Authorizations," Colorado Department of Education, July 1, 2019, <http://cde.state.co.us/cdeprof/credentialtypes> (Accessed April, 2020).

³⁷ Education Commission of the States, "K-12 Funding: State Profile- Arizona," Individual State Profile, August, 2019, <https://c0arw235.caspio.com/dp/b7f930001672ccc677794efbbec3?state=Arizona> (Accessed November, 2019).

³⁸ Ricardo Cano and Rau-Beard Alia, "Arizona School Funding: How it Works," *azcentral*, November 13, 2017.

³⁹ State of Arizona Department of Education, "The Equalization Formula for Funding School Districts and Charters in the State of Arizona," Prepared by Awwad, Yousef, December 20, 2010.

sources and grant programs. It is worth noting here that the state of Arizona does not require school districts to provide a revenue report, so the level of detail regarding revenue sources is very high-level.⁴⁰ As for expenditures, Mesa spends about 56% of its total costs on instruction, while the next largest spending category is plant operations, on which the district spends about 10% of its total expenditures.⁴¹

2. Teacher Certification Requirements

Those who wish to teach K-12 in Arizona must hold a Bachelor's degree, obtain a clearance through the Arizona Department of Public Safety, have completed either two years of teaching experience, a teacher preparation program, or hold an out-of-state teaching certificate, pass a professional knowledge exam, and pass a subject knowledge exam. The types of exams vary depending on the grade level that one wishes to teach (K-8, 5-9, or 6-12). Each grade level certificate is called a Standard certificate and is valid for 12 years before requiring renewal. The Arizona Department of Education also offers an alternative teaching certificate, valid for two years, which allows participants to teach while fulfilling Standard certificate requirements.⁴²

To renew a Standard teaching certificate, teachers must provide documentation of 15 hours of professional development activities per year that the certificate is active. For a Standard professional certificate that is valid for 12 years, this is 180 professional development hours. Professional development activities include academic courses related to education, school or district-sponsored teacher training, and education-related research. A full list of approved activities and the required supporting documentation are provided on the certificate renewal application.⁴³

E. Utah

1. Funding Mechanism and Budget Information

Like New Mexico, Texas, Arizona, and Colorado, Utah also uses a foundation formula funding mechanism. Each district is guaranteed a certain amount of funding based on how many weighted pupil units (WPU) they have. In general, one student equals one WPU. However, certain students or whole districts receive additional units for disabled students or if the district is

⁴⁰ Mesa Unified School District, Financial Services Department, "Comprehensive Annual Financial Report," June, 2018.

⁴¹ Arizona Auditor General, "Arizona School District Spending- Fiscal Year 2019: Mesa Unified School District," March, 2020.

⁴² "Educator Certification: Certificates," Arizona Department of Education, 2020, <https://www.azed.gov/educator-certification/forms-and-information/certificates/> (Accessed April, 2020).

⁴³ "Educator Certification: AzEDCert Educator Portal – Electronic Certification for Arizona Educators," Arizona Department of Education, 2020, <https://www.azed.gov/educator-certification/azedcert/> (Accessed April, 2020)

particularly small and thus more expensive to run, for example.⁴⁴ For FY2020, the value of one weighted pupil unit is \$3,532.⁴⁵ Each district is required to levy taxes to fund as much of their guaranteed funding amount as possible with the state making up the difference. Income taxes make up the majority of state funds for public education.

Alpine School District's (ASD) budget is broken down into 10 different funds, the three largest funds being the General fund, the Debt Service fund, and the Capital Outlay fund. The General fund is the district's primary operating fund, financing all activities related to students, including instruction and support services. Teacher salaries and benefits make up nearly 90% of expenditures from the General fund and supplies and materials make up another 7%. ASD acquires about 37% of its total governmental fund revenue from local sources, primarily property taxes, and nearly 60% from state sources.

2. Teacher Certification Requirements

Utah has implemented several changes to teacher licensing standards and processes that were effective as of January 2020. These changes were made in an effort to simplify and standardize the licensing requirements across the various licensing tracks. These new changes allow for two main pathways to becoming a teacher in Utah-- completion of a university educator preparation program or a local education agency (LEA) alternate pathway to licensure. The main requirements are completion of a bachelor's degree, a state-sponsored background check, content-knowledge assessment, and Board of Education learning modules. There are two levels of licenses, an Associate license and a Professional Educator license.

To renew an active teaching license in Utah, educators must earn the minimum amount of professional development "points" by attending professional development activities approved by state rule. Additionally, teachers must complete a student data privacy course, a youth suicide prevention training, a background check, and an ethics review. The completed application must be signed by a school administrator and submitted to the Utah State Board of Education.

V. Findings

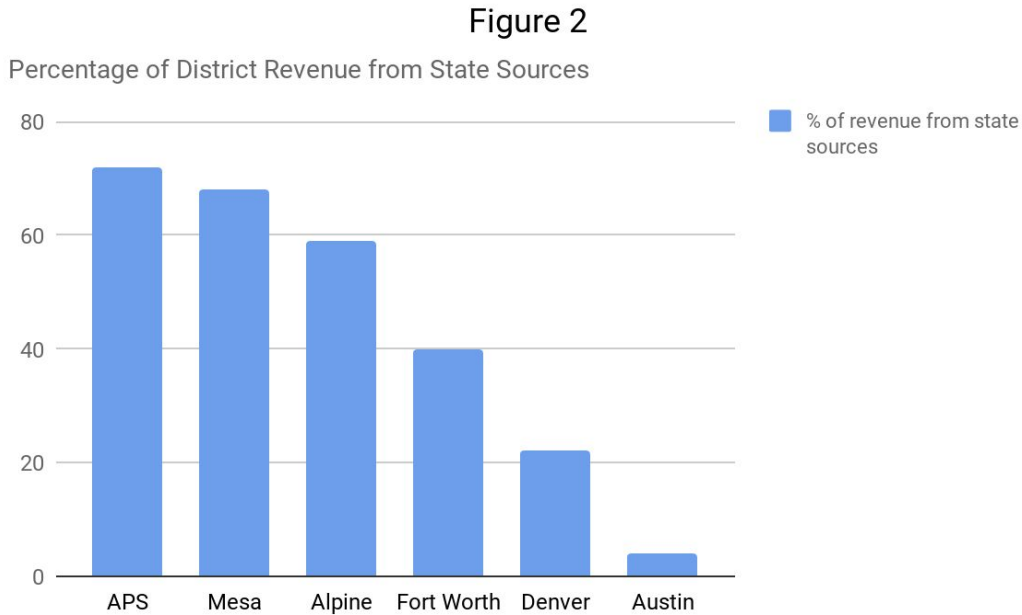
All Five States Use the Same Funding Mechanism, Similar Funding Formulas

All five states included in this report used a foundation funding formula to finance their public schools. Further, all states used a similar funding formula that allocates a base funding

⁴⁴ Katy England, "School districts rely on legislature, property taxes to pay teacher salaries," *Daily Herald*, September 5, 2018, https://www.heraldextra.com/news/local/education/precollegiate/school-districts-rely-on-legislature-property-taxes-to-pay-teacher/article_aa3da6da-8f6e-51f1-aa6c-328ccf16892b.html (Accessed March, 2020)

⁴⁵ Utah State Legislature, Senate Bill 4, "Public Education Budget Adjustments," 2019.

amount per student with additional funding amounts for certain disadvantaged student populations. However, New Mexico is the only state that does not have a pre-established dollar amount guaranteed to each student by state law included in the funding formula. Further, all states besides New Mexico and Arizona require that school districts levy property taxes to make up as much of the guaranteed funding amount as possible before any state contributions. Unsurprisingly then, APS and Mesa have the largest proportion of district revenues coming from state sources, as can be seen in Figure 2 below.



In addition to having a different revenue structure than most other districts, APS also spends nearly twice the amount on capital costs as other districts. Most of the other districts in this report spend about 10% of their total budget on capital costs, including building acquisition and new construction of educational facilities. APS's FY2020 budget includes 20% of total expenditures for capital costs.

APS Outspends Most Regional Counterparts, Student Performance Doesn't Keep Up

As depicted in Figure 1 on page 6 of this report, APS outspends all but one of the six school districts evaluated in this report. In FY2020, APS spent \$17,571 per student, while the lowest spending district spent only \$11,411 per student. Notably, APS also has the lowest teacher to student ratio of all six districts, with an average class size of 10.7 students. Table 2 below highlights overall budget figures and other relevant information for each district, including teacher to student ratios for each district.

	2019-2020 Budget	# of Students	\$ Per Pupil	# of Instructional Staff	Average class size
APS⁴⁶	\$1.475 Billion	83,987	\$17,571	7,855	10.7
Fort Worth ISD	\$976 Million ⁴⁷	84,510 ⁴⁸	\$11,555	5,831 ⁴⁹	14.5
Austin⁵⁰ ISD	\$2.1 Billion	78,400	\$28,017	5,720	13.7
Denver⁵¹	\$1.5 Billion	93,356 ⁵²	\$16,185	4,780 ⁵³	19.5 ⁵⁴
Alpine⁵⁵	\$923 Million	80,851	\$11,417	3,425	23.6
Mesa⁵⁶	\$967 Million	84,781 ⁵⁷	\$11,411	4,155	20.4

Despite spending more per student than most other districts and having more instructional staff per student than any other district, however, APS students do not appear to perform better than their regional counterparts. In fact, of the four districts included in this report that were included as part of the NAEP sample, APS students were the second lowest performing district on both 4th and 8th grade assessments. Further, APS has the second lowest graduation rates of all six districts. See Figures 3, 4, and 5 below for student test scores for 4th and 8th grade and for graduation rates broken down by district.

⁴⁶ “About APS,” Albuquerque Public Schools, <https://www.aps.edu/about-us> (Accessed February, 2020).

⁴⁷ Fort Worth Independent School District Board of Education, “Adopted Budget for Fort Worth ISD,” June 25, 2019.

⁴⁸ “Student Enrollment Reports,” Texas Education Agency, February 10, 2020, <https://rptsvr1.tea.texas.gov/adhocrpt/adste.html> (Accessed January, 2020).

⁴⁹ Fort Worth Independent School District, “2018-2019 Fort Worth ISD Annual Report,” September 5, 2019.

⁵⁰ Austin Independent School District, “FY2020 Austin Independent School District Official Budget,” June 17, 2019.

⁵¹ DPS, “Citizens Guide,” 2019.

⁵² “Facts & Figures: DPS by the Numbers,” Denver Public Schools, <https://www.dpsk12.org/about/facts-figures/#1568924617466-87cf7a59-262d> (Accessed March, 2020).

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Alpine School District, “Comprehensive Annual Budget Report: July 1, 2019-June 30, 2020,” August 13, 2019.

⁵⁶ Arizona Auditor General, “Arizona School District Spending,” March, 2020.

⁵⁷ Mesa Unified School District, Department of Research & Evaluation, “Mesa Public Schools Demographics,” February, 2018.

Figure 3

4th Grade NAEP or State Assessment Scores (% of students at or above proficiency)

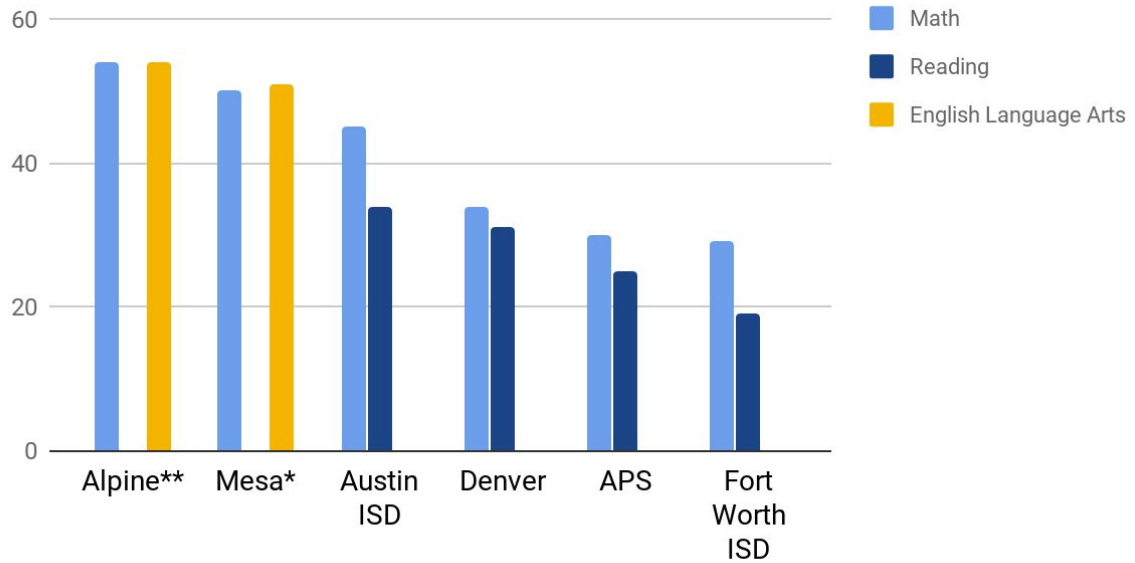


Figure 4

8th Grade NAEP or State Assessment Scores (% of students at or above proficiency)

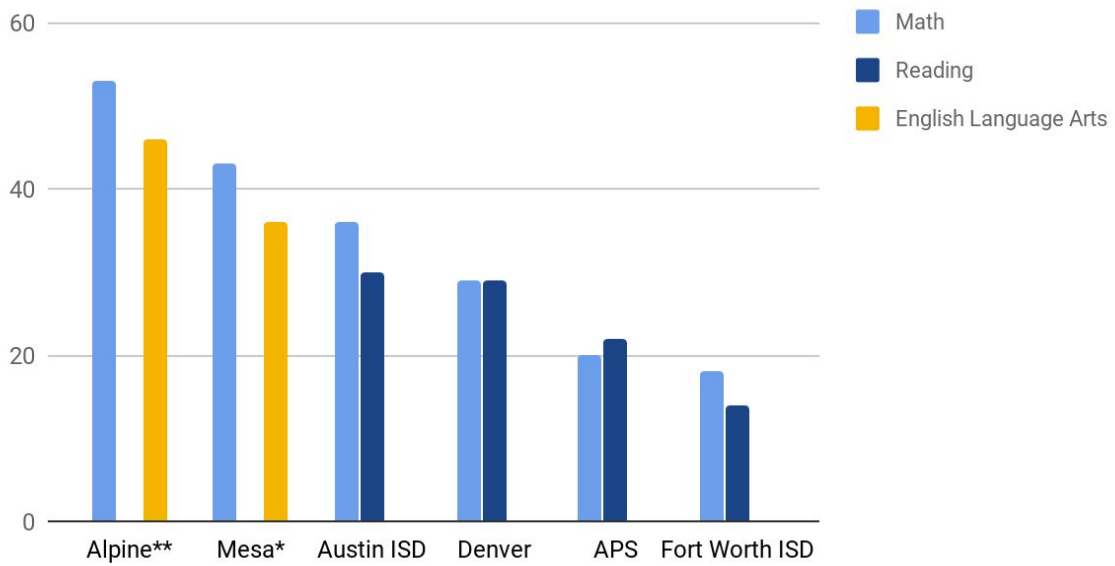
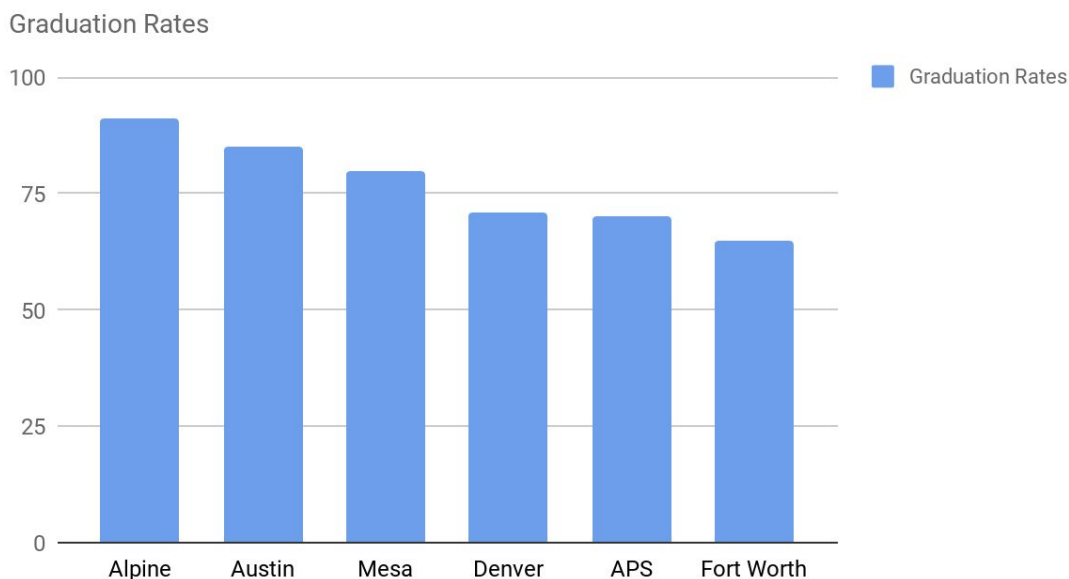


Figure 5



Teacher Certification Requirements are Similar Across States, New Mexico is Only State that Doesn't Require Professional Development Documentation

Teacher licensing and renewal requirements and processes can be used to measure the quality of teachers in each state by evaluating the rigor of the process and the various standards that teachers must meet to acquire and retain their certification. All five states have similar requirements for initial teacher licensing. Namely, all states require K-12 teachers to have a bachelor's degree and to pass a series of assessments to prove mastery of content area knowledge and teaching skills. New Mexico is unique in that it is the only state that does not require teachers to submit proof of professional development activities to renew or advance licensure. New Mexico requires its teachers to submit a professional development dossier describing their teaching activities and professional growth. No other state has such a requirement.

The findings detailed above identify several important differences between New Mexico and APS and other Southwestern states and school districts with regard to public education. First, New Mexico does not require an established minimum dollar amount of funding per student and does not require districts to come up with local sources of revenue before contributing state funds. Further, APS has the highest proportion of revenue coming from state sources than any other school district identified here. New Mexico also spends more than its regional counterparts on capital costs. Second, despite outspending all but one other school district, APS scores among the lowest in both student performance proxy measures. Lastly, New Mexico is the only state

that does not require their teachers to prove completion of continuing education or professional development activities to retain licensure.

VI. Conclusion

Education has long been viewed as a fundamental right in the United States. Beginning in the 1960's, research on the relationship between education funding and quality of education came to the forefront of education policy. In addition to spurring a nation-wide increase in education finance reform, the focus on educational quality has also led to many lawsuits against local educational agencies alleging that they are not providing a sufficient education to students. New Mexico offers one such example, with a recent lawsuit prompting government action to remedy the state's poor student performance levels. The primary response by the New Mexico state legislature has been to increase funding levels, primarily for the state's largest school district, APS. With this increase, APS is now one of the highest funded school districts of its size in the region.

This report sought to identify if a relationship exists between funding and student performance in large Southwestern school districts in order to evaluate the effectiveness of New Mexico lawmakers' response to claims of insufficient educational quality. After collecting budget information, teacher certification requirements, and student performance data for 5 similarly-sized school districts in 4 Southwestern states, I compared the findings for each district to APS. I found that APS spends more per-student than most of its regional counterparts, receives the highest amount of state funds as a proportion of overall revenue, spends nearly twice as much as other districts on capital costs, and has more teachers-per-student than any other district.

Despite these promising findings, APS reports some of the lowest student test scores and graduation rates of all districts evaluated here. This report does not seek to prescribe solutions or identify specific reasons why APS' performance levels do not keep up with their peer districts in surrounding states. However, these findings may help New Mexico lawmakers make more informed decisions about education policy in New Mexico by raising awareness of funding amounts, revenue streams, and policies in surrounding states.

Appendix I

Federal Education Legislation

A. Elementary and Secondary Education Act

In order to best understand the effect of state and local policies on education funding and student performance, it is important to also understand the federal backdrop against which those policies were adopted. The current predominant piece of federal education legislation is the Every Student Succeeds Act (ESSA), formerly known as the No Child Left Behind Act (NCLB). However, before NCLB was the Elementary and Secondary Education Act (ESEA). Passed in 1965, the ESEA dramatically increased the federal government's role in public education. Prior to the passage of the ESEA, the federal government had little to do with primary and secondary education. Most of the federal education department's efforts were spent on data collection to assist states in establishing school systems and on grants and scholarships for higher education.⁵⁸ The passage of the Civil Rights Act spurred a series of legislation aimed at leveling the playing field for historically marginalized communities. One such piece of legislation was the ESEA, which primarily expanded federal investment in K-12 education.

Of particular importance and still in effect today is Title I of the Act, which sought to create more equitable access to a quality education by allocating federal dollars to districts and individuals schools that have high percentages of low-income families. However, the increased investment in education did not come without strings attached. The ESEA had several iterations over the next several decades and dramatically increased regulations and educational standards for state educational agencies. This left local school districts with the responsibility of implementing Title I and ensuring that the funds were properly allocated amongst the schools that the Act was intended to benefit.⁵⁹ About 20 years after the original passage of the ESEA lawmakers wanted a more comprehensive approach to federal education programs and thus passed a reauthorization of ESEA, called the Improving America's Schools Act (IASA) in 1994. The IASA sought to integrate federal programs into existing efforts in local school districts and added further regulations for teacher training standards, student achievement, and parental involvement.⁶⁰

⁵⁸ "The Federal Role in Education," U.S. Department of Education, May 25, 2017, <https://www2.ed.gov/about/overview/fed/role.html> (Accessed February, 2020).

⁵⁹ "Elementary and Secondary Education Act of 1965," VCU Libraries Social Welfare History Project, <https://socialwelfare.library.vcu.edu/programs/education/elementary-and-secondary-education-act-of-1965/> (Accessed February, 2020).

⁶⁰ "The Improving America's Schools Act of 1994: Reauthorization of the Elementary and Secondary Education Act," U.S. Department of Education, September, 1995, <https://www2.ed.gov/offices/OESE/archives/legislation/ESEA/brochure/iasa-bro.html> (Accessed February, 2020).

B. No Child Left Behind

The next reauthorization of the ESEA was called the No Child Left Behind Act (NCLB) and it expanded the standardization of student achievement that had been established under IASA. NCLB required each state to administer annual tests to measure student proficiency in reading and math, with each state deciding how to define “proficiency.” The law also established various targets regarding improvement and levels of student proficiency, implementing additional requirements if the targets were not met. For example, the law required that states permit students to enroll in a better performing school in their district if their current school didn’t meet its annual performance targets. Additionally, schools that missed performance targets for multiple years in a row were required to offer tutoring programs. NCLB also set standards for teachers hired using Title I funds, requiring all Title I teachers to be “highly qualified.”⁶¹ The law also laid out several other reporting and administrative requirements to be fulfilled by local education agencies (LEA).

The main intent behind NCLB was to implement accountability measures so that the federal government could track student progress and school effectiveness across states. Regardless of original intent, the legacy of NCLB was an unprecedented amount of federal influence in state educational decisions. This law not only decreased local autonomy over decisions regarding student performance metrics, but increased the need for administrative processes to track and manage all the new requirements. This act also put new responsibility on LEAs to account for the progress and performance of each school in their district, including implementation and monitoring issues.

Critics of NCLB claim that the law was underfunded, not following through on statutory promises to assist LEAs in accomplishing the major bill requirements. Many states thus abated specific bill requirements and the lofty proficiency requirements established in the law went largely unmet. Further, the law continued without reauthorization for over a decade, while many states complained of burdensome testing requirements leading educators to ‘teach to the test’ instead of focusing on actual student achievement and improvement. Other opponents of the bill argue that standardized tests led to a culture of cheating and lying on reporting mechanisms to avoid punitive measures outlined in NCLB.⁶²

C. Every Student Succeeds Act

Noting the shortcomings of the NCLB and following through on his campaign promise of reforming the education system, the Every Student Succeeds Act (ESSA) was signed into law in 2015 by President Obama. The ESSA shares many of the same goals as the NCLB, but shifts

⁶¹ “No Child Left Behind: An Overview,” Education Week, April 10, 2015, <https://www.edweek.org/ew/section/multimedia/no-child-left-behind-overview-definition-summary.html> (Accessed February, 2020).

⁶² “No Child Left Behind,” Education Week, April 2015.

responsibility for establishing standards for academic achievement from the federal government to states. Additionally, the Act encourages states to innovate with the content of their tests by providing funding for pilot programs in seven states to administer tests that focus more on personalized student learning than meeting predetermined academic standards. The ESSA also sought to focus on more than just student academic success, implementing measures for factors such as school quality and student readiness. Perhaps the biggest difference between the NCLB and the ESSA is the eradication of punishments for schools that fail to meet performance targets. The ESSA instead requires these schools to come up with an action plan to improve performance and offers additional financial assistance to struggling schools.⁶³

The legacy of each of these pieces of legislation can be seen in today's education system. Of particular relevance, Title I of the ESEA and testing requirements established by the NCLB are still in effect today. Many school districts across the country, including each one identified in this report, take advantage of federal Title I funds. Additionally, the state and national assessments used in this report to evaluate student performance are a result of requirements established in NCLB. Thus, while state and local government entities have primary jurisdiction over education policies, federal-level policy can also influence local decision making.

⁶³ “The Difference Between the Every Student Succeeds Act and No Child Left Behind,” Understood, <https://www.understood.org/en/school-learning/your-childs-rights/basics-about-childs-rights/the-difference-between-the-every-student-succeeds-act-and-no-child-left-behind> (Accessed February, 2020).