



Response to New Hampshire Commission to Study School Funding Request for Proposals:

Research and Analysis on Behalf of the Commission to Study School Funding

Prepared By

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Executive Summary

Augenblick, Palaich and Associates, Inc. (APA), joined by WestEd, is pleased to respond to New Hampshire's Commission to Study School Funding request for proposals for research and analysis. Having two expert organizations working together as the study team allows for enhanced staffing capacity and the ability to run concurrent sub-teams to ensure deliverable milestones set in the RFP are met at the required pace. APA and WestEd have partnered on multiple similar projects and work collaboratively, maximizing the unique skill sets of each organization and its staff, to ensure project success and timeliness.

Collectively, the study team has decades of unparalleled experience working across the country to help policymakers improve school finance systems, with a deep understanding of the associated complexities, the ability to create digestible and actionable findings for policymakers, and the ability to support the development and implementation of revised or new funding formulas that are both more equitable and more adequate. Further, the study team has specific experience providing support to state commissions. Most recently, APA provided research and analysis to the Maryland Commission on Innovation and Excellence in Education (Kirwan Commission) and both organizations are currently supporting the Nevada Commission on School Funding.

The study team understands this type of project is different than simply undertaking a traditional school finance study. The study team members must act as thought partners with Commission members to ensure that the research they bring forward best fits the needs of the Commission and is agile in its response as those needs evolve. Further, the tight timeline requires a quick turnaround of research, so the study team needs to be well versed in the state's school finance system and be experts in the field. Finally, the study team must be able to work collaboratively with the Commission and Carsey School staff throughout the process and provide a model that allows for an interactive examination of the policy options available based on the results of the research.

Justin Silverstein will be the overall project lead and will coordinate the work of each team working to complete all proposed deliverables. Silverstein is co-CEO of APA and leads its school finance and cost modeling work. He has studied school finance across the country for over 20 years and led many statewide school finance studies. Jennifer (Lenz) Piscatelli will also contribute to the study's leadership team and be a contact for the Commission. Piscatelli has over 20 years of education policy experience and will bring the New Hampshire context to the study. She was a legislative staff member for the New Hampshire State Senate Education Committee, including supporting the Adequate Education and Education Financing Commission in 2000. She also served in the New Hampshire Governor's Office and is a proud University of New Hampshire graduate.

Jason Willis will oversee the work of WestEd. Willis oversees and guides the expansion of the WestEd's performance and accountability services, including supporting state and local education agencies to implement policies and develop financial infrastructure. Further information about the study team's qualifications is available in the "Staffing and Organization" section of this proposal.

The study team's work will include:

- **Ongoing Commission Engagement and Development of Adequacy Definition-** The study team will work closely with the Commission to understand its priorities in order to ensure the research is aligned with the Commission's goals. This includes meeting with the Commission to provide monthly progress reports and present research plans. The study team believes this task is where identification and agreement on a clear, comprehensive definition of an "adequate education" will be accomplished.
- **Task 1: Understanding Disparities**— This first task includes examining fiscal, resource, and performance disparities in New Hampshire. The study team will examine how these disparities relate to various local characteristics such as wealth of the community, student demographics (student need), district size, and any other variations by region of the state. The study team will utilize strong data visualization, including GIS mapping, to allow the Commission to clearly see and understand where disparities exist. (RFP Deliverable 1)
- **Task 2: Approaches to Addressing Disparities** —The study team does not believe there is the time or budget to complete a full-scale adequacy study. Trying to do so would likely lead to an underpowered, poorly implemented study. What is available is a wealth of information on the approaches states are using within existing finance systems to address the disparities commonly seen. These disparities include differences in student need and differences in the wealth and resource capacity of districts to address student needs. The study team will examine how each state addresses disparities in their finance systems with an emphasis on: 1) the most recent changes that have been implemented as part of student-centric finance reforms; and 2) states with similar governance structures to New Hampshire. Additionally, the study team will examine existing research, including adequacy study results from other states, that can shed light on the methods created in other jurisdictions to address disparities in state funding systems. (RFP Deliverable 2)
- **Task 3: Modeling** —The study team believes that creating effective policy requires the ability to test and understand the potential impacts of various alternatives to meeting policy goals. The study team will work with Commission members to identify several alternatives for each of the key components of a new finance system identified in Task 2, guided by the work of Task 1. Utilizing these component alternatives, the study team will create an interactive model that will allow Commission members to understand how implementing different combinations of components in a new system impact equity. The model will be available to all members in the common file format of Excel. (Deliverable 4)
- **Task 4: Recommendations**—Based upon the options developed in collaboration with the Commission and modeled in Task 3, the study team will work to finalize a set of options to bring forward from this phase of the work. (RFP Deliverable 3)
- **Task 5: Final Report** — Once the study team has worked with the Commission to model and identify a recommended set of policy options, a final report will be produced to summarize the study team's work. The report will include sections for each of the tasks with detailed

descriptions of the methods used, the resulting data, and how the information was used in the modeling of alternatives. (RFP Deliverable 5)

Each task will be the result of research activities, including collaborating with the Commission, conducting literature reviews and national policy scans, reviewing existing data, analyzing and visualizing data, developing an interactive model, and reporting. Research activities by task are summarized in the table below and will be discussed in depth in the “Detailed Plan” section of this proposal.

Study Activities by Task

Activities	Collaboration with Commission	Literature Review	Review of Existing Data	Data Analysis/ Visualization	Modeling/ Reporting
Ongoing Collaboration with Commission, Development of Adequacy Definition	x	x	x		
Task 1: Understanding Disparities	x	x	x	x	x
Task 2: Approaches to Addressing Disparities	x	x			x
Task 3: Modeling	x			x	x
Task 4: Recommendations	x	x	x	x	x
Task 5: Final Reporting					x

In order to complete these tasks within the timeline, the study team plans to begin all tasks at the start of the project and run them concurrently, with the ability for adjustments to be made as feedback from the Commission arises. The study team proposes a modified timeline using the targets set forth in the RFP. All deliverables will be completed by the targeted RFP date, but developing the adequacy definition and modeling are proposed to take place earlier so they may inform the Commission’s work throughout. A timeline of activities over the four-month period is available in the “Detailed Plan” and a more detailed timeline through the end of the contract period is in the “Deliverables and Timeline” section.

The draft final report will be delivered no later than August 31, 2020. The study team understands that it may be asked to submit additional analyses after submission of the final report through the conclusion of the contract on December 1, 2020. It is also likely that a number of additional research steps could help further the results of the work and the study team will work with Commission members and Carsey School staff to identify needed next steps.

We look forward to working with the New Hampshire Commission to Study School Funding, if selected. If you have any further questions, please contact Justin Silverstein at 720-227-0075 or jrs@apaconsulting.net.

Sincerely,



Justin Silverstein, Co-CEO

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Staffing and Organization

Basic Proposal Information

Augenblick, Palaich and Associates, Inc. (APA) is the primary vendor for study, in partnership with subcontractor WestEd. APA is a nationally recognized, Denver-based consulting firm, with over 35 years of experience conducting school finance studies. Justin Silverstein, APA CEO, will be the contact person for the study. He can be reached at (303) 227-0075 or jrs@apaconsulting.net. APA and WestEd both have extensive experience providing research and analysis support to state-level and/or legislative committees on school finance issues. Recent similar projects include:

- **Nevada** – In 2018, APA completed an adequacy and finance study for the state. Since then, APA and WestEd have provided technical support to the state and its Commission on School Funding as it works to implement a new formula. APA provides policy options and models the impact of those options for consideration by the Commission. WestEd provides support on policy implementation, including finance and accountability reporting.
- **Maryland** – APA has a long history working with Maryland, including conducting an early adequacy study and assisting the Thornton Commission in 2002 as it developed the state’s current finance system. More recently, APA completed a finance study for the state in 2016, and supported the work of the Commission on Innovation & Excellence in Education (Kirwan Commission). This included regular participation in Commission meetings, supporting legislative staff, and modeling policy options under consideration. The Kirwan Commission’s recommendations to revise the finance system were approved by the legislature this spring. WestEd, supported by APA, also recently completed an in-depth study of special education resources for the state.
- **Utah** – WestEd is currently leading a state finance study in Utah, with APA supporting as a subcontractor. The study includes reviewing the components of the current system, assessing the equity of the system, and making recommendations for possible changes.
- **Arkansas**- This year, APA is leading a study team, which includes WestEd, to examine a wide-ranging set of school finance issues in Arkansas on behalf of the House and Senate Committees of Education.

Organizational Background and Capacity

The study team assembled for this project brings together well over 100 combined years of school finance experience. It includes two leading national school finance organizations, Augenblick, Palaich and Associates, Inc. (APA) and WestEd, that have unparalleled experience working across the country to help policymakers improve school finance systems. Each has a deep understanding of the complexities associated with school finance systems, the ability to create digestible and actionable findings for policymakers, and the ability to support the development and implementation of revised or new funding formulas that are both more equitable and more adequate. Working together allows for enhanced staffing capacity and the ability to run concurrent sub-teams to ensure milestones are met at the required pace. APA and WestEd have partnered on multiple similar projects and work collaboratively,

maximizing the unique skill sets of each organization and its staff, to ensure project success and timeliness.

Augenblick, Palaich and Associates, Inc.

APA began working with states to examine school finance issues 37 years ago and has worked in all fifty states. APA is a nationally recognized authority on school finance and addressing resource disparities.

APA has a deep working knowledge of cost-based methodology, equity analyses, and modeling, and regularly investigates regional cost differences, labor markets, and compensation systems. With its extensive experience, APA understands how to design a finance study so that the results are most useful in the policymaking arena and how to work with policymakers to implement the results. All findings presented by the study team will include the context needed for making implementation decisions in the future.

In addition to the relevant projects described previously, APA has not only conducted adequacy studies in more than 20 states but has also designed school finance systems that were enacted in New Hampshire, Kentucky, Louisiana, Colorado, Mississippi, Ohio, Maryland, Kansas, New Jersey, and Pennsylvania. In several states, those systems are still operating today. APA has the proven capacity to communicate and work effectively with all levels of local, state and national government agencies. APA has also analyzed, or is analyzing, the level of resources school districts need to fulfill state student performance expectations in 23 other states and the District of Columbia: Alabama, Colorado, Connecticut, Delaware, Illinois, Indiana, Kansas, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, and Washington DC. The firm has analyzed the equity of school finance systems in most of the states listed above and others, including Kentucky, Louisiana, and Texas.

APA provides research and technical assistance to states and school districts as a subcontractor with the Regional Education Laboratory (REL) Central through the U.S. Department of Education's Institute of Education Sciences (IES). APA also has extensive experience in evaluating education programs and initiatives, conducting policy scans and reviews, estimating the costs of quality preschool programs, conducting return on investment analyses, and designing and costing educator compensation plans.

WestEd

WestEd is a preeminent educational research, development, and service organization with over 700 employees and 14 offices nationwide. WestEd has been a leader in moving research into practice by conducting research and development (R&D) programs, projects, and evaluations; by providing training and technical assistance; and by working with policymakers and practitioners at state and local levels to carry out large-scale school improvement and innovative change efforts. The agency's mission is to promote excellence, achieve equity, and improve learning for children, youth, and adults. In developing and applying the best available resources toward these goals, WestEd has built solid working relationships with education and community organizations at all levels, playing key roles in facilitating the efforts of others and in initiating important new improvement ventures. In 2016,

WestEd celebrated a half-century milestone, marking 50 years of improving learning and healthy development for children, youth, and adults from cradle to career.

WestEd offers a number of services to educational agencies across the country. The Performance and Accountability service line helps to build systematic coherence within educational organizations across the U.S. to ensure the opportunity for equitable outcomes for all students. The team specializes in matters of state and school district finance and resource allocation having worked with states such as California, Kansas, Florida, and North Carolina to review and identify appropriate levels of spending to achieve desired student outcomes. Further, the agency has worked with dozens of school districts, both urban and rural, to assess their resource allocation patterns as a means to maximize the effectiveness of those dollars to drive student outcomes.

Personnel

The APA and WestEd project team members have the qualifications and expertise to complete this study. Brief bios for key staff members follow; resumes for key staff can be found in Appendix C in the Other Information section at the end of the proposal. Key APA staff members include:

Justin Silverstein will be the overall project lead and will coordinate the work of the three teams working to complete all proposed deliverables. Silverstein is co-CEO of APA and leads its school finance and cost modeling work. He has led school finance studies for numerous states including Alabama, Colorado, New Jersey, Nevada, and Wyoming. Silverstein has helped create and refine two of the most popular adequacy study methodologies, the successful schools and professional judgment approaches. He prides himself on his ability to work with policymakers to create a transparent and understandable set of recommendations for a state. He believes that the key to project management is communication. This begins by ensuring that APA clearly understands the client's needs and expectations for the project, along with establishing a clear timeline. Throughout the project, frequent check-ins with the client ensure that any concerns that arise can be addressed and adjustments can be made to the scope of work to best serve the client's needs. Silverstein holds a Bachelor's in Accounting from the University of Colorado, Boulder.

Jennifer (Lenz) Piscatelli, APA Associate, will contribute to the leadership team, be a contact for the Commission, and lead the disparity analysis. A former New Hampshire resident, she also brings New Hampshire context and knowledge of the NH education policy landscape to the project team. Piscatelli joined APA in 2012 and has over 20 years of education policy experience. Her school finance experience began in the late 1990s, as legislative staff to the New Hampshire State Senate Education Committee, including serving as Senate staff to Adequate Education and Education Financing Commission in 2000. As a member of APA's school finance team, she helps lead professional judgment panels and contributes to costing out studies. She has participated in APA school finance projects in Arkansas, Alabama, Alaska, Nevada, Michigan, Maryland, Utah and Wyoming.

Prior to joining APA, Jennifer spent over 8 years as a researcher and policy analyst at the Education Commission of the States, and served in the NH Governor's Office and Senate, as noted above. Jennifer holds a Master's degree in Political Science with an emphasis in Public Policy from the

University of Colorado, Denver, and Bachelor's degrees in Political Science and Women's Studies from the University of New Hampshire.

Dr. Mark Fermanich, APA Senior Associate, joined APA in 2013. Mark will oversee model creation for the project and support the disparity analysis. Mark's primary focus at APA is on state and local education issues, including education finance, education reform, educator accountability and compensation, and the return on investment of educational resources. He has worked on school finance equity and adequacy studies in a number of states. Mark's recent projects with APA include state school finance analyses for the states of Arkansas, Nevada, Wyoming, Michigan, Maryland, and Utah. Mark served as the national technical assistance advisor for fiscal and programmatic sustainability and performance-based compensation design for the U.S. Department of Education's Teacher Incentive Fund grant program. He has published research articles in the *Journal of Education Finance*, *The Elementary School Journal*, *Peabody Journal of Education*, and other education policy journals.

Prior to joining APA, Fermanich worked in education policy research for the Center for Education Policy Analysis at the University of Colorado Denver and the Consortium for Policy Research in Education (CPRE) at the University of Wisconsin-Madison, served as a professor of education policy at Oregon State University in Corvallis, Oregon, and Sonoma State University in Rohnert Park, California, and as an education policy analyst for the Minnesota State Senate. He also served as an administrator working on policy and budget initiatives for the Minneapolis and St. Paul school districts. Fermanich received his Ph.D. in Educational Leadership and Policy Analysis from the University of Wisconsin-Madison. He holds a Master's in Public Policy and Administration from the La Follette School of Public Affairs at the University of Wisconsin-Madison and a Bachelor's in Political Science from the University of Wisconsin-Oshkosh.

Amanda Brown, APA Senior Associate, will lead the analysis of approaches to addressing disparities. Ms. Brown leads APA's professional judgement (PJ) work and has implemented the approach in numerous states across the country. She understands the need to tailor each PJ approach to the specific demographic and educational standards of a state. Amanda's primary focus areas are school finance and evaluation, both at the state and local level. Brown has worked at the state level on large-scale adequacy studies; completed evaluations of state funding mechanisms to improve allocation of resources; conducted studies to understand the resource implications of specific education reform legislation and implementation of instructional best practices; and examined the impact of local/state assessment efforts and the Common Core State Standards. She led APA's recent study of Wyoming's education finance system and has contributed to all of APA's state-level school finance studies since 2005. She also has led the ongoing support for Nevada's Commission on School Funding.

At the local level, Brown has assisted local school districts to develop school-based budgeting formulas; conducted salary competitiveness studies; addressed issues of declining enrollment; and determined the efficiency of facilities usage. Additionally, she has led and participated in program evaluations of

early childhood education and literacy for a number of nonprofit organizations. She holds a Master's degree in Public Administration from the University of Colorado, Denver.

Michaela Tonking, APA Associate, will support the work across all the tasks. At APA, she primarily focuses on school finance formulas and analysis of educational resources and has supported adequacy studies in Maryland and Michigan, and is currently providing analytical support to studies in Arkansas and Utah. Previously, she worked as a research assistant for Rhode Island's School Funding Formula Working Group, as a school finance expert for Nevada Educate Now, and has worked for Deloitte in the audit department. Michaela holds a Master's degree in Urban Education Policy from Brown University and a Master's and Bachelor's degree in Accounting from the University of Colorado, Boulder, and is currently in final stages of obtaining her CPA.

Key staff members from WestEd include:

Jason Willis is the Director of Strategy & Performance at WestEd. In this role, he oversees and guides the expansion of the agency's performance and accountability services, which include support to state and local education agencies to implement policies and financial infrastructure to support school system reform. Performance and accountability services provide this support through capacity building, facilitation, and analysis of financial data including the effective use of resources. He has also worked with numerous states and urban school systems to reimagine their funding distribution and regulatory systems to increase the effective use of resources.

Prior to joining WestEd, Willis served as Assistant Superintendent for the San Jose Unified School District. He also served as the Chief Financial Officer/Chief Business Official for the Stockton Unified School District and Budget Director for the Oakland Unified School District. Willis began his career as an Assistant Product Manager with Standard & Poor's, analyzing the debt and financial profiles of public institutions.

Judith Ennis is a Senior Engagement Manager in the Comprehensive School Assistance Program (CSAP). Ennis applies expertise and experience in the areas of organizational development, systems change, and policy analysis with an overarching focus on expanding equity and early childhood education. Ennis is a senior manager for the Strategic Resource Allocation team, a group within WestEd that specializes in school finance and systems change for district and state partners. She was a lead writer for the California's Strategic Plan for Early Childhood Education for the Preschool Development Grant (2019) and now serves as a lead of the Universal Pre-Kindergarten expansion team under the Master Plan for Early Learning and Care, a statewide initiative to expand access to early learning.

Ennis began her career in the elementary school setting before shifting to the district, state, and federal levels. Before joining WestEd, Ennis served as a manager for the Center on Great Teachers and Leaders at the American Institutes for Research. In this role, she provided policy analysis, research, and direct stakeholder engagement to states and districts across the country with a focus on recruiting and retaining excellent educators and addressing inequitable access to excellent educators in lowest performing schools. At WestEd, Ennis served as the Deputy Director of the National Center to Improve

Social Emotional Learning and School Safety. Ennis earned a master's degree at Columbia University's Teachers College in curriculum and instruction with a focus on education policy.

Raifu Durodoye Jr., WestEd research associate, is an experienced educational researcher and practitioner. His work consists of experimental and quasi-experimental evaluations of education programs, providing technical assistance to school districts and state education agencies, and conducting statewide assessments of educational finance systems. Previously Dr. Durodoye Jr. was the Title I–Part A program manager for the Delaware Department of Education. In that role, he worked to align planning and budgeting processes with school level needs assessment findings and provide data and policy guidance to district administrators. Dr. Durodoye Jr. was also tasked with instituting system level financial controls to ensure spending adhered to program guidelines and was directed to the students that needed it the most. Raifu also served in the Delaware Department of Education as a data strategist with their Educator Support Division, and as a data fellow with the Strategic Data Project at the Center for Education Policy Research.

Prior to joining a state education agency, Dr. Durodoye Jr. worked in higher education as an analyst, and senior analyst in offices of institutional research, evaluation, and assessment. He received his undergraduate degree, and master's in public administration from the University of North Texas. He received his PhD in public administration and policy from Virginia Polytechnic Institute & State University.

Lauren Outlaw is a Senior Policy Specialist and a member of the Learning Innovations and Comprehensive School Assistance Program teams at WestEd. Her work includes providing targeted technical assistance to help schools improve program quality, structures, and resource allocation and efficiency; and, using her extensive background in charter school administration and strategic risk management to provide high-value implementation support of WestEd's Charter Schools Program Grant Monitoring project and the National Charter Schools Resource Center. In this role, Ms. Outlaw also translates K-12 education laws and regulations into actionable resources for schools, districts, and regional systems, and engages a broad range of stakeholders on service assessment, process design, and leadership development.

Before joining WestEd, Ms. Outlaw successfully advocated for increased school-based mental health resources for public school students in the District of Columbia and structured and negotiated the 15-year charter school renewal agreement with the DC Public Charter School Board on behalf of KIPP DC. Her expertise is grounded in federal and local charter school and choice policies; legislative analysis and legal compliance; business and process improvement strategies; and promoting school safety, positive school climates, and the effective use of restorative practices.

Patrick McClellan is a Research Assistant with the Comprehensive School Assistance Program at WestEd. Mr. McClellan contributes to research on the efficiency and equity of school finance systems. His work primarily consists of quantitative data analysis, as he prepares large public and administrative datasets for use in cost function models. Prior to joining WestEd, he conducted research on finance and real estate during the Great Recession in order to better understand the dynamics of financial crises in the

future. McClellan holds a MS in Applied Economics & Finance from the University of California, Santa Cruz.

Staff Loading Chart

As requested in the RFP, the following loading chart includes all project team members. It shows the anticipated hours by month each team member will spend on the project. Hours in the September through December timeframe are an estimate of any additional analysis or support the study team will provide to the Commission following the submission of the final report.

Table 1. Staff Loading Chart

Staff Loading Chart, Hourly Project Workload by Month					
	May	June	July	August	September - December
Justin Silverstein	40	40	40	40	16
Amanda Brown	40	32	28	20	
Mark Fermanich	30	32	30	24	
Jennifer Piscatelli	50	50	40	40	20
Michaela Tonking	40	40	40	16	
Jason Willis	12			12	10
Judy Ennis	12	12	8	8	8
Raifu Durodoye	40	30	20	20	10
Lauren Outlaw	24	20	20	16	
Patrick McClellan	30	20	10		

Detailed Plan: Description of the Project and Respondent's Approach

Overview of Study and Team Responsibilities

Having worked with a number of Commissions, the study team (APA and WestEd) understands this type of project is different than simply undertaking a traditional school finance study. Team members must act as expert advisors and thought partners with Commission members to ensure that the research they bring forward best fits the needs of the group and is agile in its response as those needs evolve. Further, the tight timeline requires a quick turnaround of research, so the study team needs to be well versed in the state's school finance system and be experts in the field. Finally, the study team must be able to work collaboratively with the Commission and Carsey School staff throughout the process and provide a model that allows for an interactive examination of the policy options available based on the results of the research.

The study team has structured its work plan based upon the five deliverable areas identified by the RFP. Additionally, an ongoing task of Commission Engagement and Development of Adequacy Definition has been added. The study tasks include:

- **Ongoing Commission Engagement and Development of Adequacy Definition-** The study team will work closely with the Commission to understand its priorities in order to ensure the research is aligned with the Commission's goals. This includes meeting with the Commission to provide monthly progress reports and present research plans. The study team believes this task is where identification and agreement on a clear, comprehensive definition of an "adequate education" will be accomplished.
- **Task 1: Understanding Disparities**— This first task includes examining fiscal, resource, and performance disparities in New Hampshire. The study team will examine how these disparities relate to various local characteristics such as wealth of the community, student demographics (student need), district size, and any other variations by region of the state. The study team will utilize strong data visualization, including GIS mapping, to allow the Commission to clearly see and understand where disparities exist. (RFP Deliverable 1)
- **Task 2: Approaches to Addressing Disparities** —The study team does not believe there is the time or budget to complete a full-scale adequacy study. Trying to do so would likely lead to an underpowered, poorly implemented study. What is available is a wealth of information on the approaches states are using within existing finance systems to address the disparities commonly seen. These disparities include differences in student need and differences in the wealth and resource capacity of districts to address student needs. The study team will examine how each state addresses disparities in their finance systems with an emphasis on: 1) the most recent changes that have been implemented as part of student-centric finance reforms; and 2) states with similar governance structures to New Hampshire. Additionally, the study team will examine existing research, including adequacy study results from other states, that can shed light on the methods created in other jurisdictions to address disparities in state funding systems. (RFP Deliverable 2)
- **Task 3: Modeling** —The study team believes that creating effective policy requires the ability to test and understand the potential impacts of various alternatives to meeting policy goals. The study team will work with Commission members to identify several alternatives for

each of the key components of a new finance system identified in Task 2, guided by the work of Task 1. Utilizing these component alternatives, the study team will create an interactive model that will allow Commission members to understand how implementing different combinations of components in a new system impact equity. The model will be available to all members in the common file format of Excel. (Deliverable 4)

- **Task 4: Recommendations**—Based upon the options developed in collaboration with the Commission and modeled in Task 3, the study team will work to finalize a set of options to bring forward from this phase of the work. (RFP Deliverable 3)
- **Task 5: Final Report** – Once the study team has worked with the Commission to model and identify a recommended set of policy options, a final report will be produced to summarize the study team’s work. The report will include sections for each of the tasks with detailed descriptions of the methods used, the resulting data, and how the information was used in the modeling of alternatives. (RFP Deliverable 5)

In order to complete these tasks within the timeline, the study team plans to begin all tasks at the start of the project and run them concurrently. Having two preeminent organizations, APA and WestEd, working together as the study team allows for enhanced staffing capacity and the ability to run concurrent sub-teams to ensure milestones are met at the required pace. APA and WestEd have partnered on multiple similar projects and have learned how to work collaboratively, maximizing the unique skill sets of each organization and its staff, to ensure project success and timeliness.

The project leaders, Justin Silverstein and Jennifer Piscatelli (APA), will coordinate the work of the Task 1, 2 and 3 teams and will lead interactions with the Commission and the Carsey School. Teams will be asked to take a broad view of the research needs for each area to ensure that a comprehensive set of data is collected/developed for the Commission’s needs and for adjustments to be made as feedback from the Commission arises. This will allow the Commission to work with study team members to tailor the research questions over the months of the study. Staff from each of the teams will be available to meet with the Commission and Carsey School staff as needed and to promptly address any questions that arise. The study team’s complete pricing structure is based upon fully loaded hourly rates for project team members, with estimates of the hourly effort required to complete each Task. Travel is included as a separate line item. Specifics on the proposed budget estimates and total can be found in the Itemized Project Budget section of the proposal.

Timeline of Activities

The study team proposes the following, modified timeline using the targets set forth in the RFP, in Table 2 below. All deliverables will be completed by the targeted RFP date, but the development of the adequacy definition and modeling are proposed to take place earlier so they may inform the Commission’s work throughout the study period.

A more detailed timeline through the end of the contract period is also included in “Deliverables and Timeline” section.

Table 2: Timeline of Study Activities, Months 1-4

Activities	Month
Ongoing Collaboration with Commission and Development of Adequacy Definition (including Monthly Progress Reports)	Months 1-4
Task 1: Understanding Disparities	Month 1
Task 2: Approaches to Addressing Disparities	Month 2
Task 3: Modeling	Month 1-4
Task 4: Recommendations	Month 3
Task 5: Final Reporting	Month 4

The study team will also work with Commission members and Carsey School staff to identify needed next steps at the conclusion of the project. With the condensed timeline, it is likely that a number of additional research steps could help further the results of the work and the study team will help to identify these steps.

Data Identification

To ensure the project's success data will need to be available as soon as possible upon contract award. The study team has identified a number of important sources of data as identified in Table 3 below. This data contains much of what the study team will need to complete its work.

Table 3: Data Identified

Data Identified	Data Source
Demographic Data	New Hampshire Department of Education Reaching Higher NH
Finance Data	New Hampshire Department of Education New Hampshire Department of Revenue Administration
Performance Data	New Hampshire Department of Education Reaching Higher NH
Staff Data	New Hampshire Department of Education Reaching Higher NH
District Wealth	New Hampshire Department of Education New Hampshire Department of Revenue Administration

Upon contract award, the team will provide an outline of any remaining data needs within a week of the project's start and will expect to have data within three weeks of project commencement to ensure a timely conclusion to the work.

Study Activities by Task

As mentioned in the introduction, the study team believes the timeline mandates that Tasks 1, 2, and 3 be conducted simultaneously and will be informed by ongoing collaboration with the Commission throughout the study period. The study will then culminate in recommendations offered under Task 4, and a final report under Task 5. This parallel approach will provide the Commission with the needed information in the timeliest manner and will ensure the full scope of work in the RFP can be completed.

This section describes each of the activities in more detail with a focus on the RFP deliverables that will be created under each task. Table 4 first summarizes the study activities by task.

Table 4: Study Activities by Task

Activities	Collaboration with Commission	Literature Review	Review of Existing Data	Data Analysis/ Visualization	Modeling/ Reporting
Ongoing Collaboration with Commission and Development of Adequacy Definition	x	x	x		
Task 1: Understanding Disparities	x	x	x	x	x
Task 2: Approaches to Addressing Disparities	x	x			x
Task 3: Modeling	x			x	x
Task 4: Recommendations	x	x	x	x	x
Task 5: Final Reporting					x

Ongoing Commission Engagement and Development of Adequacy Definition

Commission Engagement

The study team has extensive experience working with school finance and funding commissions in states across the country and understands the need for an iterative process between the consultant and New Hampshire’s Commission members. This interaction will include weekly check-in calls and project updates. This communication will allow all parties to be on the same page regarding project progress and key next steps.

Study team staff will be present remotely, at all Commission meetings, and will be available in person as for Commission meetings as needed. Staff will present monthly progress reports on Tasks 1-4, including providing detail and seeking input from Commission members to help guide the work where possible. For example, at an early meeting the data variables being reviewed in Task 1 could be presented to members. Feedback on the variables and any additional information Commission members feel is important would be collected. This will allow the study team to gain New Hampshire-specific context for the work and to align its efforts with the Commission’s needs. It is expected that a preparatory call will be held prior to each meeting to ensure that the study team is presenting all relevant information needed. Additionally, a follow up call will be planned immediately following each Commission meeting to recap the meeting and set next steps for all stakeholders. Study team staff will also be available to remotely attend subcommittee meetings as Commission members work to address sub-topics relevant to the study, such as the definition of adequacy.

The study team will also work with the Commission and Carsey School to identify any possible ongoing adjustments. This would include identifying additional research or data collection that would strengthen the Commission’s work.

The study team believes that consistent interaction between themselves, the Commission members, and Carsey staff is vital to delivering the right information and recommendations in a timely manner.

Development of an Adequacy Definition

Creating the Commission's comprehensive definition of adequacy needs to be one of the first tasks undertaken to inform the study. Though work tasks 1, 2, and 3 will begin prior to developing the adequacy definition, as the definition is created and refined, the work in each of these tasks can be adjusted. Not all states clearly define adequacy but those that do have used different approaches to create the definition. Many states, like New Hampshire, create a set of expectations for what a student should know or be taught, often codified through academic standards in various subjects. New Hampshire includes providing students the opportunity to acquire knowledge and skills in a variety of content areas, including English, mathematics, sciences, civics, the arts, wellness and lifelong learning as its definition of an adequate education. It further defines the NH Minimum Standards for School Approval in specific content areas as the opportunity for the delivery of an adequate education. States may also include a set of minimum input standards such as maximum class sizes or other staffing requirements. New Hampshire utilized input standards for personnel per student and costs of instructional materials in setting its adequacy funding amount, but does not include them in the statutory definition of an adequate education in NH RSA 193:E.

Other measures that could be considered include outcome standards, such as student performance levels on state testing or additional input standards such as availability of coursework like Advanced Placement (AP) or International Baccalaureate (IB). Overall, a state has to decide if adequacy is a minimum standard with wide variation allowed above the standard or a higher standard that is expected for all students.

The study team will begin with the current statutory definition of an adequate education in RSA 193:E, and will bring together examples of various adequacy standards from across the country for the Commission to review. This information will be combined with current state laws, rules, and policies to create the scope of alternatives for a definition. The study team will then create a set of alternative definitions for the Commission to consider. Using these alternatives, the Commission can evaluate how different alternatives might impact changes to the existing funding formula or the creation of a new formula. For example, input standards such as maximum class sizes might lead to a different formula design than if no such standards are included. Additionally, if different definitions require more of students, teachers, schools, or districts, then discussions will be needed to understand how those changes might impact any parameters in a funding system such as adjustments for special needs students.

Task 1 – Identifying Disparities in New Hampshire

There are a number of ways to examine disparities within a state's school finance and K-12 education system. The most traditional examination in school finance terms is an equity study. In an equity study, the researcher attempts to determine how well a state's finance system addresses differences in the resources available to districts, the needs of its students, and the extent to which resource levels and local wealth are related. An equity study generally focuses on the revenues and expenditures in a state's K-12 system and has less focus on specific types of resources or outcomes for students. For this study, under Task 1, the study team will expand this focus by examining three areas of potential disparities.

The study team will: 1) implement a traditional equity analysis, 2) examine the differences in resources available to students across districts; and 3) examine student outcomes in terms of state assessments and other measures.

Equity Analysis

The equity study will examine revenue and expenditure data to address horizontal equity, vertical equity and fiscal neutrality. Horizontal equity measures how equitably students or districts with similar characteristics are treated. Vertical equity measures how a system addresses differences in students' needs or district characteristics, taking into account student demographic differences such as special education, poverty, or English language learner students. Fiscal neutrality measures the relationship between the wealth of a community and the resources available to its students. A finance system with strong fiscal neutrality means that the wealth and resources are not strongly correlated.

Researchers use a number of metrics to evaluate equity, including the:

- **Coefficient of Variation** which measures the variation of a variable such as per pupil revenue
- **McCloone Index** and **Verstagen Index**, two school finance metrics which measure variation in the bottom half and top half of a distribution respectively
- **Correlation Coefficient** which examines the relationship between wealth and available resources.

Researchers also adjust for student need differences by creating weighted student counts. As shown in Table 5, the equity analysis for New Hampshire will include applying the four metrics noted above to the following revenues and expenditures, expressed as either per student or per weighted student figures.

Table 5: Revenue and Expenditures Considered in Equity Analysis

Revenues within Adequacy Formula	Total Revenues	Expenditures
State/Local Revenue per Student	State/Local Revenue per Student	Instructional Expenditures per Student
State/Local/Federal Revenue per Student	State/Local/Federal Revenue per Student	Student Support Expenditures per Student
State/Local Revenue per Weighted Student	State/Local Revenue per Weighted Student	Total Expenditures per Student
State/Local/Federal Revenue per Weighted Student	State/Local/Federal Revenue per Weighted Student	Instructional Expenditures per Weighted Student
		Student Support Expenditures per Weighted Student
		Total Expenditures per Weighted Student

Special attention will be paid to understanding the equity of funding within the adequacy formula, the amount identified by the base and weights in the formula, and the equity once local dollars above the adequacy formula are included.

Resource Disparities

The equity analysis will focus on the dollars flowing through New Hampshire's funding system. The resource analysis will examine the disparities in what those dollars provide to students in different settings across the state. These resources include staffing levels and staff characteristics, available support for student need, and student opportunities. Resources can be examined in terms of district characteristics such as:

- Student need
- District size
- Wealth per student
- Expenditures per student.

The analysis will use descriptive statistics and correlation coefficients to examine the relationships that exist between the district characteristics and the resources available to students. Table 6 shows some of the variables that could be examined in relation to the district characteristic categories above, if data is available.

Table 6: Resource Disparity Analysis Variables

Staffing Levels	Staff Characteristics	Support for Students Need	Student Opportunities
Teachers per 1,000 Students	Average Teacher Salary	Percentage of Students Receiving Gifted Education	Number of AP Courses/ Percentage of Students Participating
Student Support per 1,000 Students	Average Teacher Years of Experience	Percentage of Special Education Students Served in General Education Classrooms More than 80% of the Day	Number of CTE Courses/ Percentage of Students Participating
Administration per 1,000 Students	Percent of Teachers with Master's Degrees	Percentage of Students Enrolled in Extended Learning Opportunities (After School, Summer School)	Number of Concurrent Enrollment Opportunities/ Percentage of Students Participating
Total Instructional Staff per 1,000 Students			Number of Extracurricular Opportunities/ Percentage of Students Participating
			Number of Elective Offerings

Performance Disparities

Building on the examinations of the disparities in finances and resources, the study team will also examine the impacts these disparities have on student performance. The study team will conduct a series of correlations examining the relationship between different finance and resource metrics and outcomes for students. This analysis cannot provide evidence of causation. However, it can provide insight into how spending might be associated with particular outcomes for students. In general, these analyses will consider the average resources and outcomes in districts in the 1st and 4th quartiles within the distribution of specific cost factors and will assess the statistical significance of differences between these two groups.

Performance data that will be analyzed includes statewide testing broken out by grade span and subpopulation along with other measures such as graduation rates. This performance data will be correlated against a number of resource variables including those from both the equity and resource analyses. The study will examine the relationship to performance purely based on the dollars available to serve students and also on how those dollars are spent. This analysis will provide insight on whether the level of resources available or how the dollars are spent correlate more closely with student outcomes.

The correlation analysis could provide direction for more detailed guidance on additional ways to identified disparities that could be used by New Hampshire in the future. This could include other statistical approaches such as a cost function analysis that cannot be completed under current project timelines.

Visualizing Discrepancies

Once existing fiscal, resource, and performance discrepancies have been identified, the next step will be to provide data visualization through tables, charts and graphs to ensure that the Commission can easily understand the information gathered. One such visualization tool the study team will use is GIS mapping. GIS mapping will provide color-coded maps of New Hampshire's 167 districts to highlight variation between districts, both in terms of student need and for the discrepancy variables described in the prior three sections of this proposal (such as instructional expenditures per student, average years of teaching experience, or student outcomes). An example of this mapping is shown in Appendix B in the Other Information section.

Task 2 – Approaches to Addressing Disparities

Under Task 2, the study team will review the determinations made by other states to address disparities within their systems. This will include identifying the level and distribution of funding and the policy choices that states make to use available funding to address inequities. While some state decisions, such as needs-based adjustments to the funding distribution, imply a straightforward policy choice (e.g. target additional funding to particular contexts), others incur additional questions that should be considered. For instance, how do states distribute increases in funding across available funding sources (i.e. state and local)? By what mechanism do states ensure that the purchasing power of funding is maintained over time? How does a state influence decision-making practices in districts, or schools for that matter?

To prepare the Commission for appropriate deliberations, the study team will conduct a literature review and 50-state policy scan focused on relevant policies pursued in states and/or localities across the country and their impact in those settings. New Hampshire history, context and governance structure will be at the forefront of the review to set a baseline understanding of the systems in place now and how those systems compare to those in other states.

This literature review will provide a fundamental overview of adequacy-focused fiscal policy approaches and methodologies. The 50-state policy scan will provide a broad context on how adjustments for different student characteristics are made across the country. Utilizing this baseline information, the

study group will examine in more detail the approaches used in comparable states, providing the Commission with information on how states in similar circumstances are adjusting formulas to make them more equitable. Additionally, promising practices from highly successful states, or new policy implementations will also be considered. Topics will include adjustment for student characteristics including special education, at-risk, and EL; district adjustments; finance formulas and equitable distribution systems; and implementation parameters such as guidelines on how to spend dollars.

States provide funding for special education, at-risk and EL students through a variety of approaches. The 50-state scan will summarize aspects the various approaches used for funding each of the student groups including:

- If the funding is inside the formula or outside the formula;
- Whether the funding uses a specific weight, per pupil amount, or is dependent on a total funding figure set each year;
- Whether states use a single funding level or differentiate funding based on levels of student need within each category;
- The student counts used in each state;
- The level of funding provided by each state; and
- A list of any other student level adjustments states include in their funding system.

District adjustments are made to ensure students across a state can receive a similar educational opportunity regardless of setting. The study team will examine the different adjustments states make to overcome these differences which often include adjustments for district size, differences in cost of living, and for small districts. The 50-state scan will provide information on the prevalence of each of the adjustments and how they are designed. Looking at comparable states will provide information on how states with a similar district structure adjust for these needs.

Though the vast majority of states use either a Foundation formula or a Resource Allocation formula, the underlying implementation policies vary widely. These implementation policies have a direct impact on student and taxpayer equity of the systems. The 50-state scan will provide information on the design of each state's funding formulas and will be compared with frequently utilized national equity analyses, such as EdWeek¹ or EdTrust's² analysis, to provide details on the common aspects of more equitable formulas. The study team will examine the distribution of funds, the required local share, and the amount of funding allowed outside each state's funding system.

States frequently try to balance between the need for local control and wanting to ensure dollars are being spent efficiently and effectively. This can be especially true for funding based on student need. States are creating different approaches to building the guidelines for these areas and the study team will identify the most promising practices in this area based on its extensive work around the country.

¹ <https://www.edweek.org/ew/collections/quality-counts-2019-state-finance/state-grades-on-school-finance-map-and.html>

² <https://edtrust.org/resource/funding-gaps-2018/>

The information from this policy review will provide detail for the Commission to consider the policy steps it needs to take to ensure an equitable education system for New Hampshire students.

Task 3 – Modeling Alternatives

Task 3 will focus on modeling alternatives for funding and distribution. School finance systems include two distinct elements that must be addressed: **determining the level of funding** and **determining the state and local shares**. As in New Hampshire’s current finance system, **determining the level of funding** includes identifying the targeted amount of dollars allocated to all students regardless of student or district characteristics (referred to as the base cost). Additional adjustments for specific student or district characteristics must then be identified. These adjustments often are made for special education, English language learner students, poverty, and for district characteristics such as small size or high cost of doing business.

The second element, **determining the state and local shares**, includes identifying the amount of funding the state and local districts need to contribute to reach the targeted level of funding. Generally, states set a required common local effort rate, requiring equal taxpayer participation in the funding system. The local contribution amount is calculated based on this effort rate, and this amount is subtracted from the target funding. The state then provides the remainder of the targeted funding. This type of formula is often referred to as an “equalized foundation formula.” Above the targeted funding, states then also make decisions on whether local communities can raise additional dollars and if those additional dollars will be equalized to address differences in local wealth.

New Hampshire’s current funding system is an example of an equalized foundation system that allows for additional local funding. The study team will design a model that allows the Commission members to adjust both the funding and distribution portions of a finance system to assess various options for creating a more equitable educational system for the state. The parameters for the model will be developed in conjunction with Commission members utilizing research done in Tasks 1 and 2 of this study.

The model will allow the user to adjust:

- **Base Funding** – the user will be able to adjust the base cost per student figure.
- **Student/ District Characteristics** – for any given student characteristic a number of options can be taken, including the appropriate identifier, the specificity of the adjustment, and the funding level for each level of specificity. The model will allow for adjustments to each of these areas by student characteristic where appropriate.

At a minimum the following variables will be included in the model for determining funding levels, as shown in Table 7.

Table 7: Model Variables and Functionality

Variables	Description
Base Funding	The user will be able to adjust the base cost per student
Special Education	<p>Identifier – generally IEP eligibility is the only identifier used.</p> <p>Level of specificity – adjustments can include a single funding amount, levels of funding such as mild, moderate, and severe, or level of service received</p> <p>Funding level – users will be able to adjust the level of funding for each student characteristic either by setting a per student funding amount or a percentage of funding above the base funding amount.</p>
Poverty	<p>Identifier – proxies include income level, direct certification, or performance on statewide tests</p> <p>Level of specificity – adjustments may be a single adjustment or could reflect the concentration of poverty found in the district</p> <p>Funding level – users will be able to adjust the level of funding for each student characteristic either by setting a per student funding amount or a percentage of funding above the base funding amount.</p>
English Learners	<p>Identifier – proficiency on the WIDA assessment</p> <p>Level of specificity – adjustments may be a single adjustment or levels of performance on the WIDA exam such as grouping levels 1/2, 3/4, and 5/6</p> <p>Funding level – users will be able to adjust the level of funding for each student characteristic either by setting a per student funding amount or a percentage of funding above the base funding amount.</p>
District Size	Users will able to determine if adjustments need to be made for smaller districts
District Cost of Doing Business	Users will be able to make adjustments for differences in costs of doing business across the state

The model will also allow the user to adjust the parameters included in determining the distribution of funds, including the parameters shown in Table 8.

Table 8: Model Parameters

Parameters	Description
Measurements of Wealth	The user will be able to see the impacts of any alternatives to measuring the wealth of communities.
Required Local Effort	The user will be able to see the impacts of changing the expected local effort required as part of the targeted funding.
Additional Local Effort	The user will be able to see the impacts of different additional local effort options, such as capping additional local effort or equalization of additional effort from the state.

The model will be designed using Excel, which can then be directly accessed by Commission members. The study team will collect demographic, finance, and wealth data (as shown in Table 3) for every district to build the model. The descriptions above show general alternatives that might be included, but the final model will be based on the decisions made between the study team and Commission members. The study team's modeling group will build the initial model with as many alternatives as possible and then will refine the model as needed during the process. An example showing how users may select alternatives in the model is included as Appendix A in the Other Information section of the proposal.

Task 4 – Recommendations

The Task 4 work will bring together all the information from Tasks 1, 2 and 3, additional research, and ongoing collaboration with the Commission to develop specific recommendations for:

- Data Collection;
- Accountability;
- Fiscal taxing capacity and additional state aid resources; and
- Making adjustments to the system over time.

Data Collection

The RFP requests a recommendation on “options for continuous collection of relevant data.” The first step in developing a recommendation is to identify all of the data needed to fully implement the options developed by the Commission. The study team will begin much of the analysis on the availability of data within tasks 1 and 4 when it collects data for the disparity analyses and to build the model. Study team members will be able to present a full layout of all the data used in these tasks and any gaps in the needed data. The work done in tasks 2 and 3 will further inform this work. Task 2 will identify data used in other states to implement systems and funding to address disparities, while Task 3 will cover data in other areas such as accountability.

Once all of the data needs are identified, the next step will be to determine what improvements can be made on data collection. This could include identifying areas where data is not currently collected at all or providing recommendations on how to more effectively or efficiently collect current data. It could also include identifying areas where more specificity in data might be useful, such as increased data collection around specific subpopulations of students for either funding or accountability purposes.

As the alternatives are modeled in Task 4, any data limitations will be easily identified, and information will be codified on the impacts of data limitations on the accuracy of modeling. Recommendations will be made on how to best collect data going forward.

Accountability

The RFP asks for recommendations around accountability; however, accountability can mean many different things within the K-12 sector. The study team believes that creating a working definition with the Commission on what accountability means to them will be important. Accountability could refer to either the state's current system of evaluating the performance of schools and districts, or accountability around how dollars are expended for specific students at the district or school level.

States have historically designed finance systems, provided funding to districts, and then held districts accountable for the performance of students, without considering how dollars have been spent. Typical accountability systems have therefore evaluated student performance metrics including statewide assessments, course offerings, attendance rates, and graduation rates by absolute performance, growth, and performance by student subgroups. These variables can be used to score or rate districts and schools within an accountability structure. More recently, states are starting to examine if there are more effective ways to spend certain funds. This is especially true for targeted dollars such as for poverty or EL populations. More strict controls on special education expenditures have traditionally already been in place, due to federal requirements.

The study team has experience examining both performance and fiscal accountability systems. The study team will provide information from other states and from a literature review on state accountability policies, including the types of guardrails that are being considered around these funding areas and how they might be incorporated into changes to the New Hampshire funding system.

Fiscal Taxing Capacity and Additional State Aid Resources

The findings and results of Tasks 1 and 2 will inform recommendations around fiscal capacity and additional state aid resources. Task 1 will evaluate the relationship between fiscal capacity and the equity, resources, and performance disparities in the state. The analysis will provide the Commission with detailed information on the impacts of current policies in each of the areas and an understanding of how adjustments might increase overall equity and opportunity in the system. Through its ongoing engagement of the Commission, the study team will identify unfunded state mandates (as noted in the RFP) that should be considered as equity or resource disparities to be addressed in the study team's recommendations.

Task 2 will identify how other states address fiscal taxing capacity and additional state aid resources. The study team will evaluate how other states measure and tap fiscal tax capacity. This will include examining how they are incorporated into the finance formula of systems and the ability for districts to raise dollars above the formula. Many states provide additional funding outside of the formula through state categorical funding. This is especially true for funding areas often related to student disparities such as special education or poverty. The study team will provide details on these additional state resources and how they are implemented to develop more equitable systems.

How to Adjust the System Over Time

States update finance systems and their current formulas in a number of ways. Many states, like New Hampshire, provide an adjustment to the base figure each year or biennium. Often the base cost adjustment is based on a readily available cost of living adjustment, similar to New Hampshire's use of the U.S. Bureau of Labor Statistics' Consumer Price Index for All Urban Consumers, Northeast Region, special aggregate index of "services less medical care services." Some states, such as Wyoming and Arkansas, also conduct larger, full-scale updates periodically, looking at all aspects of their systems. The study team will identify how states periodically update systems as part of Task 2 and will provide both the general concepts and operational specifics to the Commission. As alternatives are considered by the

Commission, the study team will develop recommendations on what areas of the formula should be adjusted overtime, the alternative approaches to make such adjustments, and the data requirements/workload associated with the options.

There are several further study areas that could enhance the Commission's or future legislative work that are outside the current scope, timeline, and budget of this study. The study team's recommendations will address these further study areas, including the tasks and anticipated timelines needed to complete them.

Creating Alternative Scenarios

Utilizing the information gained from Tasks 1-3, study team staff will work with Commission members to create a number of alternative scenarios. To design the scenarios each relevant decision point will be discussed with Commission members. For each decision the options that potentially meet the policy goals of the Commission will be explored. For example, if the Commission members feel that both a single funding and tiered funding level for special education could meet the Commission's goals, both alternatives will be considered.

Once study team staff identify the range of options for each variable that meet the Commission's goals it will use the Task 3 model to provide details on the impacts of various combinations. These alternatives will then be presented to the Commission to allow for the targeting of the alternative scenarios that the Commission would like to bring forward from its work.

Task 5 – Final Reporting

The study team will provide interim reports throughout the project highlighting the results of each of the tasks as they are completed. The final report will summarize all aspects of the study and the work of the Commission. The report will allow stakeholders to understand in detail the progression of the Commission's work over the study period. The report will contain sections describing the study team's work on each of the tasks along with detailed results for each task. Results will include:

- **Task 1** – data visualizations, including tables and GIS maps, for the disparity results.
- **Task 2** – complete tables with descriptions of how each state addresses disparities in finance systems and details on promising practices found across the country.
- **Task 3** – a mockup of the model, and if amenable to the Commission, the ability to utilize the model in an online format.
- **Task 4** – detailed descriptions of the specific alternatives modeled for the Commission, including which alternative was chosen for each variable.

In sum, the report will be a record of the Commission's work to identify the options for building an equitable system for New Hampshire.

The final report will be delivered no later than August 31, 2020. The study team understands that it may be required to complete a presentation following submission of the report. It also may be asked to submit additional analyses after submission of the final report through the conclusion of the contract on December 1, 2020.

Itemized Project Budget

Project Budget

The budget reflects the study team's best estimate of the time and effort it will take to complete the scope of work. It has been designed to provide the Commission with the most research based, detailed data and information possible within the given timeline and budget. The budget is disaggregated by ongoing work with the Commission and the five tasks outlined in the study team's detailed proposal. The work will be led by Justin Silverstein, with day-to-day management support from Jennifer Piscatelli. WestEd's work will be over seen by Jason Willis. Silverstein will participate on all tasks, ensuring the work is coordinated across teams. To facilitate the work on the short timeline, most tasks have an identified team with Silverstein overseeing all tasks and crossover between tasks where needed. Staff responsibility for individual tasks is as follows:

- Task 1 will be led by Jennifer Piscatelli, with support from Michaela Tonking, Raifu Durodoye, and Lauren Outlaw. The task is broken up into three distinct disparity analyses with the equity analysis being led by Piscatelli, the resource analysis by Tonking, and the performance analysis by Durodoye.
- Task 2 will be led by Amanda Brown.
- Task 3 will be led by Mark Fermanich.

The majority of the team will participate in ongoing Commission engagement, recommendations (Task 4), and report writing (Task 5), led by Silverstein. For ongoing Commission engagement, identified team members will provide monthly progress reports and updates on results, support to the Commission as they design the final alternatives for creating a more equitable formula, and will be available to promptly answer questions from the Commission and Carsey staff as needed. The funded level in this task also includes limited additional analysis following completion of the final report, through the end of the contract period.

The study team has tried to limit travel to preserve as much funding as possible for study tasks. All members of the team will be available for Commission meetings virtually and the proposed budget provides 8 person trips at an estimate of \$1,500 per trip for in person meetings.

The following proposed budget includes fully loaded hourly rates for project team members and details the hourly level of effort for each project Task, with a total proposed project budget of \$158,690. Any potential services identified to be provided after the end of the contact would be billed at those identified, fully loaded hourly rates.

Itemized Project Budget

PROPOSED BUDGET BASED ON HOURS WORKED											
	APA					WestEd					
	Justin Silverstein	Amanda Brown	Mark Fermanich	Jennifer Piscatelli	Michaela Tonking	Jason Willis	Judy Ennis	Raifu Durodoye	Lauren Outlaw	Patrick McClellan	Total
Fully Loaded Hourly Rate	\$162.50	\$137.50	\$137.50	\$112.50	\$112.50	\$210.00	\$162.50	\$130.00	\$130.00	\$115.00	
Hours											
Ongoing Commission Engagement and Adequacy Definition	60	12	12	60	12	16	16	30			218
Task 1 - Understanding Disparities	8			80	60			60	40		248
Task 2 - Approaches to Addressing Disparities	20	80					12		20	40	172
Task 3 - Modeling	24		80		40			10		10	164
Task 4 - Recommendations	20	8	8	20	8	8		10			82
Task 5 - Final Report	20	20	16	20	16	10	10	10	10	10	142
Management	24			20			10		10		64
Cost											
Ongoing Commission Engagement and Adequacy Definition	\$9,750	\$1,650	\$1,650	\$6,750	\$1,350	\$3,360	\$2,600	\$3,900	\$0	\$0	\$31,010
Task 1	\$1,300	\$0	\$0	\$9,000	\$6,750	\$0	\$0	\$7,800	\$5,200	\$0	\$30,050
Task 2	\$3,250	\$11,000	\$0	\$0	\$0	\$0	\$1,950	\$0	\$2,600	\$4,600	\$23,400
Task 3	\$3,900	\$0	\$11,000	\$0	\$4,500	\$0	\$0	\$1,300	\$0	\$1,150	\$21,850
Task 4	\$3,250	\$1,100	\$1,100	\$2,250	\$900	\$1,680	\$0	\$1,300	\$0	\$0	\$11,580
Task 5	\$3,250	\$2,750	\$2,200	\$2,250	\$1,800	\$2,100	\$1,625	\$1,300	\$1,300	\$1,150	\$19,725
Management	\$3,900	\$0	\$0	\$2,250	\$0	\$0	\$1,625	\$0	\$1,300	\$0	\$9,075
Total Hourly	\$28,600	\$16,500	\$15,950	\$22,500	\$15,300	\$7,140	\$7,800	\$15,600	\$10,400	\$6,900	\$146,690
Travel (8 person trips, \$1,500 per trip)											\$12,000
Project Total											\$158,690

Deliverables and Timeline

APA is proposing seven areas that may be considered deliverables, including ongoing work with the commission, Tasks 1-5, and management. APA proposes that Tasks 1-5 be paid at the completion of the deliverable, with payment for ongoing work and the final report coming at the end of the project.

As shown in Table 9 below, the study has been designed to allow for information to be available to the Commission members as early as possible:

- Task 1 will be completed about 5 weeks after the start of the project,
- Task 2 will be completed about 8 weeks after the start,
- Task 3 will be completed about 10 weeks after the start, and
- Task 4 occurring after the Commission has had time to digest the findings of Tasks 1-3 and the ongoing work with the consultants.

The final report (Task 5) will be delivered by August 31, 2020, and study team members will be available for additional analysis after that date.

Table 9. Project Timeline

PROJECT TIMELINE					
	May	June	July	August	Sept-Dec
Ongoing Commission Engagement and Adequacy Definition	X	X	X	X	
Task 1 - Understanding Disparities	X	X			
Task 2 - Approaches to Addressing Disparities	X	X			
Task 3 - Modeling	X	X	X		
Task 4 - Recommendations			X	X	
Task 5 - Final Report				X	
Additional Analysis Following Final Report					X
Management	X	X	X	X	X

Samples of Previous Work

The study team has included two samples of recent relevant work. The first work sample, *Nevada School Finance Study*, was completed by APA in 2018.

The second work sample, *Utah Education Funding Study Phase I Report* is also an example of the study team's joint work, as WestEd is the lead organization, with APA subcontracting, on this Utah education finance study.



Nevada School Finance Study

By

Augenblick, Palaich and Associates

Education Commission of the States

Picus Odden and Associates

Final, October 22, 2018



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I. Overview of Study and Report, Review of Current System

Overview of Study and Report

This is the draft report of Augenblick, Palaich, and Associates' (APA) "Nevada School Finance Study" for the Nevada Department of Education (NDE). In late 2017, APA along with the Education Commission of the States (ECS) and Picus, Odden, and Associates (POA) responded to a request for proposal (RFP) from Nevada for a school finance study. The state's RFP called for an update of the American Institute of Research's (AIR) 2012 *Study of a New Method of Funding for Public Schools in Nevada*,¹ with a focus on the resources needed for students with special needs, including at-risk, English learners (ELs), special education, and gifted students.

The 2012 AIR study included five components:

- Overview and Analysis of the Nevada Plan
- Inventory of State Finance Systems
- Identifying Adjustments Used to Address Cost Factors
- Simulation of Alternative Practices in Nevada
- Recommendations

The report examined how other state's finance formulas worked and used that information, along with statistical analysis, to create a set of recommendations on how Nevada's current school finance formula might be updated to better serve students. APA's proposal included updating the information contained in the first four components of the AIR report, engaging in stakeholder feedback, implementing two adequacy approaches- the professional judgment and evidence-based approaches- to developing cost factors, and providing an updated set of recommendations to the state.

Further, during early meetings of the Working Committee for the study, it became clear that no conversation about the additional resources for special needs students could be had without an understanding of the resources needed at the base level for all students. This study identifies one possible base figure through the evidence-based approach. The study team also incorporated results of prior adequacy work conducted in Nevada by APA in 2006 and 2015 to allow for a robust discussion of an appropriate base amount using multiple approaches.

Report Structure

The remainder of this chapter highlights changes to the state's funding system since the 2012 study. It also includes the initial feedback from stakeholders gained through a statewide survey focused on impressions of the current school finance system.

¹ Jay Chambers et al, *Study of a New Method of Funding for Public Schools in Nevada* (San Mateo, California: American Institutes for Research, 2012). Retrieved at: https://www.air.org/sites/default/files/downloads/report/AIR_NV_Funding_Study_Sept2012_0.pdf

Chapter 2 updates the review of how other states' finance systems function. In the 2012 study, the AIR team used a survey to collect the data. For this updated data collection, led by ECS, the study team collected information about state funding formulas, funding for high-need students, and funding adjustments for small/isolated schools through a review of state legislation, rules, and regulations. When necessary, the study team made use of state reports and studies to confirm our understanding of state policies. In some cases, the study team contacted departments of education staff in states to further clarify certain pieces of information. The study team used verified third-party studies for information about vocational/career/technical programs, state grade weighting, and regional cost adjustment policies.

Chapter 3 reviews the analyses AIR conducted to examine potential adjustments based on the cost factors in a set of comparable states. The study team first examined if there have been changes in the ways the comparable states fund schools since the 2012 study that would indicate a need to redo the AIR analysis. In this report, the study team identifies where updated analysis was needed.

To supplement the information gained on how best to serve special needs populations identified in chapters 2 and 3, the study team utilized two different adequacy approaches—the professional judgment (PJ) approach and the evidence-based (EB) approach—to examine the resources that might be needed for Nevada students to meet state standards. These adequacy approaches require a different investigative lens than simply reviewing and analyzing how other states' fund these students. Adequacy approaches utilize a state's specific education standards to estimate the resources needed for each student population to meet state standards. These types of approaches have been used across the country to make such estimates. Chapter 4 examines the implementation of the PJ approach. The PJ approach brought together educators from across Nevada to identify the resources needed for special education, at-risk, and English learners (ELs). The PJ approach was implemented in a targeted way to address resources for these student groups and built upon a 2015 APA study for the Lincy Institute at UNLV.² The PJ results identify new figures for the special needs categories and an updated base cost figure using the findings of the 2015 study. Chapter 5 examines the implementation of the EB approach, led by POA, which relies on research from across the country to identify the types of resources that are being shown to have significant impact on student performance. The approach provides a base cost and the adjustments needed for special needs students.

Chapter 6 brings together the information from the prior five chapters to develop the draft recommendations first presented in the August 1st draft report. The chapter compares the information from the national funding model review, the updated comparison state analyses, and the results of this study and prior adequacy studies in Nevada. The chapter then presents options for: (1) a base amount, (2) adjustments for student need, and (3) adjustments for school/ district characteristics that might be included in an updated Nevada state school funding system. It does not include the fiscal impact of any

² Silverstein, J., Brown, A., Piscatelli, J., Shen, Y. (2015). *Professional Judgement Study Report* for the Lincy Institute at UNLV. Denver, CO: Augenblick, Palaich & Associates. Retrieved at: <http://apaconsulting.net/wp-content/uploads/2018/08/NV-Professional-Judgment-Report-.pdf>

one or number of alternatives at this time. In this final version of the report, a review of stakeholder feedback about the draft recommendations has been added to Chapter 6.

Finally, Chapter 7 presents a number of revisions to the draft recommendations in Chapter 6 and models the fiscal impact of the recommended funding approach and compares it against current approach.

Review of Current Funding System

Overview of the Nevada Plan³

Nevada's current school funding system, the Nevada Plan (Plan), was first established in 1967. Though there have been changes over time, the basics of the Plan remain similar to when it was first established. The Plan is an equalization formula that generates a guaranteed funding amount, the basic support amount, for each of the state's school districts. Once the funding amount is set, each districts' local capacity to raise funds is measured, this amount is subtracted from the guaranteed amount, and the state backfills or equalizes the remaining dollars.

Each district's guaranteed funding amount under the Plan is generated based on district-specific characteristics, not student characteristics. A separate basic support per pupil figure for each school district is calculated by NDE using a formula that considers a district's relative differences in terms of cost of living, size, and the cost per pupil of administration and support services compared to the statewide average in each area. A wealth adjustment, based on each district's ability to generate revenue in addition to the guaranteed level of funding, is also included to equalize the system.

While the Nevada Plan does not differentiate for student-specific differences, other funding streams (referred to as categorical streams) do provide funding for such students. Categorical funding streams include dollars for class-size reduction, career and technical education, English learners, and other programs.

Special education funding is also funded outside of the basic support amount. Funding for special education was a unit-based allocation prior to the 2016-17 school year when funds were distributed on a proportional basis to school districts and charter schools. Funding is capped at 13 percent of total pupil enrollment. Additionally, the state adopted a Special Education Contingency Fund to help provide resources for students with significant disabilities.

Other changes to the state's funding system since the 2012 AIR report include:

- 2015 – The legislature permanently increased the Local School Support Tax (LSST) to 2.60 percent from 2.25 percent.
- 2015 – Increased funding for kindergarten students from .60 to a full 1.0.
- 2016 – Ballot Question 2 approved the sale of recreational marijuana, with the net proceeds of the excise tax being deposited into the DSA budget.

³ Legislative Counsel Bureau, Fiscal Analysis Division (2017). *The Nevada Plan for School Finance, an Overview*. Retrieved at https://www.leg.state.nv.us/Division/Fiscal/NevadaPlan/Nevada_Plan.pdf.

National Rankings

There are at least three long-running and well-regarded state-by-state assessments of the quality of state education finance systems. Perhaps the best known of the three is the annual *Quality Counts* report issued by Editorial Projects in Education, the publisher of *Education Week*. The 2018 *Quality Counts* is the 22nd year of the report. The Education Law Center at Rutgers has published the report *Is Funding Fair? A National Report Card* for the past nine years. The third report, the National Education Association's *Rankings of the States* report has been issued for the past 70 years.

All three reports show Nevada ranking near the bottom among states in most measures. They also show that Nevada's ranking, in most cases, has not improved or gotten worse over the past one or two decades.

Education Week's *Quality Counts* annual report rates each states' and the District of Columbia's education finance systems on two dimensions – equity and spending. In the 2003 *Quality Counts* report, Nevada received a grade of B for funding equity. Its coefficient of variation at the time was 0.087, well under even the more stringent 0.10 benchmark, and its correlation coefficient was -0.104, also well below the standard of 0.1. By 2018 these two measures were 0.152 and 0.166, respectively, both above the generally accepted benchmarks. The later report no longer assigns a grade for each of the two dimensions, but only an overall grade.

Nevada did not perform quite as well on the spending dimension as on the equity dimension in 2003. It received a grade of C-, with a score of 71 out of a possible 100. In one of the primary measures, per-student expenditures, Nevada ranked 44th. Its per-student expenditure amount was 85.6 percent of the national average at the time. By 2018 Nevada ranked 47th in per-student expenditures and its per-student expenditure amount was equal to only 70.3 percent of the national average per-student expenditure amount.

The Quality Counts analysis assigned an overall grade of C+ for the state's school finance system in 2003. By 2018 the Nevada's overall grade had fallen to a D-.

The Education Law Center at Rutgers released an update of its *Is School Funding Fair: A National Report Card* report in February 2018.⁴ This edition of the report uses data from 2015 to rate the 50 states and the District of Columbia on the following factors of each state's school finance system: 1) how well it distributes funding across its school districts; 2) the level of fiscal effort made by the state to fund public education; 3) the amount of funding; and 4) coverage, or the proportion of all students enrolled in public schools. Each factor is summarized below.

1. **Funding Level.** Funding level is the average per-student state and local funding provided by each state. To provide a more equitable comparison these per-pupil amounts were adjusted for regional cost differences, poverty, population density, and economies of scale. In the 2009

⁴ Baker, et al., (2018).

report, Nevada was ranked 38th. In 2018 Nevada was ranked 42nd, ahead of Tennessee, Mississippi, Oklahoma, Utah, North Carolina, Arizona, and Idaho.

2. **Funding Distribution.** Funding distribution refers to how per-student funding varies in relation to districts' concentrations of poverty. States that provide more funding as poverty rises are ranked higher than those that do not increase funding with poverty or spend less per student as poverty increases. In the 2009 report, Nevada received a grade of "F" along with four other states. In the latest report Nevada is ranked last, providing higher poverty districts with only 57 percent of the funding allocated to districts with low-poverty levels. Nevada is one of nine states to receive a grade of "F" in this category.
3. **Effort.** Effort is a measure of the proportion of state resources, measured by per-capita gross state product (GSP), dedicated to funding public schools. In 2009 Nevada was one of 14 states receiving an "F" in this category. In the 2018 report, Nevada again received an "F," one of 17 states to receive this grade. Only four states, Delaware, North Carolina, Arizona, and Hawaii ranked lower than Nevada. The 2018 edition of the report also ranked fiscal effort using the proportion of per-capita personal income as the measure. Nevada again received an "F" on this measure, along with 13 other states. Colorado, Idaho, Florida, Arizona, and Hawaii were the states ranked below Nevada.
4. **Coverage.** Coverage represents the proportion of school-age children attending public schools compared to children attending private schools. Nevada ranked 17th in the 2009 report. In 2018 Nevada ranked 13th, the only category of rankings in which Nevada improved over the 2009 report.

The National Education Association's annual *Rankings of the States*⁵ provides state-by-state comparisons of a wide range of data on students, district and school staff, and education finances. Nevada does not rank very highly on most items related to finances. At \$9,258, Nevada ranked 48th in 2017 in per-pupil revenues. The national average was \$13,900 and the state with the highest per-student revenues, \$25,576, was New York. Idaho had the lowest per-student revenues at \$8,144. The state's low level of per-student revenues led to low rankings on several expenditure-related measures. At 25.86 students per teacher, Nevada had the highest number of enrolled students per teacher in the country. The national average was 15.96 students per teacher. At \$8,165, Nevada ranked 47th in per-student current expenditures compared to the national average of \$11,642. Nevada ranked higher (18th) in average classroom teachers' salaries, with an average salary of \$57,376. However, this ranking is offset to a certain extent by the large number of students per teacher noted above. In essence, the state is trading larger class sizes for higher salaries.

A review of the 2008 *Rankings of States* shows that little changed in most of these measures in Nevada over the past decade. The 2008 report ranked Nevada 50th in per-pupil revenues and 48th in per-pupil current expenditures. At fourth highest, Nevada was ranked slightly better in students per teacher in

⁵ NEA Research. (2018). *Rankings of the States 2017 and Estimates of School Statistics 2018*. Washington, D.C.: National Education Association.

2008. One area of significant improvement since 2008 was in average classroom teacher salaries. In 2008 the average teacher salary was ranked 29th compared to 18th in 2017.

Equity Assessment

In school finance terms, “equity” is concerned with how resources are allocated across school districts and, ultimately, across schools and students. The most common notion of equity assumes a school finance system that distributes resources equally is equitable. This definition of equity, known as horizontal equity, is true when thinking about the median student, that is, a student with no special needs (e.g. at-risk students, EL students, or special education students). School finance researchers may also be interested in equity from other perspectives, such as the relationship between local wealth and per-pupil spending levels (also known as fiscal neutrality) or the relationship between student need and spending (known as vertical equity). In its 2012 report, AIR examined the equity of Nevada’s funding system for the period 2000 through 2012. It reported that the equity of Nevada’s system appeared to be decreasing over time. It found that the coefficient of variation⁶ (CV) in Nevada was 0.0103 in 1991, which is well under the benchmark of 0.150 used by AIR, and very near the benchmark of 0.100 established by other school finance researchers.⁷ The most recent Quality Counts⁸ study published by *Education Week* reports a CV for Nevada (based on 2015 data) of 0.152. This value is considerably higher than the 1991 CV and the more stringent 0.100 benchmark, but is slightly less than the national average CV reported by Quality Counts of 0.157 and just exceeds the higher benchmark of 0.150. These data suggest Nevada’s finance system is becoming less equitable over time but is still reasonably equitable by at least some benchmarks.

Fiscal neutrality was also measured in the Quality Counts report. This measure consists of the correlation coefficient between local wealth, usually comprising the local property tax base, and per-pupil spending. Stronger correlation between the two suggests the school finance system is too dependent on local resources, giving wealthier communities with larger local tax bases a funding advantage. The correlation coefficient ranges from -1.0 to 1.0, with 0.0 representing no relationship, -1.0 a perfect negative relationship, and 1.0 a perfect positive relationship. A generally accepted benchmark is that an equitable system should have a correlation coefficient of no more than 0.1. The Quality Counts report found that Nevada had a correlation coefficient of 0.166, higher than the benchmark and also higher than the national average for all states of 0.138. This finding suggests Nevada’s funding system tends to provide more resources to wealthier communities than to poorer communities.

⁶ The coefficient of variation is a measure of the distribution of values around the mean. It is calculated by dividing the standard deviation by the mean, with a range of possible values from 0 to 1.0. A low coefficient of variation indicates a more equitable system.

⁷ See, for example, Odden, A. R. & Picus, L. O. (2014). *School Finance: A Policy Perspective* (5th Ed.). New York: McGraw-Hill.

⁸ Education Week. (2018). *2018 Quality Counts School Finance Report and Ranking*. Retrieved from <https://www.edweek.org/ew/collections/quality-counts-2018-state-finance/index.html>.

In its report *Is School Funding Fair*⁹ the Education Law Center examined vertical equity, the relationship between spending levels and student need, by estimating the difference in per-student funding for districts with 0, 10, 20, and 30 percent of students in poverty. In a state that is vertically equitable, districts with a 30 percent poverty rate will have higher per-student revenues than those with lower poverty rates. The study found that Nevada’s “fairness ratio,” the ratio of per-student funding at 30 percent poverty to funding at 0 percent poverty was 57 percent, meaning the higher poverty district received just over half of the per-student funding of the district with no poverty. Nevada’s fairness ratio was the lowest among the 50 states (Utah, at 141 percent, had the highest fairness ratio). This analysis is also used in Chapter 3 to update the list of states with the most progressive school finance systems.

Comparison against School Finance Principles

In the 2012 AIR report, the state’s funding system was compared to a set of principles of a good school finance system including:

- Sufficiently funded
- Equitable on both horizontal/vertical dimensions
- Transparent, understandable, and accessible
- Cost based
- Capable of minimizing incentives
- Reasonable in its administrative costs
- Predictable, stable, and timely
- Accountable for learning outcomes and spending
- Politically acceptable

The study team agreed with AIR’s assessment of the current system, particularly the concerns related to cost basis, equity, adequacy, transparency, and predictability. This chapter expands upon this comparison with some additional elements from APA’s list of principles/characteristics based upon the firm’s over thirty years of working with policymakers to develop school finance systems. The full list of these 12 characteristics can be found in Appendix A. Many of the characteristics can only be measured with a full equity study, not done as part of this work. This section will focus on those characteristics that can be evaluated as part of this study. Each characteristic(s) is described and then a brief summary of how well Nevada’s funding system meets the characteristic is provided.

The allocation of state support is positively related to the needs of school systems, where needs reflect the uncontrollable demographic characteristics of students and school systems.

The Nevada Plan does not adjust for student characteristics but has a strong focus on the differential costs of school systems (districts). Those differentials in costs are based upon historical expenditure data and may not reflect the current best practice thinking of how to measure/adjust for such costs. While

⁹ Baker, B. D., Farrie, D., & Sciarra, D. (2018). *Is School Funding Fair? A National Report Card* (7th Ed.). Newark, NJ: Rutgers, Graduate School of Education, Education Law Center. Retrieved from <https://drive.google.com/file/d/1BTAjZuqOs8pEGWW6oUBotb6omVw1hUJI/view>.

there are funding streams outside of the Nevada Plan that target student characteristics, they are a smaller piece of the overall funding system.

The allocation of state support is inversely related to the wealth of school systems, where wealth reflects the ability of school systems to generate revenue for elementary and secondary education.

The Nevada Plan is an equalization formula that measures wealth as part of the distribution formula. Since the Plan only provides differential funding for district characteristics, resources for student needs are not part of the wealth equalized funding stream.

Related to adequacy: (1) the amount of state support allocated to school systems reflects the costs they are likely to incur in order to meet state education standards and student academic performance expectations; (2) all school systems are spending at adequate levels, and variations in spending among school systems can be explained primarily by differences in the needs of school systems and the tax effort of districts and are not related to differences in school district wealth, and (3) the state has a procedure to define and measure the adequacy of revenues school systems obtain for elementary and secondary education and periodically determines whether adequate revenues are available in all school systems.

All three characteristics examine a state's funding system against the expected costs of meeting state standards. Though Nevada has in the past examined what these cost levels might be,¹⁰ the state's current funding system is not adequacy-based. Later in this report, two adequacy approaches are discussed and funding levels to meet this target are identified. If Nevada were to move towards an adequacy-based system, a procedure to periodically update funding figures should be put in place.

The school finance system covers current operating expenditures as well as capital outlay and debt service expenditures.

The Nevada Plan along with the outside funding streams attempts to address the current operating expenditures of districts, but the state does not provide a comprehensive system to support district capital needs. Districts raise funds for capital outlay locally.

Overall, Nevada's system directly accounts for district characteristics within the Nevada Plan and provides some adjustments for student characteristics with dollars outside the plan. The state equalizes much of the funding system but few dollars are related to student need. Nevada's funding system is not cost-based and capital needs are systemically supported by the state.

School systems have a reasonable amount of flexibility to spend the revenues they obtain as they want, provided they are meeting, or making acceptable progress toward meeting, state education standards and student academic performance expectations.

Districts have a reasonable amount of flexibility in how they use funding through the Nevada Plan. However, resources through categorical funding streams are limited in their use.

¹⁰ Augenblick, et al. (2006). *Estimating the Cost of an Adequate Education in Nevada*.

Stakeholder Feedback

Stakeholder feedback was primarily collected through an online survey conducted in July. The survey was open to all educators, parents, students, and community members. District superintendents were sent a notice to share with their staff and communities. The Department of Education also promoted the survey through communications and social media channels. In at least one district, local media provided coverage of the survey. Details in the participation section give more information on the survey respondent pool.

Survey questions were focused on gauging stakeholder perceptions about how well the current funding system met a number of the principles discussed in the prior section including equity, responsiveness (to student need and district characteristics), transparency, flexibility, and adequacy. Through an open response question, stakeholders were then asked what changes, if any, they would make to the current system to ensure that it best served students.

Participation

About 6,900 responses were received from the online survey. Respondents were first asked if they were an educator, parent or community member, and they could select multiple choices. Of those responses, 56 percent were from educators (including teachers, school administrators, other school employees, district administrators, and other district employees). An additional 40 percent were parents (who were not also educators and counted in the percentages above), and the remaining 4 percent were students and other community members.

Responses were received from all school districts and the percentage of total responses by district was as follows: Clark County, 49 percent; Washoe, 37 percent; Carson City, 7 percent; Lyon County, 3 percent; and Churchill, 2 percent. About three percent of responses were from the other 13 districts or state sponsored charter schools.

Results are presented for all responders. Any noticeable variations in responses of educators and the combined pool of (non-educator) parents, students and community members are highlighted.¹¹ Table 1.1 first presents stakeholder ratings of the current funding system against several key principles of school finance.

**Table 1.1: Stakeholder Ratings of Nevada’s Current Education Funding System
Against Key School Finance Principles**

	Poor	Average	Good	Excellent	Unsure	Number of Responses
Equitably distributes resources to school districts	54.99%	24.13%	8.93%	1.56%	10.39%	6,805
Responds to student need (differentiates funding based on at-risk, EL, or special education students)	41.07%	33.70%	14.10%	3.39%	7.75%	6,789

¹¹ The educator pool includes educators who are also parents/community members. The parent and community member pool then includes parents who did not also indicate they were an educator.

Responds to district characteristics (differentiates funding based on district size, location, etc.)	52.60%	26.23%	8.46%	1.49%	11.22%	6,783
Allocates resources in clear and understandable manner	62.72%	21.95%	6.61%	1.48%	7.23%	6,773
Allows flexibility in how resources are used	51.63%	27.54%	8.54%	1.64%	10.65%	6,771
Provides adequate resources	65.30%	21.37%	7.74%	1.69%	3.90%	6,743

Over half of survey participants rated the current system as poor in terms of equity, responsiveness to district characteristics, transparency (being clear and understandable), flexibility, and adequacy. The adequacy of the system was the area that received the highest percentage of “poor” ratings at nearly two-thirds of respondents (65 percent) holding this opinion. Perceptions of the responsiveness of the system to student needs were more mixed (41 percent rated the system as “poor,” 34 percent as “average,” and 17 percent as “good” or “excellent”). Between four and 11 percent were unsure how to rate the different aspects of the system. Table 1.2 examines variation in the percentage of respondents that rated the system as “poor” between educators and the public.

Table 1.2: Educator vs. Public Ratings, Percentage of Respondents who rated the Current System as “Poor”

	Educators	Public
Equitably distributes resources to school districts	59.72%	48.89%
Responds to student need (i.e. differentiates funding based upon students' being at-risk, English learners, or in special education)	44.71%	36.36%
Responds to district characteristics (such as differentiating funding based upon district size, location, etc.)	59.08%	44.43%
Allocates resources in a manner that is clear and understandable	68.33%	55.45%
Allows flexibility in how resources can be used	54.42%	48.45%
Provides adequate resources	70.98%	57.91%

Educators were more likely than the rest of the community to rate the current funding system as “poor” by a difference of about 10 percentage points in most of the categories.

Respondents were then asked to indicate the degree to which they agreed or disagreed with several statements that further explored how well they felt the system did in terms of equity, transparency, flexibility, and adequacy (specifically the adequacy of salaries and benefits), as well as if resources were being used efficiently by schools and districts.

Table 1.4 on the next page presents this information.

Table 1.4: Survey Responses to Statements Probing Equity, Transparency, Flexibility, Adequacy of Salaries/Benefits and Resource Use Efficiency

	Strongly Disagree or Disagree	Strongly Agree or Agree	Unsure	Number of Responses
Similar districts are funded fairly in relationship to one another.	46.87%	18.50%	34.63%	6,774
Taxpayers are treated equally across the state.	63.48%	17.46%	19.07%	6,776
Where a student lives does NOT determine the quality of their education.	75.13%	21.34%	3.53%	6,779
It is easy to understand how funding is determined and allocated.	84.43%	7.87%	7.69%	6,778
The current funding system is flexible enough to allow schools and districts to decide how resources should be used to serve students.	70.26%	14.58%	15.16%	6,762
Schools spend resources efficiently.	50.44%	38.72%	10.84%	6,772
Districts spend resources efficiently.	78.40%	12.26%	9.35%	6,759
Salaries and benefits are at appropriate levels to attract and retain qualified staff.	84.60%	9.79%	5.60%	6,762

In terms of equity, most respondents disagreed that taxpayers were treated equally across the state or that where a student lived did not determine the quality of their education; less than 20% felt similar districts were funded fairly and over a third were unsure how to answer that question. Respondents continued to report that it was not easy to understand how funding was allocated (85 percent disagreed that it was easy to understand) and that the system did not have the necessary flexibility to allow for schools and districts to decide how resources should be used (70 percent disagreed that this was possible). About 85 percent of respondents said they did not believe salaries and benefits were at appropriate levels to attract and retain qualified staff.

Respondents were also asked if schools and districts spend resources efficiently. About 50 percent of respondents felt schools did not spend resources efficiently, while nearly 80 percent felt districts did not spend resources efficiently. District resource use was the one area of variance between educator and community responses, with 85 percent of educators reporting they disagreed that districts use resources efficiently vs. 71 percent of the public feeling this way.

Finally, survey participants were given the opportunity to provide suggestions for changes they would make to the funding system. The study team did not want to constrain the types of suggestions received, so this question was asked as an open-ended response via text entry. About 4,200 participants submitted a wide range of suggestions. The study team reviewed each response and attempted to categorize them by type in broad categories. Table 1.5 presents the percentage of the open responses that suggested a given category of change.

Table 1.5: Key Suggestions for Changes to Nevada’s Current Funding System

General response category	Number of responses	Percentage of total responses
Higher teacher salaries	1,158	28%
More/adequate funding	905	22%
Less district administration staffing/ lower district administration salaries	591	14%
More resources for specific group or program	415	9%
More transparency	386	9%
Use specific revenue stream, either existing or new	375	9%
More resources in the classroom, class supplies	361	9%
Increase equity/fairness	396	8%
Lower class sizes	304	7%
Funding following student/going directly to school	216	5%
Distrust/dislike of district leadership	146	3%
Buildings/capital	134	3%
More flexibility in use of funds	127	3%
The entire system should be replaced	102	2%
Accountability for use of funds/audit	72	2%
Spend less money, either overall or on specific group/program	57	1%
Higher salaries for non-teacher positions	38	1%
Larger districts should be split up into smaller districts	22	1%

Most frequently, participants suggested that higher salaries for teachers were needed (28 percent), followed by the need for more or adequate funding overall (22 percent), and that spending at the district level should be lower through having fewer positions and lower salaries (14 percent). Between five and ten percent of open-ended responses recommended: more resources for a specific student group or program (preschool, CTE, English Learners, special education and interventions were most often noted), more funding transparency, using existing revenue streams (like marijuana taxes) or creating new revenue streams, providing more resources in the classroom, lowering class sizes, and having funding follow the student/be sent directly to schools so they can set their own budgets.

II. State Public School Funding System

The American Institutes for Research (AIR) 2012 study of the Nevada school funding system included a component summarizing how states fund their public K-12 school systems, including the funding formula used by each state, funding adjustments for small and/or isolated school districts, and also funding (if any) provided for high-need student groups:

- At-risk or poverty students,
- English Learners (ELs),
- Gifted and talented students, and
- Students with disabilities.

The majority of the information from the AIR report was derived from a survey that was sent to each state for the 2010-11 fiscal year.

Building on this study, the study team was tasked with providing updated information about how states currently fund their primary and secondary public education systems.

Updated and Revised Data

For this study, the study team also collected information about state funding formulas, funding for high-need students, and funding adjustments for small/isolated schools, but did so through a review of state legislation, rules, and regulations. When necessary, the study team made use of state reports and studies to confirm our understanding of state policies. In some cases, the study team contacted staff from the different state departments of education to further clarify certain pieces of information. The study team used verified third-party studies for information about vocational/career/technical programs, state grade weighting, and regional cost adjustment policies. Unless otherwise listed, the information contained in this chapter is updated for the 2018-19 school year.

The chapter is divided into three sections: 1) the funding system used to distribute aid for public K-12 schools is reviewed across states to provide a context for discussion of student needs, 2) mechanisms used to pay for high-need students are discussed, and 3) state factors for distributing additional funding to small/remote schools is examined, along with state policies toward career/technical programs.

State Funding Formulas

The cost of educating public K-12 students is divided between local, state, and federal resources. The only exceptions to this are Hawaii and the District of Columbia, which both operate as single school districts. The remaining 49 states distribute their state-level education funding to school districts or charter schools. While no two states distribute their funding in the exact same manner, the majority of states use two basic forms of school funding (Table 2.1):

- **Foundation Formulas** (33 states) – A foundation formula begins with a per-pupil funding amount that is theoretically sufficient to educate a general education student to state standards (also known as the “foundation” or “base” funding amount). Many states choose to supply districts with additional funding for high-need student populations through the use of additional

weights in the funding formula. For example, if a state determines that it would cost districts 20 percent more to educate an ELL student, the formula would provide these students with an additional weight of 0.2.

- **Resource Allocation Systems** (eight states) – This type of system is sometimes known as the “position allocation” or “teacher allocation” system because it guarantees that school districts and charter schools have a certain number of teaching positions. This type of formula determines the number of teachers and other educational staff that schools are entitled to based on their enrollment. States then provide some form of operational funding for maintenance, technology, and utility costs based either on a per-pupil amount or a teaching position amount. Under these types of systems, school districts are often locked into how they can expend their funding based on the state formula.

Three states (Georgia, Maine, and Virginia) have funding systems that contain elements of both foundation formulas and position allocation systems. For example, Georgia makes use of a foundation-type formula that determines the foundation amount based on a type of resource allocation system. The state determines the per-student foundation amount by calculating the minimum cost of providing one teaching position for every 23 students in a school district. An amount is then added to this base funding level that includes the cost for teacher specialists, counselors, operational costs, additional teaching days, indirect costs, staff time development, and media room costs. Compared to funding using a resource allocation system, districts have much greater freedom in how they expend state funds.

Several states have funding systems that do not fit neatly into any specific category. Massachusetts and Wyoming have systems that provide funding to districts that varies based on certain education inputs. It is similar to the foundation method in that students with different education needs receive different amounts of funding. However, this type of system is based on educational inputs and does not utilize a single base or foundation amount. Michigan uses a system where the state controls almost all of the education funding decisions. Districts are required to send most of their local property tax collections to the state. These local tax dollars are combined with state funds and then distributed back to districts. This leaves most funding-level decisions up to state policymakers. Vermont’s system allows districts a great deal of flexibility to determine their own funding levels. The state then provides equalization payments to districts based on the difference between their proposed education budget and their local ability to raise funding.

Table 2.1: State Funding Formulas (2018-19)

Funding Formulas	States
Foundation Formulas (33)	AK, AR, AZ, CA, CO, CT, FL, IA, IL, IN, KS, KY, LA, MD, MN, MT, MO, NV, NH, NJ, NM, NY, ND, NE, NV, OH, OK, OR, RI, SC, TX, UT, WA
Position Allocation Systems (8)	AL, DE, ID, NC, SD, TN, WA, WV
Hybrid Systems (3)	GA, ME, VA
State Operates as a Single District (2)	DC, HI
State Specific Systems (5)	MA, MI, VT, WI, WY

Determining the Foundation Amount

In the 33 states that currently use a foundation formula, 27 establish a single foundation amount for all districts annually through the state's budget process (Table 2.2). Two states (California and Montana) have different foundation amounts based on grade levels. Illinois and New Jersey have foundation amounts that vary by district. Nevada and Nebraska are the only two states that determine a district's foundation funding amount based on previous year expenses. In the case of Nebraska, the foundation funding amount for each district is based on per-pupil expenditures from the previous school year for the 10 districts closest in size (five larger and five smaller). For additional information about state funding formulas see Appendix B.

Table 2.2: State Approaches to Determining the Foundation Formula (2018-19)

How Foundation Amount Is Determined	States
Single Foundation Amount (27)	AK, AR, AZ, CO, CT, FL, IA, IN, KS, KY, LA, MD, MN, MO, NV, NH, NM, NY, ND, OH, OK, OR, RI, SC, TX, UT, WA
Foundation Varies Based on Grade (2)	CA, MT
Foundation Based on Previous Year Expenditures (2)	NE, NV
Varies by District (2)	IL, NJ

Funding for High-Need Student Populations

This section addresses individual student needs and characteristics, including: (1) students with disabilities, (2) English Learners (EL), (3) at-risk students, and (4) gifted and talented students. The section also describes states that incorporate the needs and challenges of school districts in remote areas and small schools in their methods for financing public schools.

Note, that the study team discusses weights, where applicable, in terms of the additional amount above base per student funding. For example, if a state provided 20 percent more funding for at-risk students, the weight would be .20. This differs from the AIR report that would have said the weight was 1.20, including the base funding amount (the "1.0").

Special Education Funding

Under the Individuals with Disabilities Education Act (IDEA), the federal government provides some funding and guidelines on how states should fund services for students requiring special education. Each state distributes this funding, combined with all other sources of education funding, through various funding mechanisms. Based on our categorization of special education funding mechanisms, there are seven distinct categories:

1. Single student weight or dollar amount
2. Multiple student weights
3. Census-based allocation
4. Resource-based allocation
5. Reimbursement
6. Categorical grant
7. State funding for high-cost students

The following information was retrieved from state statutes and regulations and, where appropriate, the citation is provided.

Some states have a hybrid system that fall into more than one category; however, states were sorted into the category with which they most closely align. Table 2.3 shows which states use which mechanism to fund special education students.

Table 2.3: State Funding for Special Education Students (2018-19)

Mechanism	States
Single student weight or dollar amount (11)	AK, LA, MD, MO, NV, NH, NY, NC, ND, OR, WA
Multiple student weights (16)	AZ, CO, FL, GA, IN, IA, KY, ME, MN, NM, OH, OK, PA, SC, SD, TX
Census-based allocation (5)	AL, CA, ID, MA, NJ
Resource-based allocation (8)	DE, HI, IL, MS, TN, VT, VA, WV
Reimbursement (5)	MI, NE, RI, WI, WY
Categorical grant (2)	MT, UT
State funding for high-cost students (2)	AR, CT
Other (1)	KS

Appendix C provides a brief description and citation for each state’s special education funding mechanism.

Single student weight or dollar amount

There are 11 states that use a single weight or dollar amount to fund special education students. Under this method, all special education students are treated the same, regardless of the actual cost or resources required. Weights vary between states. For example, in New York, any student who requires special education receives an additional weight of 1.41 (McKinney's Education Law § 3602). Similarly, in North Dakota, special education students receive an additional weight of 0.082 (NDCC, 15.1-27-03.1).

Multiple student weights

Instead of providing a single weight for all special education students, 16 states provide multiple student weights, based on the severity of disability, resources required, or specific disability. For example, New Mexico provides four weights, ranging from an additional 0.7 to 2.0, based on the severity (N.M.S.A. 1978, § 22-8-21). Texas provides additional weights, ranging from 0.1 to 4.0, based on where the student is educated and the resources required (V.T.C.A., Education Code § 42.151). South Carolina provides 10 different weights based on the student’s disability (Code 1976 § 59-20-40).

Census-based allocation

States who use a statewide, census-based number for special education funding assume all districts in the state, regardless of their actual student composition, have the same percentage of special education students. For example, Alabama assumes five percent of students receive special education services and provides that five percent with additional teaching resources (Ala.Code 1975 § 16-13-232). In Idaho,

districts receive special education funding at a rate of six percent of a district's total enrollment in kindergarten through sixth grade and 5.5 percent of a district's total enrollment in seventh through 12th grades. Idaho then uses a resource-based allocation to distribute resources to districts (I.C. § 33-1002).

Resource-based allocation

There are eight states that primarily use a resource-based allocation to fund students in special education. Under a resource-allocation model, states distribute resources (e.g. teachers, aids, specialists, and technology) instead of dollars, based on the number of students identified as special education. For example, Delaware has a higher teacher-to-student ratio for special education students (8.4) than it does for general education students (20) (14 Del.C. § 1703). Similarly, Illinois distributes teachers, aids, and psychologists based on the number of identified special education students (105 ILCS 5/18-8.15).

Reimbursement

Five states use cost reimbursement methods to support special education. The state generally defines eligible cost categories and the percentage of these costs that will be reimbursed by the state. Wyoming is the only state that reimburses 100 percent of the cost of educating special education students (W.S.1977 § 21-13-321). The state of Michigan also reimburses districts for qualified special education expenses, but caps the reimbursement at 75 percent of the cost (M.C.L.A. 388.1652).

Categorical grant

Block grant distributions are based on state allocations and can vary based on availability of funds. Utah uses a block grant distribution funding mechanism where the amount allocated is based on averages of the prior five years, with a growth factor (U.C.A. 1953 § 53A-17a-111).

Funding for high-cost students

Because of the range in costs of educating students who require special education, states will often step in to lessen the burden on districts by providing additional funding for very high-cost students. This funding mechanism is often layered on top of other funding mechanisms (e.g. New Hampshire, Massachusetts, and Maine). However, in Connecticut and Arkansas state funding is exclusively for very high-cost students.

Funding for Poverty/At-Risk Students

Although there are more than 20 methods that states use to define at-risk status, students most often defined as at-risk are students who qualify for free or reduced priced lunches through the National School Lunch Program, meaning their family income falls below 130 percent or 185 percent of the federal income poverty line, respectively. Studies have found a connection between providing additional funding for these low-income, at-risk students and increased academic success. The second most common identification method is students who do not maintain satisfactory academic progress.

Three states (Alaska, Delaware, and South Dakota) do not provide additional state funding for at-risk students. The remaining 47 states can be divided into four categories. Descriptions of the categories are

provided below in Table 2.4 and an explanation of each state’s funding mechanism for at-risk students can be found in Appendix D.

Table 2.4: State Funding for At-Risk Students (2018-19)

Mechanism	States
Single student weight or dollar amount (31)	AL, AZ, CA, CT, HI, IN, IA, KY, LA, ME, MO, MA, MI, MN, MS, MO, NH, NM, NV, NY, ND, OH, OK, OR, RI, SC, TX, VT, WA, WV, WY
Multiple student weights (8)	AR, CO, IL, KS, NE, NJ, PA, VA
Categorical grant (4)	FL, MT, UT, WI
Resource-based allocation (4)	GA, ID, NC, TN

Single Weight or Dollar Amount

There are 31 states that use a flat weight or dollar amount per student to provide additional funding for at-risk students. For example, West Virginia provides an additional \$18 per student for the total number of students enrolled in a district (W. Va. Code, § 18-9A-21). In contrast, Maine identifies students who are eligible for free or reduced price meals as at-risk and provides an additional weight of 0.15 just for those students (20-A M.R.S.A. § 15675).

Multiple Weights or Dollar Amounts

When states fund at-risk students through multiple weights or dollar amounts, it is usually a sliding scale based on the concentration of at-risk students in a district. There are eight states that use this funding mechanism. Pennsylvania uses two different additional weights (either 0.3 or 0.6), based on the concentration of at-risk students in a district (24 P.S. § 25-2502.53). Similarly, Nebraska uses seven different weights, ranging from an additional 0.0375 to 0.225, where the weight increases as the percentage of at-risk students increases (Neb.Rev.St. § 79-1007.06).

Categorical Grant

Four states provide funding for at-risk student through a categorical grant based on state appropriations. For example, Florida provided \$712,207,631 for the 2017-18 fiscal year for its Supplemental Academic Instruction program. Districts can submit a plan to the state to receive funding through this program.

Resource-Based Allocation

There are four states that use a resource-based allocation for at-risk students. Under this model, states allocate resources, like teachers and aids, based on the number of at-risk students. For example, Tennessee uses class-size reduction to provide additional resources to at-risk students. The teacher-to-student ratio increases to 1:15 class size reduction for grades K-12, which is estimated to be the equivalent of \$542.27 per identified at-risk student (T. C. A. § 49-3-361).

Funding for English Learners

All but two states – Mississippi and Montana – provide additional funding for EL students. Table 2.5 divides all 50 states into categories based on the funding mechanism used to fund EL students in that state.

Table 2.5: State Funding for English Learners (2018-19)

Mechanism	States
Single weight or dollar amount (25)	AK, AZ, AR, CA, FL, GA, IA, KS, KY, LA, MD, MO, NE, NH, NJ, NM, OK, OR, PA, RI, SC, SD, TX, VT, WY
Multiple student weights (10)	CO, HI, IN, ME, MA, MI, MN, NY, ND, OH
Categorical Grant (6)	AL, CT, ID, NV, UT, WV
Resource-based allocation (5)	DE, NC, TN, VA, WA
Reimbursement (2)	IL, WI

Additional information about how each state provides funding for EL students can be found in Appendix E. Descriptions of the categories and state examples are below.

Single Weight or Dollar Amount

Half of the states use a flat weight or dollar amount to fund EL students. Under this model, districts receive the same amount of funding per student, regardless of the concentration or student's ability. For example, Arkansas provides an additional \$338 per identified EL student (A.C.A. § 6-20-2305) and California provides an additional 20 percent through a student weight of 0.2 (West's Ann.Cal.Educ.Code § 42238.02).

Multiple Student Weights

Of the 10 states that use multiple student weights to fund EL students, some states determine weights based on the amount of time a student has been classified as an EL (e.g. Ohio [R.C. § 3317.016]), based on the proficiency of the students (e.g. North Dakota [NDCC, 15.1-27-03.1]), or based on the concentration of students in a district (e.g. Maine [20-A M.R.S.A. § 15675]). Under this model, additional funding can be provided to students with additional need.

Categorical Grants

There are six states that use categorical grants, based on state appropriations, to fund EL students. For example, Idaho appropriated \$3.82 million for the 2017-18 school year to serve all EL students in the state (2017 Idaho House Bill No. 287, Idaho Sixty-Fourth Idaho Legislature, First Regular Session – 2017). In West Virginia, a county board must apply to the state superintendent to receive EL funding (W. Va. Code, § 18-9A-22).

Resource-Based Allocation

Five states distribute monies for EL students through resources instead of through dollars or weights. In North Carolina, there is a minimum threshold districts must meet in order to receive funding. Eligible

Local Education Agencies (LEAs) or charter schools must have at least 20 students with limited English proficiency (based on a three-year weighted average headcount), or at least 2.5 percent of the students classified as limited English proficiency to receive funding. There is also a cap of 10.6 percent. Similarly, the state funding formula in Tennessee provides districts with funding for an additional teaching position for every 20 EL students and an additional interpreter position for every 200 EL students (T. C. A. § 49-3-307).

Reimbursement

Illinois and Wisconsin provide state reimbursement to districts for the additional cost of educating EL students. In Illinois, each school district is reimbursed for the amount by which such costs exceed the average per-pupil expenditure by a school district for the education of children of comparable age who are not in any special education program (105 ILCS 5/14C-12).

Funding for Gifted and Talented Students

There are thirteen states that have no state-level program for gifted and talented students in statute. Additionally, two states (Illinois and Maryland) have programs in statute, but are only funded if there is money available. The remaining 35 states have funding mechanisms for gifted and talented students that can be sorted into six categories (Table 6).

Table 2.6: State Funding for Gifted and Talented Students (2018-19)

Mechanism	States
Categorical Grants (11)	AR, CO, FL, ID, IN, ME, MT, NE, OR, UT, WI
Single weight or dollar amount (10)	AK, GA, IA, LA, MN, NV, OK, SC, TX, WY
Resource-based allocation (5)	DE, MS, OH, TN, VA
Census-based allocation (4)	AZ, HI, NC, WA
Reimbursement (3)	CT, ND, PA
Multiple student weights (2)	KY, NM

A unique challenge that states face is how to identify gifted and talented students. Parental identification generally leads to over-identification; whereas identification from a standardized test is expensive and time-consuming. Similarly, states must decide whether to define gifted and talented as high intelligence or high ability. More detailed descriptions of each state's funding mechanism for gifted and talented student can be found in Appendix F.

Categorical Grants

There are 11 states that provide funding for gifted and talented students based on categorical funding and state appropriations. In Indiana, for example, the state appropriated \$12.5 million for the 2016-17 school year. Schools can then apply to the state to receive some of that funding under the High Ability Program (IC 20-36-2-1). In contrast, there is no application process in Utah for the \$5 million under the Enhancement for Accelerated Students (U.C.A. 1953 § 53A-17a-165).

Single Weight or Dollar Amount

Eleven states provide a flat weight or dollar amount per student identified as gifted and talented. South Carolina uses this model and provides an additional 15 percent per student. There is also a district minimum of \$15,000, regardless of the gifted and talented student count (S.C. Code of Regulations R. 43-220). Louisiana only provides funding for gifted and talented students who have an Individualized Education Program (IEP). Louisiana provides an additional weight of 0.6 for gifted and talented students (2017 La. Sess. Law Serv. Hs. Conc. Res. 7 [WEST]).

Resource-Based Allocation

When funding gifted and talented students, five states primarily use a resource-based allocation system. Under a resource-allocation model, states distribute resources (teachers, aids, specialists, and technology) instead of dollars, based on the number of students identified. For example, Virginia provides one additional teacher for 1,000 students identified as gifted and talented (2016 Virginia House Bill No. 29, Virginia 2017 Regular Session). Similarly, Mississippi provides one teacher for 20 identified and participating students, and a second teacher for every 40 students (Miss. Admin. Code 7-96).

Census-Based Allocation

Under this funding model, four states assume a flat percentage of gifted and talented students in a district, regardless of the actual demographics. For example, Arizona provides \$75 per pupil for four percent of the district's student count, or \$2,000, whichever is more (A.R.S. § 15-779.03). Hawaii assumes that three percent of each school is gifted and talented and provides an additional weight of 0.265.

Reimbursement

Three states reimburse the district for part of the expenses incurred from educating gifted and talented students. In Connecticut, for example, the state only reimburses if the cost exceeds 4.5 times the average per-pupil expenditure (C.G.S.A. § 10-76a and C.G.S.A. § 10-76g).

Multiple Student Weights

Two states – Kentucky (KRS § 157.200) and New Mexico (N.M. Admin. Code 6.29.1) – provide funding for gifted and talented education based on the degree of modification a student needs and the cost of providing those modifications.

Funding for Remote and Small Schools

Some states have adjusted their school funding formulas to consider district size. States have made these adjustments to their funding formulas based on research showing that small schools/districts tend to face higher costs. Data from the United States Census shows that small districts (those with under 3,000 students) have per-pupil expenditures that are \$1,901 (16.6 percent) above the national average.¹² There are several reasons why small districts tend to face higher per-pupil costs, but most

¹² Griffith, Michael. *In Education Funding Size Does Matter*. 2017. <https://www.ecs.org/in-education-funding-size-does-matter/>

center on the fact that larger districts can take advantage of economies of scale and small districts cannot. Some states provide additional funding to all of their small districts; for example, Oklahoma provides any district with 529 or few students with additional funding.¹³ However, a number of states only provide additional funding to their small districts that are geographically isolated. These geographically isolated, small schools are often referred to as “necessarily small” schools to acknowledge that some schools, though small, must exist to serve students in certain communities. The study team found that 11 states provide small schools or districts with additional funding regardless of their location, 10 states only provide additional funding to small schools or districts that are also geographically isolated, and eight states provide additional funding for both small schools and districts and schools that are isolated (Table 2.7).

Table 2.7: Stand Funding for Remote and Small Schools (2018-19)

Mechanism	States
Small School Funding (11)	AK, CO, KA, LA, MO, NE, NM, NC, SD, VT, WY
Isolated School Funding (10)	AR, CA, FL, GA, MA, MN, MT, OR, UT, WI
Funding for Both Isolated & Small (8)	AZ, ID, MI, NY, OK, TX, WA, WV

Other Individual Student Needs and Characteristics

The 2012 AIR report also examined other state policies that could impact a district’s school funding. One issue that districts have to address are the additional costs involved in providing students with additional career and technical educational (CTE) opportunities. A 2017 study found that 47 states provide their districts with some form of additional funding to address the additional cost of CTE programs.¹⁴ The only states that do not provide additional CTE funding are Kansas, Nebraska, and New Mexico. Some states provide additional funding through a weight for each student enrolled in a CTE program; for example, Florida provides districts with 100.1 percent additional funding for each CTE student. Some states, such as Connecticut, provide funding but only to designated CTE centers. Other states, such as Kentucky, provide funding to both CTE centers and to school districts that opt to provide their own CTE programs.

There can be a different level in cost to deliver educational services based on the grade a student is enrolled in. This is due to the fact that many states have smaller class size requirements for kindergarten to third grade, thus producing a higher cost for these grades. In addition, increases in course offerings can create increased costs for high schools. The majority of states (32) provide some additional funding to districts based on the grades their students are enrolled in.¹⁵ The states that do not provide any additional grade weighting are: Alaska, Colorado, Indiana, Iowa, Kansas, Kentucky, Maryland, Mississippi, Missouri, Nebraska, New Hampshire, New York, Oregon, Pennsylvania, Rhode Island, South Dakota, West Virginia, and Wyoming.

¹³ Oklahoma Statutes: Section 70-18-201.1(B)(3)(a)

¹⁴ EdBuild, FundEd: Career and Technical Education data base, <http://funded.edbuild.org/reports/issue/cte/in-depth>

¹⁵ EdBuild, FundEd: Grade Level Funding, <http://funded.edbuild.org/reports/issue/grade/in-depth>

The cost of providing educational services in a state can vary based on a district's geographic location. Some states adjust their school funding formulas to address these differences in costs. These adjustments are commonly referred to as "Regional Cost Adjustments." A 2015 study found that 11 different states provide some form of regional cost adjustment in their school funding formula.¹⁶ In some cases these adjustments are based on the cost of incurred in regional markets (Maine), in others they are based on the cost of wages in a community (Massachusetts), while in others they are based on a cost-of-living index (Wyoming).

¹⁶ Taylor, Lori L., Options for Updating Wyoming's Regional Cost Adjustment, October 2015.
<http://www.wyoleg.gov/InterimCommittee/2015/SSRRpt1001AppendixC-1.pdf>

III. Updating 2012 AIR Study Analyses

Local school districts may vary in their costs of providing an education to students for two basic reasons. The first is choices made by district policymakers that may increase per-student costs. These may include policies for offering smaller class sizes or a wide range of course offerings. The second reason includes factors impacting costs that are beyond the control of local policymakers, such as the number of special need students enrolled in the district (such as at-risk, EL, or special education students); the size of a district's student enrollment; or the cost of input prices for providing education services (e.g. the level of wages and benefits needed to attract and retain staff, the costs of instructional materials and technology, and the cost of energy). The American Institutes for Research (AIR) report referred to these three uncontrollable cost areas as: 1) student needs, 2) scale of operations, and 3) geographic differences in resource prices.

In order to provide a set of options for Nevada policymakers to consider, the AIR initially attempted to identify a set of peer states with similar student and geographic characteristics to Nevada's school districts from which to draw best practices for adjusting funding to address the three uncontrollable cost areas. However, due to the unique circumstances found in Nevada (e.g. a small number of school districts and the existence of one district that is much larger than the state's other districts), AIR was unable to identify any states that were similar to Nevada across all of its selection criteria. Instead, it found subsets of states that were similar to Nevada in one or two areas. As a result, AIR instead identified the states with the largest funding adjustments in each of the three cost areas. On the following page, Table 3.1 on the following page shows how AIR ultimately identified states that were similar to Nevada by the various selection criteria organized under the larger categories of student need, scale, and revenue sources.

Following a similar analysis, the study team also found there is not a subset of states reasonably similar to Nevada across all relevant dimensions. As a result, the basic analytical approach used by AIR is followed here. The starting point for the study team consisted of the states identified by AIR as providing robust funding adjustments for each of the cost factor areas (student need, scale, and geographic cost differences). The study team reviewed the latest information for the funding adjustments (e.g. adjustments for students in poverty, EL students; adjustments for district size and population density; and adjustments for geographic cost differences) for each of the states listed. There were no substantive changes to these adjustments in any of the states identified by AIR.

Table 3.1: States with Similar Characteristics Identified by AIR

Student Needs			Scale of District Operations					Revenue Sources		
Percent Poverty or FARM Eligible	Percent English Learners	Percent Special Education	Student Density	Herfindahl Index ¹⁷	Percent of Districts by Locale ¹⁸	Percent of Statewide Enrollment by Locale	District Enrollment Size	Percent of Revenue from Local Sources	Percent of Revenue from State Sources	Percent of Revenue from Federal Sources
CO	AZ	CT	AK	SC	FL	FL	FL	CA	AL	AL
DE	CA	IA	FL	UT	MA	GA	GA	GA	KY	IN
KS	CO	LA	ID	WV	MD	MD	KY	KS	SC	KY
MT	KS	MO	MT		NJ	UT	LA	KY	WV	MT
SD	OR		ND		RI	VA	MD	LA		SD
WY	TX		NM		UT		NM	MI		TN
	UT		WY				TN	OK		TX
							UT	OR		WA
							VA	SC		WV
								TN		
								WV		

Source: AIR

¹⁷The Herfindahl Index is used to measure the distribution of students in schools within a district. The index ranges from 0 to 1. Lower values indicate a more even distribution of enrollment across a district's schools, while higher values a more uneven distribution of enrollment across schools.

¹⁸ Locale refers to the locale categories used by the National Center for Education Statistics of U. S. Department of Education to classify school districts by geographical designations: city, suburban, town, and rural.

The following sections identify the implicit funding weights for each student group. Note, that the study team discusses weights in terms of the additional amount above base per student funding. For example, if a state provided 20 percent more funding for at-risk students, the weight would be .20. This differs from the AIR report that would have said the weight was 1.20, including the base funding amount (the “1.0”).

At-Risk/ Poverty

Table 3.2 presents the 10 states the AIR report identified as having the highest “implicit” poverty funding weights. These implicit weights were determined using a regression analysis to measure the relationship between student free and reduced lunch (FRL) concentration and state and local per-student funding. While these 10 states showed the highest rate of increase in state and local funding as FRL concentrations increased, they were not necessarily the highest spending states in terms of overall per-pupil state and local funding. The state and local revenues in six of the 10 states (Arkansas, Colorado, Georgia, Kentucky, South Dakota, and Utah) were well below the 2010 national average of \$10,870.¹⁹ Weights are shown as the additional funding amount.

Table 3.2 Implicit Poverty Weights

State	Implicit Poverty Weight
Minnesota	.34
South Dakota	.28
New Jersey	.27
Arkansas	.25
Ohio	.25
Massachusetts	.18
Indiana	.17
Kentucky	.17
Utah	.16
Connecticut	.13
Average	.22

Table 3.3 provides an update to FY 2018 of the at-risk funding mechanisms for these 10 states. None of the states significantly changed the method by which they provided additional funding to poverty or at-risk students from the FY 2011 information presented in the AIR report.²⁰ Of the five states with specific poverty weights or per poverty student dollar amounts, three made relatively modest changes to the weight or amount, while two (Connecticut and Kentucky) were unchanged.²¹ Other changes since 2011

¹⁹ Cornman, S.Q., Young, J., Herrell, K.C. (2012). *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2009–10* (Fiscal Year 2010) (NCES 2013-305). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch>.

²⁰ State funding formula information used in the AIR report was largely taken from the 2011 edition of Verstegen’s *Quick Glance at School Finance: A 50 State Survey of School Finance Policies and Programs, Volume I*. Retrieved from <https://schoolfinancesdav.wordpress.com/a-50-state-survey-of-school-finance-policies-2011/>

²¹ The at-risk equalization weights in New Jersey were reduced from 1.47 for districts with concentrations less than 20 percent and 1.57 for districts with concentrations greater than 60 percent to 1.41 for concentrations less than 20 percent and 1.46 for concentrations greater than 40 percent. Arkansas’ per eligible student amounts for its National School Lunch Categorical grant program increased from \$1,488 for concentrations greater than 90 percent, \$992 for concentrations ranging from 70 percent to

include a change in the student count used in Indiana’s Complexity Index calculation from students eligible for FRL to those eligible for the Temporary Assistance for the Needy Families (TANF) program, the Supplemental Nutrition Assistance Program (SNAP), or those in foster care. Utah consolidated annual appropriations for several programs targeted to at-risk students into the Enhancement for At-Risk Students Program Grant at about the same level of funding.

Because the changes in these states’ poverty student funding programs were relatively minor since publication of the AIR report, APA did not see a need to update the implicit poverty weight analysis.

Table 3.3: Funding Mechanisms for Poverty Students for Top 10 States Identified in AIR Report

	FY 2018 Poverty Funding Mechanisms
Arkansas	National School Lunch Categorical grants, equaling: greater than 90% FRL: \$1,576 per eligible student; 70%–90% FRL: \$1,051 per eligible student; Less than 70% FRL: \$526 per eligible student. State also provides Alternative Learning Environment (ALE) funding of \$4,640 per FTE per ALE student.
Connecticut	Weight of 1.33 based on Title I eligible student count. In FY 2019 the formula will change to FRL, 1.3 weight + another 5% per FRL student > 75%
Indiana	Provides funding via Complexity Grant formula, based on count of students eligible for TANF, SNAP, or in foster care. Complexity grant: \$3,539 (FY 2017) X complexity index (percentage of district students eligible for TANF, SNAP, or in foster care).
Kentucky	Weight of 1.15 applied to count of students eligible for free lunch
Massachusetts	Provides additional amount per eligible, poverty student based on concentration deciles. Per-student amounts range from \$3,816.89 to \$4,180.91. Poverty students are defined as being eligible for SNAP, Transitional Assistance for Families with Dependent Children, Medicaid, or are in foster care.
Minnesota	Provides Compensatory Revenue equal to: (Basic Formula Allowance – \$415) x .6 x Compensatory Pupil Units (1.0 free lunch + 0.5 reduced-price lunch)
New Jersey	Provides At-Risk Equalization Aid using sliding scale of weights from 1.41 for districts with less than 20% FRL up to 1.46 for districts with greater than 40% FRL (FY 2017)
Ohio	Calculates an index based on the percent of economically disadvantaged students in a district compared to the state average percentage. The formula is: $\$272 \times ((\text{number at-risk students in district} / \text{number at-risk students in state})^2 \times \text{number of at-risk students in district})$
South Dakota	No funding program targeted to at-risk or poverty students other than federal Title I
Utah	Provides annual appropriation for the Enhancement for At-Risk Students Program. Funds are distributed based on count of low-performing, poverty, high-mobility, and EL students

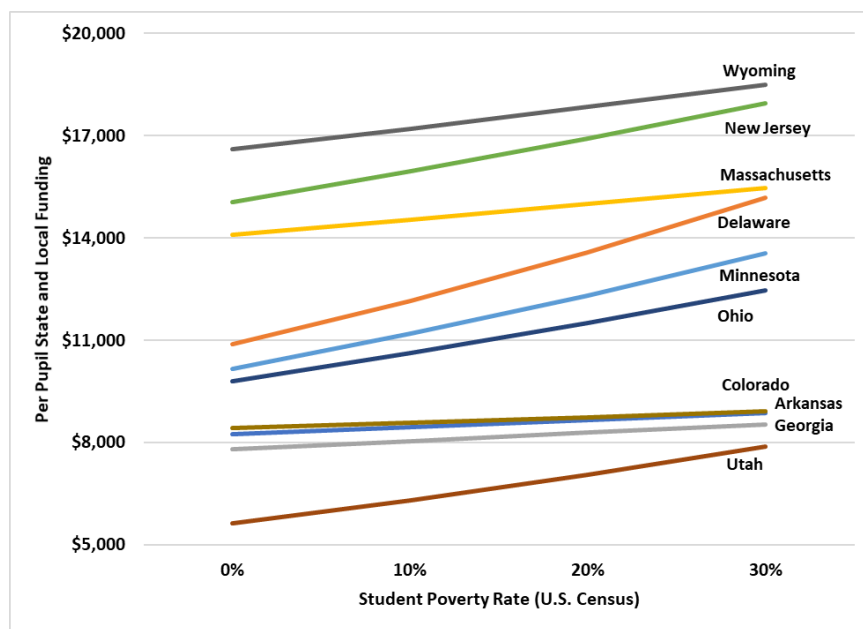
However, a more recent analysis of state funding for poverty students is available from the Education Law Center (ELC) at Rutgers University. In their most recent report, *Is School Funding Fair*,²² ELC provides a similar comparison of how state and local per-pupil funding changes as poverty concentrations in

90 percent, and \$496 for concentrations less than 70 percent to \$1,576, \$1,051, and \$526, respectively. The per eligible student poverty adjustment used in Massachusetts increased from a range of \$2,561 to \$3,167 in 2011 to \$3,817 to \$4,181 in 2018.

²² Baker, et al. (2018).

school districts increase using FY 2015 data (the AIR report uses FY 2010 data). This analysis plots total state and local per-pupil funding for districts with poverty concentration levels of 0 percent, 10 percent, 20 percent, and 30 percent. Those states in which funding increases with poverty levels are labeled “progressive,” while those in which funding stays flat or decreases with poverty are labeled “regressive.” Six of the top 10 states in this analysis overlap with the states identified by AIR. The top 10 states from this analysis consist of Arkansas, Colorado, Delaware, Georgia, Massachusetts, Minnesota, New Jersey, Ohio, Utah, and Wyoming. Dropped from the AIR list are Connecticut, Indiana, Kentucky, and South Dakota. The states not found on the AIR list are Colorado, Delaware, Georgia, and Wyoming. Figure 3.1 shows graphically the trajectory of state and local funding in these states as concentration of poverty increases. Although Utah has the lowest overall level of state and local per-pupil funding, its finance system provides the greatest rate of per-pupil funding increase based on concentrations of poverty. The two states with the highest per-pupil state and local funding, Wyoming and New Jersey, rank sixth and fifth, respectively, in the rate of increased funding by poverty level.

Figure 3.1: State Education System Funding Progressivity



Source: Education Law Center, Rutgers.

Table 3.4 summarizes the funding mechanism for students in poverty or who are at-risk in the four states not included in the AIR poverty analysis.

Table 3.4: Funding Mechanisms for Poverty Students in States Not Included in the AIR Report

State	FY 2018 Poverty Funding Mechanisms
Colorado	At-risk count includes FL eligibility and students excluded from state assessments due to limited English proficiency. Weights range from 1.12 to 1.30 depending on at-risk %.
Delaware	Provides 1 unit (teacher FTE) per 250 students.
Georgia	Provides funding through three different programs: <ul style="list-style-type: none"> • Early Intervention Program, uses following weights to provide extra teachers at 11:1 student/teacher ratio: 2.0348 Kindergarten; 1.7931 Grades 1-3; 1.7867 Grades 4-5 • Remedial Education Program, uses weight of 1.3087 to provide extra teachers at 15:1 student/teacher ratio for grades 6-12 • Alternative Education Program, used weight of 1.4711 to provide extra teachers at 15:1 student/teacher ratio for grades 6-12 Based on counts of students performing below grade level, in danger of academic failure or eligible for Title I.
Wyoming	Provides teacher tutors, additional student support staff, and extended learning time based on free and reduced-price lunch counts. Also offers Economically Disadvantaged Youth program: \$500/ECY if school's FRL > 150% of state average per school type.

English Learners (ELs)

Table 3.5 shows the states with the largest explicit (statutory) weights presented in the AIR report along with an update to the weights in effect for FY 2018. The majority of the weights have not changed between 2011 and 2018. However, the weight in several states did change, with the largest difference occurring in Georgia, where the EL weight increased from .53 in 2011 to 1.56 in 2018. The weight in Florida increased slightly from .15 to .21, while the weights in New Mexico and New Jersey were reduced slightly, from .50 to .35 in New Mexico and from .50 to .47 in New Jersey.

Table 3.5: States with Largest Explicit EL Weights from AIR Report

State	AIR Report (2011)	2018 Weights
Maryland	.99	.99
Missouri ¹	.60	.60
Georgia	.53	1.56
Maine ²	.53	.53
Oregon	.50	.50
New Mexico	.50	.35
New Jersey	.50	.47
Kansas ³	.40	.40
Oklahoma	.25	.25
Hawaii ⁴	.23	.23
Iowa	.22	.22
Vermont	.20	.20
Florida	.15	.21
Arizona,	.12	.12
Texas	.10	.10
Average	.39	.44

¹ In districts where EL population exceeds 1.94% or ADA

² Weight of 1.70 if < 15 EL students, 1.50 if 15–251 EL students, and 1.53 if >251 EL students

³ Greater of 1.40 times EL FTE enrollment or 1.185 times all EL enrollment

⁴ Weights from 1.06 if fully English proficient, to 1.39 if limited proficiency, to 1.94 if non-English proficient.

Special Education

The 2012 AIR report took a different approach to reviewing the methods used in state education funding formulas to provide additional resources for serving students eligible for special education services.

Rather than reviewing the various adjustments currently used by the states, it instead described a range of student weights based on the findings of the most recent special education cost study conducted by AIR for the Office of Special Education Programs (OSEP) of the U.S. Department of Education.²³ This study examined the pattern of spending for special education over a 30-year period from 1969 to 2000. Based on these findings, it developed a series of per-pupil expenditure estimates by disability type along with cost ratios in comparison to the cost of educating regular education students. However, this study was published in 2005 using data that ends with the 1999-00 school year. As a result, these data fail to capture the impact on costs of more recent advances in services for students with disabilities, such as response to intervention (RTI). However, the research team does concur with AIR that the complexities of funding special education programs limits the utility of comparing the approaches used in states' education funding formulas. Instead, this report relies on the recommendations of education practitioners and education research, as determined through the professional judgment and evidence-based analyses presented in later chapters.

Size (Scale) and Isolation Cost Adjustments

Twenty-nine states provide some sort of an explicit or implicit funding adjustment for differences in the scale of operations of districts or schools (typically determined by student enrollment that falls below a specified threshold), for low population densities within a district, for geographically isolated schools, or for some combination of two or more of these factors. The mechanisms by which states make these adjustments are also varied, ranging from additional student weights, to more complex regression formulas that account for multiple factors, to simple categorical flat grants.

The AIR report listed the 10 states that its analysis found to have the largest “implicit” student weights for scale and/or density. AIR used a regression model similar to the one used to estimate implicit poverty funding weights to calculate its scale/density weight adjustments. The 10 states identified by AIR were, ranked from the highest to lowest implicit weights were:

1. New York;
2. New Mexico;
3. Colorado;
4. Arizona;
5. Texas;
6. Nebraska;
7. Massachusetts;
8. Oregon;
9. Kansas; and
10. California

²³ Chambers, J. G., Pérez, M., Harr, J. J., & Shkolnik, J. (2005). Special education spending estimates from 1969–2000. *Journal of Special Education Leadership*, 18(1), 5–13.

The implicit weights calculated for these states ranged from about 1.80 in California to 3.25 in New York for districts with total enrollment of fewer than 100 students.

Because the AIR report is relatively recent, rather than recalculating the implicit weights from its report, the study team reviewed the funding formulas of all 50 states, relying primarily on Verstegen's 2015 school finance policies survey,²⁴ to determine if there were any significant changes in their scale/density adjustments that may have affected AIR's rankings. This review found that in nearly all states, including all 10 of the states identified by AIR, only minor changes have occurred since that report. In most of these cases the changes involved adjustments to dollar amounts, indices, or other factors to account for inflation or changes in states' per pupil base funding amounts. One state (Ohio) repealed its small district adjustment along with the rest of its school funding formula in 2011. North Dakota moved from a formula adjustment based on small and isolated schools to one based on school district density. Based on the results of the study team's state policy review, we conclude that no significant changes to the AIR rankings occurred in the time since their report was published.

Geographic Cost of Education Adjustments²⁵

Studies of the costs of providing educational services have documented that educating students does not cost the same across school districts. These costs may vary for a number of reasons, some of which are under the control of local school officials (such as decisions about the size of classes or about curricular offerings), but other factors impacting costs cannot be controlled by local school districts. For example, local district officials cannot control the effects of operating in geographical locations that may lack certain desirable amenities (for example, access to the arts or athletic events) or are affected by extreme weather conditions. When distributing funds through a state finance formula, it is appropriate for policy makers to adjust district resources to account for differences in these uncontrollable costs.

The primary way in which geographic location impacts costs is through the price school districts pay for various inputs needed to provide educational services. These may include the price districts must pay to buy materials (e.g. books and technology); to pay for physical inputs, such as utilities and building maintenance; and, most importantly, the price of personnel, such as teachers, administrators, aides, support staff, etc. The importance of personnel costs is reflected in the fact that the bulk of any district's budget is spent on employee salaries and benefits.²⁶ While all districts purchase these inputs, the specific amount and mix of inputs needed in any individual district depends on the characteristics of that district. For example, a district located in a very warm (or very cold) area will need to spend more on energy than a district located in a more temperate area. Similarly, a district's geographic location may also influence its specific input prices. For example, a district in an area with a high cost of living will need to offer higher wages to attract and retain employees.

²⁴ Verstegen. (2015).

²⁵ Much of this section is taken from an analysis prepared by Jennifer Imazeki in Imazeki, J. (2016, June). *A Comparable Wage Index for Maryland*. Denver, CO: APA Consulting.

²⁶ Odden, A.R. & Picus, L.O. (2014). *School Finance: A Policy Perspective 5th Edition*. New York, NY: McGraw-Hill Education.

Over time, a number of states have adopted some form of adjusting for geographical variation in these costs. Table 3.6 lists states which currently include a geographic cost-of-education adjustment in their state school funding formulas.

Table 3.6: Types of Geographic Cost of Education Adjustments

State	Type of Adjustment
Alaska	Cost-of-Education Adjustments
Colorado	Cost-of-Living Adjustments
Florida	Cost-of-Living Adjustments
Massachusetts	Cost-of-Living Adjustments
Maryland	Cost-of-Education Adjustments
Missouri	Cost-of-Living Adjustments
New York	Cost-of-Living Adjustments
Virginia	Cost-of-Living Adjustments
Texas	Cost-of-Education Adjustments

Three of the most common geographic cost-of-education adjustments are: (1) cost-of-living adjustments, (2) comparable wage indices, or (3) hedonic wage indices. A description of each approach and its advantages and disadvantages is presented below.

Housing-Based Cost-of-Living Adjustment

The first option is to adjust for the cost of living by computing the price of a basket of goods associated with each location (similar to how the Consumer Price Index (CPI) is calculated across time). Typically, that local basket of goods is dominated by housing costs, although the prices of other goods are also usually included.²⁷ This approach has the advantage of being straightforward to calculate and update over time, as long as data on housing costs and other items in the basket are available. The major disadvantage of a housing-based, cost-of-living adjustment is that it does not include any information about area amenities that may also impact the wages needed to attract and retain workers. Workers will generally accept lower wages to work in locations with pleasant amenities, such as desirable weather or vibrant cultural life. Thus, even though housing costs are higher in such locations, wages may not need to be equally high. A cost-of-living adjustment based primarily on housing and other consumer costs will tend to overestimate the wage differential needed to attract and retain school employees in locations with high costs of living and underestimate it in locations with low costs of living.

Comparable Wage Index

A Comparable Wage Index (CWI) is calculated by measuring the variation in non-teacher wages across localities. A CWI therefore can account for the impacts of both cost of living and area amenities. The assumption is that workers who are similar to teachers in terms of their levels of education, training,

²⁷ McMahon, W.W. (1996). Intrastate Cost Adjustments. In W.J. Fowler, Jr., (Ed.), *Selected Papers in School Finance, 1994* (NCES 96-068) (pp. 89-114). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

and job responsibilities will have similar preferences as teachers. For example, if non-teacher workers in municipality A are paid, on average, 10 percent more than non-teacher workers in municipality B, then the CWI would suggest that district employees in municipality A should receive 10 percent more revenue for salaries than in municipality B. By examining the regional wage differentials of a large sample of workers who have characteristics similar to teachers, the CWI implicitly accounts for a wide range of factors that influence the salary levels necessary to attract teachers to live and work in particular districts or regions. These include factors, such as cost of living and desirability of place, including climate, cultural amenities, safety, commute times, and recreational opportunities. In comparison, with a hedonic index, the analyst must identify each appropriate variable to be included in the regression equation along with a data source (if one exists). If the analyst miss-specifies the equation or is unable to obtain valid data for one or more of the identified factors, the result of the analysis will be biased, resulting in the cost index over- or under-adjusting school system revenues. Further, by relying on data external to school districts, the CWI specifically excludes cost differences among districts that are under the control of boards of education, such as actual district wages and working conditions, as the economic literature suggests.²⁸

Specifically, following Taylor and Fowler (2006), a CWI is created by estimating the following equation:

$$\text{LnAnnualSalary}_i = \beta_W W_i + \beta_O O_i + \beta_I I_i + \beta_R R_i + \varepsilon_i$$

In this equation:

- The dependent variable is the natural log of annual salary;
- W_i is a vector of characteristics of worker i ;
- O_i is an indicator variable for worker i 's occupation;
- I_i is an indicator variable for worker i 's industry;
- R_i is an indicator variable for the region that worker i lives in; and
- ε_i is an idiosyncratic error term.

The resulting coefficients are then used to predict a wage in each region for a worker with average characteristics (i.e. average values of all worker characteristics).

Estimation of this model requires data on individual worker characteristics as well as industry, occupation, wages, and location. These variables are all available in the American Community Survey, which is administered annually.²⁹ The American Community Survey (ACS) is an ongoing national survey administered by the U.S. Census Bureau, sent to 3.5 million people each year, collecting information on

²⁸ See Fowler, W. J. Jr. & Monk D. H. (2001). *A Primer for Making Cost Adjustments in Education*. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement and Taylor, L. L., & Fowler Jr, W. J. (2006). *A Comparable Wage Approach to Geographic Cost Adjustment*. Research and Development Report. NCES-2006-321. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics.

²⁹ In 2000 and earlier, the relevant variables were collected on the long form of the decennial census. Taylor and Fowler (2006) discuss how to use Occupational Employment Statistics data from the Bureau of Labor Statistics to update a CWI in the years between censuses; thus, annual adjustments can still be made between census years prior to 2005 when the relevant variables became available annually as part of the American Community Survey.

income, housing, education, and migration, as well as the employment variables already mentioned. The ACS replaced the long form of the decennial census and thus, is the only national source of this type of information. Data with the individual responses necessary to compute a CWI are available in the ACS Public Use Microdata Sample for areas with at least 100,000 residents (called PUMAs or Public Use Microdata Areas). A CWI for any PUMA is therefore relatively straightforward to create and can easily be updated on an annual basis. A CWI also has the advantage of being clearly beyond the control of local districts; it does not use any school-generated data. It can also be used, or easily adjusted for use, for all labor costs (e.g. certified staff, non-certified staff, teachers, administrators, or classified staff).

In contrast, a CWI assumes comparability of workers. The CWI captures average preferences for a location among all non-teacher workers, so using a CWI to adjust for district wage costs assumes teachers have similar preferences as other workers and therefore require similar wage adjustments. This assumption could be strengthened by estimating the CWI with a sample of workers more closely aligned with teachers (e.g. workers with college degrees or workers in industries that require education levels and/or job responsibilities similar to teaching). However, if teacher preferences are systematically different than other worker preferences—an unlikely possibility—then a CWI may not be appropriate.

A CWI is also intended to capture variation across labor markets, generally measured at a broad geographical level (e.g. across a metropolitan area). The smallest area for which a CWI value can be calculated using the ACS data is a PUMA (areas with at least 100,000 residents). In densely populated regions, a PUMA may represent one part of a city or county, but in sparsely populated regions, a PUMA may span multiple counties. A CWI cannot measure cost variations across districts within the measured geographical area, so all districts within that area would necessarily have the same index value.³⁰ This drawback is related to another potential concern about CWIs: a CWI does not measure variation in wages across districts due to school-specific working conditions. As discussed in the previous section, it is not clear that the state *should* make adjustments for the impact of student characteristics on wages. That said, if a state decided to make such adjustments anyway, a CWI measure would not include variation in wages because of school-specific conditions.

Hedonic Wage Index

Hedonic wage indices are calculated by breaking down variation in current wages due to a number of different identifiable variables. Thus, hedonic wage indices can capture variation due to both geographic location characteristics and student characteristics. Following Chambers (1998), a hedonic wage index for teachers is created by estimating the following equation:

$$\ln \text{TeacherSalary}_i = \beta_T T_i + \beta_D D_i + \beta_C C_i + \beta_G G_i + \varepsilon_i$$

In this equation,

- The dependent variable is the natural log of a teacher's annual salary;

³⁰ This is likely to be less important in states with geographically large districts and/or districts that line up with established municipal boundaries, such as Maryland where school district boundaries coincide with county lines.

- T_i is a vector of characteristics of teacher i (the most commonly included are gender, race, education, certifications, experience, and any other available measures of teacher quality, such as measures of effectiveness or test scores);
- D_S is a vector of discretionary cost/working condition variables in district S (such as class size);
- C_S is a vector of uncontrollable cost/working condition variables in district S (the most commonly included are the percentages of high-need or at-risk students);
- G_S is a vector of characteristics for the region that teacher i lives and works in (such as housing prices and area amenities like weather, crime or population density); and
- ϵ_i is an idiosyncratic error term.

The resulting coefficients are then used to predict a wage for an average teacher (with state average values of the variables in T_i) in each district, holding constant the discretionary cost variables.

The data required to estimate this model will depend on the specific variables included. Though the most commonly included variables have been noted above, it is important to recognize that the specific choice of variables to include is ultimately up to the analyst. This can have some benefits, as the model can generate estimates of the impact of specific variables that may be of particular interest to the state. For example, the hedonic method can reveal how much of the locational variation is coming from housing costs, versus how much locational variation is coming from preferences for area amenities (e.g. low crime or desirable weather). Additionally, the hedonic approach explicitly captures and controls for the impact of student characteristics on teacher wages, and thus can generate a distinct value for each district.

In contrast, there may be some variables (e.g. measures of teacher quality or area amenities) that should theoretically be included (because theory and previous research suggest they impact teacher wage costs), but that are excluded in practice due to lack of data. This creates a potential concern: because the model uses directly observed teacher salaries, which are subject to district control, any variation in teacher salaries due to variables that are not specifically included in the model will either (1) be relegated to the error term (and thus left out of the resulting index values), or (2) create bias (potentially of unknown direction and size) in the coefficients of included variables. In both cases, the resulting index will provide a potentially biased measure of true cost variations. Of particular concern is that, to the extent that unobserved/excluded variables are correlated with included cost factors, the hedonic index may overestimate or underestimate true costs. For example, if districts with more special needs students are also less efficient than districts with fewer special need students, then the coefficients on student variables may be biased upward, rewarding districts with extra revenue for their inefficiency.

It is tempting to try to make up for missing data by including as many specific cost and control variables as possible. However, doing this creates some issues. Including additional variables can reduce the precision with which all the coefficients are estimated; this is particularly salient in states with relatively few districts, such as Nevada. (i.e. smaller samples restrict the number of variables that can be included in the model.) It is also particularly salient when the additional variables are correlated with other

variables already in the model. Furthermore, a larger and more complex model becomes increasingly difficult to update over time. That last point is perhaps the largest drawback of the hedonic approach in general, especially for generating a measure to be used in state policy. The data requirements and statistical complexity of the hedonic approach make calculating and updating even a relatively simple hedonic wage index significantly more difficult and time-consuming than either of the alternative approaches.

Comparable Wage Index versus Hedonic Wage Index

Economic theory clearly suggests that the cost-of-living approach is inferior to the other two approaches. Although all three methods can account for the impact of housing and other costs on wages, the cost-of-living approach fails to capture the impact of area amenities that affect wages. With that in mind, this analysis focuses on the relative merits of a comparable wage index and a hedonic wage index.

When attempting to capture variation in the impact of geographic location on district salaries, the comparable wage approach has multiple benefits over the hedonic approach. First, unlike a hedonic model, a comparable wage model does not require an analyst to decide which specific area costs and amenities to include. With the comparable wage approach, the overall impact of all relevant variables is simply captured by the regional indicator variables. This decreases the chance that the results will be systematically biased and reduces the “noise” in the estimates. Second, the data needed to estimate a comparable wage model are easily accessible on public government websites maintained by federal agencies. By contrast, the hedonic approach requires data on all the specific variables an analyst chooses to include. Generally, these data must be gathered from multiple sources. Sometimes, they can only be gathered through individual data requests, making updates to the index much more cumbersome. There is also a higher chance that data will either stop being collected or that specific variables will change or be defined differently by the collecting agency. Finally, because the comparable wage approach relies on data that are completely outside the control of local school districts, it cuts out any possibility of districts manipulating the system to receive additional revenue (e.g. offering inefficiently high salaries).

One aspect of the hedonic model that may seem advantageous is that it specifically includes student characteristics. Research shows that student characteristics (as variables) do have an influence on teacher salaries. However, if the intention is to use the resulting model to generate a funding adjustment, then the inclusion of student characteristics may provide little benefit. As discussed above, it is unclear whether it is appropriate to compensate districts for the higher wage costs associated with factors, such as the share of special needs students, because there are many ways for districts to address teacher preferences about student characteristics other than offering higher salaries. Although these variables need to be included as controls in any model using actual teacher salaries as the dependent variable, it may not be appropriate to incorporate variation in those variables when calculating the aid adjustment for wage costs. But if that variation is not going to be included anyway, then the comparable wage approach is preferable for the reasons stated above.

If for some reason a state wants to include student characteristics, it is important to recognize that an index based on a hedonic model is no longer a clean measure of the impact of geographic location. Instead, an index based on a hedonic model conflates the impact of both geographic location and district characteristics on wages. Although there are situations where this might be desirable (such as analyses investigating the relative impacts of different variables), it is likely to be problematic in the context of school funding formula adjustments because most states have separate adjustments for those same district characteristics. Typically, analysts estimate the costs of a student characteristic, such as poverty, by looking at the characteristic's impact on *total* expenditures, since student characteristics are likely to require districts to hire more teachers, or buy higher levels of other inputs, in addition to offering higher wages. These costs are then included in state aid formulas separately from adjustments for geographic location, which primarily impact wages. If a state has these separate adjustments for student characteristics, then it may be problematic to include the same student characteristics in an adjustment primarily intended to capture the impact of geographic location on wages. Including student characteristics in such an adjustment may lead to overall revenue adjustments that are larger than necessary for districts with higher concentrations of special needs students.

Finally, one potential benefit of the hedonic approach relative to a CWI is that a hedonic model includes individual area variables. This means a distinct value can be calculated for each individual district, even if student characteristics are held constant. In contrast, a CWI generates the same value for all districts in the same labor market or population center. In practice, this is likely to have relatively little impact because many area variables will have similar values within labor markets. Still, the identical values generated under the CWI could be more difficult to explain politically.

Summary

To summarize, there are three commonly accepted methods used by analysts to capture the geographic variation in the costs of providing education services. These are cost-of-living, CWI, and hedonic wage models. Because of the importance of the geographic variation in wage costs on school district budgets, the focus of this analysis has been primarily on variation in educator wages. While each of these approaches has strengths and weaknesses, the CWI approach has become commonly used in state policy because of the relative simplicity of the model and the availability of data. A CWI is relatively straightforward to create and update on an annual basis; it also has the advantage of being clearly beyond the control of local districts, as there are no data used that are generated by schools. In contrast, the data requirements and statistical complexity of the hedonic approach make calculating and updating even a fairly simple hedonic wage index more difficult than either of the alternative approaches. A hedonic model also conflates variation due to geographic location with costs associated with student characteristics, such as poverty. This may be particularly problematic when those costs are already accounted for elsewhere in the funding system.

IV. Professional Judgement Approach

Introduction and Overview

This chapter presents the results of the professional judgment (PJ) approach. The PJ approach utilizes educator experience and expertise to specify the resources representative schools and school districts need to meet state standards and requirements. These resources can then be “costed out” by applying salary and benefit information and the prices of other resources (such as for technology) to determine the level of funding needed at a per-student level.

For this 2018 study, the PJ approach was implemented in a targeted manner through a limited number of panels. These panels discussed the resources needed to serve students with identified needs—at-risk students (often based on qualification for free and reduced lunch), English Learners (ELs), special education students, and gifted students—above and beyond what might be needed at a “base” level to serve all students. These additional resources are then represented as a series of adjustments, or “weights,” relative to the base cost.

PJ Panel Design

APA conducted three professional judgement panels, one to address the resources needed to serve at-risk students, one for EL resources, and one for special education and gifted resources. Each panel included 7–10 Nevada educators, including a combination of classroom teachers, principals, instructional administrators, district administrators, and school business officials. To identify panel participants, APA worked with the Nevada Department of Education (NDE), who reached out to district superintendents across the state to recruit participants based on different roles (teachers, school administrators, district staff) and to provide geographic representation. A total of 23 panelists participated in the three PJ panels. A list of panel members is provided in Appendix G of this report.

Panels were held in April 2018 in Las Vegas. Panelists did not receive monetary compensation for their participation, though meals were provided.

Resources discussed by the panels included: school-level personnel, non-personnel costs, additional supports and services, and district-level resources. Given that resources for each of the targeted student groups is above a base set of resources, but that developing a new 2018 PJ base cost was outside of the scope of the study, each panel reviewed the resources identified as needed at the base level during a 2015 PJ study conducted by APA.

Creating Representative Schools

The PJ panels identified resources for a set of representative schools, which were designed using statewide average characteristics (including size and grade configuration) to represent schools across the state. The school sizes and configurations were determined as a part of the 2015 PJ study. By creating representative schools based on state averages, it allowed panelists from different schools and districts from around the state to “meet in the middle,” meaning that the schools might not look like their home schools specifically, but were not so large or so small that they could not envision them and

what resources would be needed. The approach also develops per-student figures that could be applied in each unique district in Nevada, based on the district’s actual enrollment figures and demographics. Each panel then addressed three different levels of need for a given student group:

- **At-risk panel:** discussed resources needed at three different concentration levels (if a school had 25 percent, 50 percent, or 75 percent of its students qualifying as at-risk).
- **EL panel:** identified resources for EL students based on three different language acquisition levels on a continuum from entering to monitoring, using World-Class Instructional Design and Assessment (WIDA) language proficiency standards (L1/L2, L3/L4, and L5/L6). The total percentage of EL students was 25 percent, with the proportion in each category varying by school level.
- **Special education panel:** determined resources for three different levels of need—mild, moderate, and severe—related to the percentage of time that a student is in the general education classroom (80 percent or more, 40–79 percent, and less than 40 percent, respectively). Using the statewide average of 12 percent, that translated to seven percent in the mild category, three percent in the moderate category, and two percent in the severe category.

The representative schools used in the panel are shown in Table 4.1.

Table 4.1: Representative Schools

	Elementary School (K-5)	Middle School (6-8)	High School (9-12)
Enrollment	450	750	1,300
Identified Need Populations			
At-risk			
25% concentration	113	188	325
50% concentration	225	375	650
75% concentration	338	563	975
EL (25%)			
L1, L2	32 (7%)	30 (4%)	52 (4%)
L3, L4	68 (15%)	113 (15%)	95 (7%)
L5, L6	14 (3%)	45 (6%)	78 (6%)
Special Education (12%)			
Mild (7%)	32	53	91
Moderate (3%)	14	23	39
Severe (2%)	9	15	26

Summarizing Nevada State Standards

Prior to the commencement of any PJ panel discussions, all panelists reviewed a specific, APA-prepared set of background materials and instructions. In particular, panelists were instructed to identify the resources needed to meet all Nevada standards and requirements (Appendix H). APA prepared a brief

summary document of all of the expectations that the state has for students, schools, and districts, which was then shared with panelists. The document was not meant to be exhaustive, as all panel participants were experienced educators in Nevada; instead, the document was meant to highlight key or recently revised expectations, such as Nevada's new assessments and content standards. This document was reviewed by Nevada Department of Education staff to ensure accuracy.

Professional Judgment Panel Procedures

Once panelists were provided with instructions and background information to guide their efforts, the PJ panels convened. Two APA staff members were present at each panel meeting to facilitate the discussion and take notes about the level of resources needed and the rationale for participant decisions. Panelists were frequently reminded that they should be identifying the resources needed to meet state standards in the most efficient way possible without sacrificing quality.

Each panel first reviewed the resources identified at the base level during the 2015 study. After that review, they discussed the additional resources needed in addition to the base to serve the given student group. Resources reviewed and discussed included:

1. Personnel, including classroom teachers, other teachers, psychologists, counselors, librarians, teacher aides, administrators, nurses, etc.
2. Other personnel costs, including days for substitute teachers and professional development
3. Non-personnel costs, such as supplies, materials and equipment costs (including textbook replacement and consumables), and the cost of offering extracurricular activities
4. Non-traditional programs and services, including before- and after-school, preschool, and summer school programs
5. Technology, including hardware, software, and licensing fees
6. District-level supports, such as administration and resources for maintenance and operations, centralized purchasing or licensing, legal, school board, insurance, data systems, and contracted services

It is important to note that capital, transportation, food services, adult education, and community services were *excluded* from consideration as they were outside the scope of this study.

For each panel, the figures APA recorded represented a consensus among members. At the time of the meetings, no participant (either panel members or APA staff) had a precise idea of the costs of the identified resources. Instead, APA's actual calculations and costing of resources took place at a later date. This is not to say that panel members were unaware that higher levels of resources would produce higher base cost figures or weights; however, without specific price information and knowledge of how other panels were proceeding, it would have been difficult for any individual or panel to suggest resource levels that would have led to a specific base cost figure or weight, much less a cost that was relatively higher or lower than another.

Base Resources Identified in the 2015 PJ Study

This section summarizes the results from the 2015 PJ study, including the resources identified and the resulting base cost figure. For additional detail, please refer to APA's 2015 *Professional Judgment Study Report*.³¹

Key resources recommended for all students during the prior study:

- Small class sizes: 15:1 for K-3rd grade, 25:1 for fourth through 12th grades;
- Professional development and instructional coaches for teachers;
- Student support (counselors, social workers);
- Technology-rich learning environments, including one-to-one student devices and needed information technology (IT) support; and
- Preschool, recommended for all four-year-olds.

It should be noted that the resources identified by all PJ panels, including the 2015 study panels and the most recent panels, are examples of how funds might be used to organize programs and services in representative situations. APA cannot emphasize strongly enough that the identified resources do not represent the only possible way to organize programs and services to meet state standards. Instead, the identification is meant to estimate the overall cost of adequacy—not to determine the one “best” way to organize schools and districts.

Base School-Level: Personnel

Staffing recommended by the 2015 study PJ panels included:

- Instructional staff, including teachers, instructional aides, instructional coaches, interventionists, librarian/media specialists, and technology specialists;
- Pupil support staff, including counselors, nurses, and social workers;
- Administrative staff, including principals, assistant principals, bookkeepers, attendance monitors, registrars, and clerical/secretarial staff; and
- Other staff members, including school resource officers, in-school suspension teachers, aides for duty and monitoring, and media aides.

Tables 4.2 through 4.4 first identify the school size and the panel-recommended average class size/teaching schedule. The tables then identify the personnel on a full-time equivalent (FTE) basis needed to serve all students regardless of need at the elementary, middle, and high school levels (base education). Teacher FTEs are calculated by dividing the number of students in a school by the average class size, and then at the secondary level by multiplying that figure by the number of classes students are taking compared to the average number of classes a teacher is teaching.

³¹ Silverstein, J., Brown, A., Piscatelli, J., Shen, Y. (2015). *Professional Judgement Study Report* for the Lincy Institute at UNLV. Denver, CO: Augenblick, Palaich & Associates. Retrieved at: <http://apaconsulting.net/wp-content/uploads/2018/08/NV-Professional-Judgment-Report-.pdf>

Table 4.2: Elementary School Personnel as Recommended by 2015 Study PJ Panels, Base Education

School Size and Configuration	K-5, 450 students
Recommended Average Class Size	Grades K-3: 15 to 1 Grades 4-5: 25 to 1
<i>Instructional Staff</i>	
Teachers (Classroom)	26.0
Teachers (Specials)	4.0
Instructional Facilitator (Coach)	2.0
Librarians/Media Specialists	1.0
Technology Specialists	0.5
<i>Pupil Support Staff</i>	
Counselors	1.0
Nurses	1.0
Psychologists	0.2
Social Worker	0.25
Family Liaison	0.25
<i>Administrative Staff</i>	
Principal	1.0
Assistant Principal	1.0
Office Manager	1.0
Clerical/Data Entry	1.0
<i>Other Staff</i>	
School Resource Officer (SRO)	0.25
In-School Suspension	1.0
Aides – Duty, Monitoring	2.0
IT Technician	0.5

Panelists that participated in the 2015 study recommended class sizes of 15:1 in grades K-3 and 25:1 in grades 4-5. They also identified specials teachers for art, music, PE, technology, world language or another enrichment area. Instructional coaching staff was identified to support teachers, as was a full-time librarian, counselor and nurse. Additional student support was provided by a part-time psychologist, social worker and family liaison. An administrative team with a principal and assistant principal, supported by an office manager and a secretarial position (clerical/data entry) was also identified. Finally, panelists recommended a part-time SRO, IT technician and aides for duty, monitoring and in-school suspension (or alternative to suspension and behavioral support).

Table 4.3: Middle School Personnel as Recommended by 2015 Study PJ Panels, Base Education

School Configuration and Size	6-8, 750 students
Recommended Average Class Size	25 to 1
Schedule	6 period day; teachers teaching 5 periods
<i>Instructional Staff</i>	
Teachers (Classroom)	36.0
Instructional Facilitator (Coach)	3.0
Teacher Tutor/Interventionist	1.0
Librarians/Media Specialists	1.0
Technology Specialists	1.0
Instructional Aides	
<i>Pupil Support Staff</i>	
Counselors	3.0
Nurses	1.0
Psychologists	
Social Worker	0.25
Family Liaison	0.25
<i>Administrative Staff</i>	
Principal	1.0
Assistant Principal	2.0
Office Manager	1.0
Attendance/Registrar	1.0
Clerical/Data Entry	2.0
<i>Other Staff</i>	
School Resource Officer (SRO)	0.25
In-School Suspension	1.0
Aides – Duty, Monitoring	2.0
IT Technician	1.0

2015 Panelists also recommended 25:1 for grades 6-8, with teachers teaching 5 out of 6 classes. Similar to elementary school, instructional coaching staff, a full-time librarian, a full-time technology specialist and a full-time nurse were recommended. Counselors were staffed at a ratio 250:1, and additional student support was provided by a quarter-time social worker and family liaison. An interventionist was also recommended for instructional support. The school's administration included a principal, two assistant principals, an office manager, a registrar and two secretarial positions. Finally, the other staff positions were similarly staffed as compared to the elementary school.

Table 4.4: High School Personnel as Recommended by 2015 Study PJ Panels, Base Education

School Configuration and Size	9-12, 1,300 students
Recommended Average Class Size	25 to 1
Schedule	6 period day; teachers teaching 5 periods
<i>Instructional Staff</i>	
Teachers (Classroom)	62.4
Instructional Facilitator (Coach)	4.0
Teacher Tutor/Interventionist	
Librarians/Media Specialists	1.0
Technology Specialists	1.0
Instructional Aides	
<i>Pupil Support Staff</i>	
Counselors	5.2
Nurses	1.0
Psychologists	
Social Worker	0.5
Family Liaison	0.5
<i>Administrative Staff</i>	
Principal	1.0
Assistant Principal	3.0
Office Manager	1.0
Attendance/Registrar	1.0
Clerical/Data Entry	5.0
<i>Other Staff</i>	
School Resource Officer (SRO)	1.0
Behavior Interventionist	1.0
Aides – Duty, Monitoring	2.0
IT Technician	1.0

The panelists kept the same schedule and the same average class size of 25 for the representative high school as the middle school. The panelists also identified additional pupil support staff, administrative staff, and other staff at similar levels to the middle school. Differences included not recommending an interventionist as differentiation could be provided through robust course offerings, having an additional assistant principal and additional secretarial staff due to the larger school size, as well as having a full-time SRO.

Base School-Level: Non-Personnel Costs

The figures in Table 4.5 show other resources needed in schools, including needs for instructional supplies and materials, equipment, assessment, student activities (sports, extracurricular activities, field trips, etc.) professional development, and assessment.

Table 4.5: School-Level, Non-Personnel Costs

	Base Education
Professional Development	
<i>Additional days per teacher</i>	6 days
<i>PD supplies/training costs</i>	\$100/student
Substitutes—days per teacher	10 days
Supplies, Materials, and Equipment (incl. textbooks)	Elem: \$165/student Middle: \$175/student HS: \$350/student
Student Activities	Elem: \$35/student Middle: \$125/student HS: \$250/student

Base School-Level: Additional Resources

Additional Programs

In addition to the personnel and non-personnel costs identified above, the panels also recommended the following additional programs at the base level:

- Full-day preschool for all four-year-olds at an 18:2 ratio (one teacher and one instructional aide per 18 students);
- After-school programs at middle and high school level;
- Bridge program for entering high school students; and
- Credit enrichment at the high school level.

It is important to note that while our study did not include transportation, panelists felt that sufficient transportation was necessary for extended day and summer school programs to be possible.

Technology Hardware

Panels in 2015 also addressed the technology set up at representative schools, recommending: 1:1 student devices, laptops, and mobile devices for staff; classroom technology set ups (smartboards, document cameras, audio systems, and a printer); one or more fixed labs; computers in the media center; and infrastructure maintenance (switches, routers, etc.). Assuming a four-year replacement cycle, this amounted to an about \$250 per-student annual cost for all school technology hardware.

Base District-Level Resources

Due to study scope constraints in the 2015 study, APA did not address base district-level resources, but instead relied on the 2006 adequacy work to identify additional district-level costs beyond the identified

school-level resources. District-level costs—including costs for administration, building maintenance and operation (M&O), insurance, legal expenditures, school board expenses, and other central office purchases—were also identified as part of the base cost. In the 2006 study, district-level resources identified by PJ panels were 25 percent of school-level costs. APA used the same proportions to estimate the district-level costs for the 2015 study.

Resources for At-Risk, English Learners, Special Education, and Gifted Students Identified by 2018 PJ Panels

As noted, for this 2018 study three PJ panels were convened to identify the resources needed above the base to serve at-risk, EL, special education, and gifted students. This section presents the resources recommended for each group of students.

At-Risk Resources

The PJ panel identified resources to serve at-risk students (using free and reduced lunch as a proxy) in each of the representative schools for three different concentration levels of need: 25 percent of students being at-risk, then 50 percent, and 75 percent. This was done to determine if resource needs varied in total amount or intensity depending on the proportion of at-risk students in the school.

Approaches at each grade level and for each concentration level varied, but in general, resources recommended included:

- Interventionists to provide Tier 2 response-to-intervention (RTI) support at the elementary and middle school level.
- At the high school level, the approach for intervention shifted to increased differentiation through course offerings, so additional teachers and instructional coaches were recommended.
- Additional pupil support staff (counselors, psychologists, social workers and family liaisons) to address social-emotional needs.
- Increased safety and security personnel at the secondary level.
- Attendance and administration staff support when the concentration of at-risk students was higher.
- Professional development for all teachers to support differentiation (an additional four days above the six days identified in the base).
- Additional resources for supplies and materials, as well as student activities.
- Extended learning time, such as through before- and after-school programs and summer school (or intersession).

Personnel

Tables 4.6 through 4.8 present the additional personnel to support at-risk students in elementary, middle, and high schools.

Table 4.6: Elementary School Personnel to Support At-Risk Students

Elementary School			
Concentration	25%	50%	75%
# of At-Risk Students	113 students	225 students	338 students
Instructional Staff			
Interventionists	1.0	1.0	2.0
Pupil Support Staff			
Counselors		0.3	0.5
Psychologists	0.1	0.3	0.8
Social Workers	0.3	0.8	1.1
Family Liaisons	0.3	0.8	1.1
Administrative Staff			
Attendance/ Registrar		1.0	1.5

Given the small classes sizes recommended by the 2015 PJ study at the elementary level (15:1 K-3, 25:1 4-5), panelists did not recommend additional teachers but instead focused their support strategies through additional interventionists, pupil support, and attendance support at the 50 percent concentration level or higher.

Table 4.7: Middle School Personnel to Support At-Risk Students

Middle School			
Concentration	25%	50%	75%
# of At-Risk Students	188 students	375 students	563 students
Instructional Staff			
Interventionists	2.0	3.0	5.0
Pupil Support Staff			
Psychologists		0.3	0.7
Social Workers	0.8	1.8	2.8
Family Liaisons	0.8	1.8	2.8
Other Staff			
School Resource Officer (SRO)	0.1	0.25	0.75

Panelists recommended interventionists to provide instructional support at the middle school level. They felt the counselor staffing in the base was sufficient, but recommended additional student support from psychologists, social workers and family liaisons. Increased SRO staffing was also identified as needed.

Table 4.8: High School Personnel to Support At-Risk Students

High School			
Concentration	25%	50%	75%
# of At-Risk Students	325 students	650 students	975 students
<i>Instructional Staff</i>			
Teachers	1.6	3.6	5.6
Instructional Facilitator (Coach)		2.0	4.0
<i>Pupil Support Staff</i>			
Counselors	0.3	0.8	1.8
Social Workers	0.3	0.5	1.5
Family Liaisons	0.3	0.5	0.5
Behavior Interventionist (Alternative to/ In School Suspension)	0.5	1.0	1.0
<i>Administrative Staff</i>			
Assistant Principal			1.0
Attendance/ Registrar	0.25	0.5	1.0
Clerical/Data Entry			1.0
<i>Other Staff</i>			
School Resource Officer	0.5	1.0	1.0
Security/ Duty Aides			1.0

The panelists recommended a different approach at the high school level. Instead of separate interventionists, they thought that differentiated instruction could be done through course offerings. They recommended additional teachers to offer more sections and instructional coaches to support all teachers. Similar to the resources at the elementary and middle school level, the panelists recommended additional student support, attendance support, and safety personnel. At the highest concentration level, they also recommended an additional assistant principal.

Non-Personnel Costs

In addition to the personnel identified, the panel recommended resources for professional development, supplies and materials, and student activities.

Professional Development

The panels strongly felt all teachers should be able to support success of at-risk students through effective and differentiated instruction. To ensure that was possible, all staff needed to receive meaningful professional development, and the panel recommended the equivalent of an additional four days of professional development for all teachers identified either in the base or specifically for those working with at-risk students. These days could be used at any time—during the summer, during breaks, during in-service days, or split up into shorter half-day or hour segments.

Supplies and Materials

The panels recommended an additional \$125 per at-risk elementary and middle school student, and \$200 per at-risk high school student for supplies and materials, including intervention program licensing.

Student Activities

To support student enrichment, the panels also felt \$25 per at-risk student was needed above the resources in the base.

Additional Programs

Panelists indicated that at-risk students needed extended learning time opportunities as well as the quality instruction and intervention they should be receiving during the regular school hours.

Before and After School

Panelists recommended that before- or after-school programs should be offered for two hours a day, four days a week at the elementary, middle, and high school level. These programs would be staffed by certified teachers at a ratio of 20:1, assuming 50 percent of at-risk students would participate.

Summer School/Intersession

Summer school was also recommended for middle (half day) and high school students (full day). This was also staffed with certified teachers at a ratio of 20:1, assuming 50 percent of at-risk students would participate. At the high school level, intersession boot camps, or catch-up sessions, were also recommended for 10 percent of at-risk students to keep them on track (also staffed at 20 students per certified teacher).

District-level Resources

Administration

At the district level, the panels identified a number of staff positions that would be needed to support schools. Table 4.9 shows the district staff needed in a district of 50,000, if 50 percent of students were at-risk.

Table 4.10: District Personnel to Support At-Risk Students

District Staff	FTE
Assistant/Associate Superintendent	1.0
Director	1.0
Coordinator	2.0
Clerical/Data Entry	4.5

Panelists also recommended \$25 per student for administrative costs.

Alternative School

The final resource area addressed by the at-risk panel was an alternative school setting. The panelists identified resources for a school of 100 students and discussed how many schools of this size would be needed, based on district size. For a district of 50,000, they felt five alternative schools would be needed. Table 4.11 shows the alternative school personnel and other associated costs.

Table 4.11: Alternative School Personnel

School Size	100 students
Recommended Average Class Size	10 to 1
Schedule	6 period day; teachers teaching 5 periods
<i>Instructional Staff</i>	
Teachers	14.0
Instructional Facilitator (Coach)	2.0
Librarians/Media Specialists	0.5
Technology Specialists	0.5
<i>Pupil Support Staff</i>	
Counselors	1.0
Nurses	1.0
Psychologist	0.5
Social Worker	0.5
Family Liaison	0.25
<i>Administrative Staff</i>	
Principal	1.0
Clerical/Data Entry	1.0
<i>Other Staff</i>	
Security/ Duty Aides	1.0
Behavior Interventionist (Alternative to/ In School Suspension	0.25
Other Costs	
Professional Development	10 days per teacher and \$100 per student
Substitutes	8 days per teacher
Supplies and materials	\$500
Technology Hardware	\$248
Student Activities	\$250

Small class sizes (10:1) were a key resource component of the recommended alternative school model. Panelists also recommended a high level of student support, a full-time librarian/technology specialist (.5 in each role), a principal, a secretarial staff member, and a security aide. Other costs included: 10 days of professional days per teacher and \$100 per student for PD materials, eight substitute days per teacher, \$500 per student for supplies and materials, and finally \$248 for technology hardware and \$250 per student for student activities, both of which are the same amount as the regular high school.

EL Resources

The EL panel reviewed both the base resources named in the 2015 PJ study as well as the resources identified by the at-risk panel. Frequently, there is overlap between students who qualify as at-risk and students needing language acquisition services, so EL panels considered what resources would already be available to students both at the base and through the at-risk adjustment in order to avoid double counting of resources as best they could.

Panelists were asked to identify resources in representative schools with 25 percent of students being EL overall, disaggregating resource needs by the WIDA level of students split into three groups: L1/L2, (highest level of support needed), L3/L4, and L5/L6 (lowest level of support needed). Panelists determined the percentage of students that would fall into each category based on school level.

In general, panelists recommended more resources for L1/L2 students compared to the other groups, and for secondary students compared to elementary students. They recommended:

- Fewer resources in elementary schools since language acquisition is a key component of instruction for all students in lower grades.
- Sheltered instruction for L1/L2 secondary students.
- Co-teaching for L3/L4 students.
- Additional resources for supplies and materials, and student activities.
- Extended learning time, through before- and after-school programs and summer school (or intersession).

Personnel

The specific personnel recommended to serve ELs are found in Tables 4.12 through 4.14.

Table 4.12: Elementary School Personnel to Support English Learners

Elementary School			
WIDA level	L1/L2	L3/L4	L5/L6
# of English Learners	32 students	68 students	14 students
<i>Instructional Staff</i>			
Teachers	0.28	0.60	0.12
Instructional Facilitator (Coach)	0.28	0.60	0.12
Instructional Aides	0.56	1.19	0.25

Panelists recommended 1.0 teacher, 1.0 instructional coach, and 2.0 instructional aides to support elementary ELs with their time split proportionately across the three language levels.

Table 4.13: Middle School Personnel to Support English Learners

Middle School			
WIDA level	L1/L2	L3/L4	L5/L6
# of English Learners	30 students	113 students	45 students
<i>Instructional Staff</i>			
Teachers	3.0	5.0	1.7
Instructional Aides	2.0		

At the secondary level, panelists shifted their approach and differentiated the service model by language level. For L1/L2s, they recommended a sheltered instruction model with teachers at a 10:1 ratio and supported by 2.0 instructional aides. For L3/L4 and L5/L6, they recommended co-teaching in the general education classroom at ratios of 22:1 for L1/L2 and 26:1 for L5/L6.

Table 4.14: High School Personnel to Support English Learners

High School			
WIDA level	L1/L2	L3/L4	L5/L6
# of English Learners	52 students	195 students	78 students
<i>Instructional Staff</i>			
Teachers	5.2	8.86	3.0
Instructional Aides	2.0		
<i>Pupil Support Staff</i>			
Social Worker	0.1	0.3	0.1
Family Liaison	0.1	0.3	0.1

The instructional model was the same for the representative high school as the middle school. Additionally, panelists recommended a half-time social worker and a half-time family liaison to support the three language groups.

Non-Personnel Costs

In addition to the personnel identified, the panel recommended resources for supplies and materials, and for assessment.

Supplies and Materials

The EL panel recommended an additional \$150 per EL student for supplemental supplies and materials.

Assessment

Another \$200 per EL student was identified to address the cost of specific EL assessing, including administration costs.

Additional Programs

Panelists indicated that EL students should also receive similar extended learning time opportunities (such as before- and after-school programs and summer school) as were identified for at-risk students and described in the prior section.

District-level Resources

Administration

At the district-level, the panel identified staff positions to support schools, including intake services. Table 4.15 presents the resources identified for a district of 50,000 students, if 25 percent were EL students.

Table 4.15: District Personnel to Support English Learners

District Staff	FTE
Director	1.0
Coordinator	1.0
Teachers	18.0
Clerical/Data Entry	2.0
Translator	2.0
Data Specialist	1.0
Instructional Aides	3.0
Student Support (Counselor/ Social Worker)	1.0

Staff listed above included personnel to manage new student intake, including student support and staff for assessment. Panelists also recommended \$5 per student for interpretation contracted services.

Special Education and Gifted Resources

The third PJ panel addressed resources needed to serve special education students, as well as gifted students, since gifted falls under the special education umbrella in Nevada.

Panelists felt that no additional resources were needed to serve gifted students if schools had the class sizes and resources identified in the base.

For mild, moderate, and severe special education students, the panel recommended:

- 1.0 teacher per 16 mild students, per nine moderate students, and per six severe students, with instructional aide support.
- Student support by psychologists, social workers, speech pathologists, and other therapists, like occupational or physical therapy.
- Additional resources for supplies and materials, including adaptive technology.
- Extended School Year (ESY) for a percentage of moderate and severe students.

- Additional district administration and resources, such as contracted services, legal, and other placements.

Personnel

Tables 4.16 through 4.18 present the school-level special education personnel recommended by the PJ panel, including teachers at the ratios noted above.

Table 4.16: Elementary School Personnel to Support Special Education Students

Elementary School			
Need Level	Mild (7%)	Moderate (3%)	Severe (2%)
# of Special Education Students	32 students	14 students	9 students
<i>Instructional Staff</i>			
Teachers	2.0	1.5	1.5
Instructional Aides		0.5	3.0
<i>Pupil Support Staff</i>			
Psychologist	0.2	0.1	0.1
Social Worker			
Speech Pathologist	0.4	0.2	0.2
Therapists (OT/PT, Behavior, etc.)	0.2	0.2	0.3

Table 4.17: Middle School Personnel to Support Special Education Students

Middle School			
Need Level	Mild (7%)	Moderate (3%)	Severe (2%)
# of Special Education Students	53 students	23 students	15 students
<i>Instructional Staff</i>			
Teachers	3.3	2.5	2.5
Instructional Aides		0.8	5.0
<i>Pupil Support Staff</i>			
Psychologist	0.3	0.2	0.2
Social Worker	0.1	0.1	0.1
Speech Pathologist	0.2	0.3	0.3
Therapists (OT/PT, Behavior, etc.)	0.2	0.2	0.3

Table 4.18: High School Personnel to Support Special Education Students

High School			
Need Level	Mild (7%)	Moderate (3%)	Severe (2%)
# of Special Education Students	91 students	39 students	26 students
Instructional Staff			
Teachers	5.7	4.2	4.3
Instructional Aides		1.0	9.0
Pupil Support Staff			
Psychologist	0.6	0.3	0.3
Social Worker	0.1	0.2	0.2
Speech Pathologist		0.2	0.3
Therapists (OT/PT, Behavior, etc.)	0.3	0.3	0.4
Transition Coordinator		0.5	0.5

Non-Personnel Costs

All non-personnel costs were identified at the district level.

Additional Programs

Panelists identified the resources for an Extended School Year (ESY) program to serve a limited number of special education students (severe and high need moderate) whose individualized education programs (IEPs) required service. This program was staffed at one teacher and one instructional aide per 10 students, with support from speech and other therapists.

District-level ResourcesAdministration

At the district level, the special education panel identified needed staff and other resources. Below are the resources for a district of 50,000 with 12 percent of students in special education.

Table 4.19: District Personnel to Support Special Education Students

District Staff	FTE
Director	3.0
Coordinator	8.0
Teachers	7.0
Clerical/Data Entry	3.0
Nurses	3.0
Other Therapists	1.0
Psychologist	1.0
Job/Transitions Coach	1.0
Other Professionals	13.0

In addition to staff above, the panelists recommended \$560 per special education student to provide supplies and materials, including adaptive technology, contracted services, legal, homebound, and other placements.

Base Costs and Adjustments

Updating the 2015 PJ Study Base

The 2015 PJ study base cost was determined by applying 2012-13 Nevada salary and benefit information (provided by the NDE) to the resources identified. This process produced a base cost of \$8,577. To update this to the most recent year of data availability (2016-17), APA applied the following annual inflation rate using data from the Bureau of Labor Statistics for the western region: 2.3 percent increase in 2013-14, 1.3 percent in 2014-15, 1.4 percent in 2015-16, and 2.5 percent in 2016-17. This produced an inflation-adjusted PJ base cost of \$9,238.

Adjustments for At-Risk, EL, and Special Education Students

Applying Resource Prices to Resources

To determine the adjustment, or weight, for each student group, APA used 2016-17 statewide average salary and benefit information provided by the Nevada Department of Education (Appendix I).

Dollar Amounts and Weights

Table 4.20 shows the resulting adjustments for at-risk, EL, and special education students.

Table 4.20: Amounts and Weights for At-Risk, EL, and Special Education in Relation to PJ Base

	Elementary School		Middle School		High School	
	Amount	Weight	Amount	Weight	Amount	Weight
At-risk						
25% concentration	\$2,450	0.27	\$2,287	0.25	\$1,885	0.20
50% concentration	\$2,450	0.27	\$2,161	0.23	\$2,099	0.23
75% concentration	\$2,645	0.29	\$2,319	0.25	\$2,419	0.26
EL (25%)						
L1, L2	\$3,451	0.37	\$11,098	1.20	\$10,402	1.13
L3, L4	\$3,451	0.37	\$4,454	0.48	\$4,812	0.52
L5, L6	\$2,633	0.29	\$3,531	0.38	\$3,806	0.41
Special Education (12%)						
Mild (7%)	\$8,060	0.87	\$7,279	0.79	\$6,968	0.75
Moderate (3%)	\$13,751	1.49	\$13,904	1.51	\$13,914	1.51
Severe (2%)	\$31,464	3.41	\$30,555	3.31	\$31,803	3.44

Applying salaries and benefits to the identified resources, produced an amount ranging from \$1,885 to \$2,645 per at-risk student, resulting in at-risk weights from 0.20 to 0.29. There was minimal relationship

to concentration level, meaning that while additional staff was needed as the concentration of students increased, on a per-student level the resources were similar.

Dollar amounts and weights for EL students varied both by school level and by language level. Elementary weights ranged from 0.29 to 0.37 (\$2,633 to \$3,451) with less variation by language level, while at the secondary level weights for L1/L2 students were between 1.13 and 1.20 (\$10,402 to \$11,098), the weights for L3/L4 students were around 0.50 (or about \$4,600) and the weights for L5/L6 were around 0.40 (or \$3,700).

Weights for special education varied by need level. The weight for mild students was between 0.75 and 0.87 (about \$7,500), around a 1.50 for moderate students (or about \$13,850), and between 3.31 and 3.44 for severe students (\$30,555 to \$31,803).

V. Evidence-Based Approach

Introduction and Overview

Using the Evidence-Based (EB) Model, this chapter provides a set of recommendations Nevada can use to determine how the state can provide a level of funding to all school districts that would give every student in the state—particularly at-risk students, EL students, and students with disabilities—an equal opportunity to achieve to the state’s college and career-ready standards.

For the past 18 years, Picus Odden & Associates (known as Lawrence O. Picus and Associates prior to 2013) has worked across the country, primarily with state legislatures and other state agencies, to help determine how to adequately fund all students, including at-risk students, EL students, and students with disabilities. Adequate funding has been defined as providing a level of resources that would enable all districts and schools to give every student an equal opportunity to learn to high-performance standards. Over time, as both curriculum and performance standards have increased and as states have adopted college and career-ready standards for reading/language arts, mathematics, and science, the EB model has been updated to meet the changing and more rigorous expectations of PreK-12 schools.

The next section describes the school improvement framework that undergirds the EB funding model. This section draws from research that Picus, Odden, and others have conducted on schools that have dramatically moved the student achievement needle. Such schools exist across the country and vary by location (urban, suburban and rural) and by school size (large, medium, and small) and with high, medium, and low percentages of at-risk and EL students, as well as students with disabilities.

The subsequent section then “unpacks” the elements of an effective school and includes specific recommendations for every element of the model, including a list of all EB model elements and their values, representing the core of the EB model, as it is formulated in mid-2018. These elements include class size, extra help for struggling students (at-risk and EL students particularly), professional development, student support services (including guidance counselors and nurses), and systems for organizing instruction and teachers to reinforce effectiveness in increasing student performance and reducing achievement gaps linked to student demographics.

The last section provides the final estimated EB costs, drawing from an Excel-based computer simulation developed to translate the model elements into per-pupil figures and weights for special needs students. Please note that the resulting figures do not include resources for transportation, food services, or capital construction costs.

The Evidence Based School Improvement Model

The primary intent of this section is to identify in detail the array of educational goods that would allow Nevada districts and schools to provide each student an equal opportunity to meet the state’s student performance standards and to identify the per-pupil costs of that basket of education goods. This section describes the elements of the school improvement strategy embedded within the EB funding model. Although we cannot claim a direct linkage between funding and student performance, the Evidence-Based (EB) model is designed to identify a level of resources that would enable all students,

schools and districts to meet state standards and requirements, and be successful in today's global, knowledge-based economy.

This section provides a more general description of the school improvement strategies that undergird the EB Model and describes how the key resource elements are used to increase student performance.

The High-Performance School Model Embedded in the EB Model

The EB Model is derived from research and best practices that identify programs and strategies that boost student learning, including learning for EL and at-risk students. The formulas and ratios for school resources developed from that research have been reviewed by dozens of educator panels in multiple states over the past decade. The EB Model relies on two major types of research:

1. Reviews of research on the student achievement effects of each of the individual major elements of the EB Model, with a focus on randomized controlled trials, the “gold standard” of evidence on “what works.” These analyses can be found in the fifth edition of our school finance text (Odden & Picus, 2014) and in the most recent adequacy studies conducted for Michigan (Odden & Picus, 2018).
2. Studies of schools and districts that have dramatically improved student performance over a four- to six-year period, which is sometimes labeled “a doubling of student performance” on state assessments.

The current EB approach is more explicit in identifying the components of the school improvement strategies that deploy the resources in the funding model, and it articulates how all elements of the EB Model are linked at the school level to strategies that, when fully implemented, produce notable improvements in student achievement (Odden & Picus, 2014).

High-performing and improving schools have clear and specific, as well as ambitious and rigorous, student achievement goals, including goals to reduce achievement gaps linked to poverty and English proficiency status. The goals are nearly always specified in terms of performance on state assessments.

Compared to traditional schools where teachers work in isolated classrooms, improving schools organize instruction differently. Regardless of the context (urban, suburban, or rural; rich or poor; large or small), improving and high-performing schools organize teachers into collaborative teams: grade-level teams in elementary schools and subject or course teams in secondary schools. With the guidance and support of instructional coaches, the teacher teams work with student data (usually short-cycle or formative assessment data) to:

- Plan standards-based curriculum units;
- Teach those units simultaneously;
- Debrief on how successful the units were; and
- Make changes when student performance does not meet expectations.

This collaborative teamwork makes instruction “public” over time by identifying a set of instructional strategies that work in the teachers’ school. Over time, all teachers are expected to use the instructional strategies that have been demonstrated to improve student learning and achievement.

High-performing and improving schools also provide an array of “extra help” programs for students struggling to achieve to standards. This is critical as more rigorous programs are implemented to support the increasing number of struggling students prepare for college and careers. These “extra help” strategies may include individual tutoring, small group tutoring, after-school academic help, and summer school focused on reading and mathematics for younger students, and courses needed for high school graduation for older students. These strategies are particularly key for students from poverty and EL backgrounds. The school approach is to hold standards constant and vary instructional time.

These schools exhibit multiple forms of leadership. Teachers lead by coordinating collaborative teams and through instructional coaching. Principals lead by structuring the school to foster instructional improvement. The district leads by ensuring schools have the resources to deploy the strategies outlined above with a focus on producing aggressive student performance goals, improving instructional practice, and taking responsibility for student achievement results. Further, successful and improving schools seek out top talent. They know that the challenge to prepare students for the competitive and knowledge-based global economy is difficult, and even more challenging for students from poverty and EL backgrounds. It requires smart and capable teachers and administrators to effectively get the educational job done.

The study team recently studied dramatically improving schools in Maryland, Vermont, and Maine as part of school finance studies completed in those states and found the theory of improvement embodied in the EB Model reflected in nearly all the successful schools studied (Picus, Odden, et al., 2012; Picus, Odden, et al., 2013; Odden & Picus, 2015). In addition, other researchers and analysts have found similar features in schools that significantly improve student performance and reduce achievement gaps (e.g., Blankstein, 2010, 2011; Chenoweth, 2007, 2009, 2017). After a comprehensive set of studies and analyses, Duncan and Murnane (2014) reached conclusions that support the element of the EB Model. They note that if all students in a school are to have a chance at success in the emerging global economy, they will need high-quality preschool programs followed by effective elementary and secondary schools. The key features needed in each school include:

- Leadership focused on improving instructional practice;
- Within-school organization of teachers into teams that over time create a set of effective instructional practices and then deploy them systematically in all classrooms;
- A culture of assistance (e.g., instructional coaches and ongoing professional development) and accountability (e.g. adults taking responsibility for the impact of their school actions on student performance); and
- An array of extra help strategies to extend learning time for any student who needs more time to achieve to standards.

Although the details of studies of improving and high-performing schools vary and different authors highlight somewhat different elements of the process, the overall findings are more similar than different. This suggests schools can improve the performance of all students if they have adequate resources and deploy those adequate resources in the most effective ways.

The EB Model offers a framework for the use of resources by districts and schools to help focus those resources on programs and strategies that would allow them to produce substantial gains in student academic performance. To provide further detail to the global description of the EB effective schools, the key elements of the school improvement model embedded in the EB Model have been organized into 10 areas.

In general, schools and districts that produce large gains in student performance follow ten similar strategies (see Chapter 4 and 5 of Odden & Picus, 2014; Odden, 2009), resources for each of which are included in the EB Model. The ten strategies employed by improving schools are:

1. Analyze student data to become deeply knowledgeable about performance issues and to understand the nature of the achievement gap. The test score analysis usually first includes review of state test results and then, over time, analysis of formative/short cycle (e.g. Renaissance Learning Star Enterprise) as well as benchmark assessments (e.g. Northwest Evaluation Association MAP) to help tailor instruction to precise student needs; to progress monitor students with an Individual Education Plan (IEP) to determine whether interventions are working; and to follow the performance of students, classroom, and the school over the course of the academic year. Improving schools are performance data hungry.
2. Set high goals such as aiming to educate at least 95 percent of all students in the school to proficiency or higher on state reading and math tests; working to ensure a significant portion of the school's students reach advanced achievement levels; having more high school students take and pass AP classes; and making significant progress in closing the achievement gap between the average student and students from poverty and EL backgrounds. The goals tend to be explicit and far beyond just producing improvement or making adequate yearly progress. Further, because the goals are ambitious, even when not fully attained, they help the school produce large gains in student performance.
3. Review evidence on good instruction and effective curriculum. Successful schools throw out the old curriculum, replace it with a different and more rigorous curriculum, and over time create their specific view of good instructional practice to deliver that curriculum. Changing curriculum is a must for schools implementing more rigorous college and career-ready standards and such new curriculum requires changes in instructional practice. Successful schools also want *all* teachers to learn and deploy new content-based, instructional strategies in their classrooms and seek to make good instructional practice systemic to the school and not idiosyncratic to teachers' individual classrooms.
4. Invest heavily in teacher training that includes intensive summer institutes and longer teacher work years, resources for trainers, and, most importantly, funding for instructional coaches in all schools. Time is provided during the regular school day for teacher collaboration focused on improving instruction. Nearly all improving schools have found resources to provide instructional coaches to work with school-based, teacher data teams; model effective instructional practices; observe teachers, and give helpful but direct feedback. This focus has

intensified now that schools are delivering a more rigorous curriculum focused on educating all students to college and career-proficiency levels. Further, professional development is viewed as an ongoing and not a once and done activity.

5. Provide extra help for struggling students and, with a combination of state funds and federal Title 1 funds, provide some combination of tutoring in a 1:1, 1:3, or 1:5 teacher-to-student format. In some cases, this also includes extended days, summer school, and English language development for all EL students. These Tier 2 interventions in the response to intervention (RTI) approach to helping struggling students achieve to standards are absolutely critical. For many students, one dose of even high-quality instruction is not enough—many students need multiple extra help services in order to achieve to their potential. No school producing large gains in student learning ignored extra help strategies altogether or argued that small classes or preschool were substitutes.
6. Restructure the school day to provide more effective ways to deliver instruction. This can include multi-age classrooms in elementary schools, block schedules and double periods of mathematics and reading in secondary schools, and intervention periods at all school levels. Schools also protect instructional time for core subjects, especially reading and mathematics. Further, most improving schools today organize teachers into collaborative teams: grade-level teams in elementary schools and subject/course teams in secondary schools. These teams meet during the regular school day, often daily, and collaboratively develop curriculum units, lesson plans to teach them, and common assessments to measure student learning that results from them. Further, teams debrief on the impact of each curriculum unit, reviewing student learning overall and across individual classrooms.
7. Provide strong leadership and support for data-based decision-making and improving the instructional program, usually through the superintendent, the principal, and teacher leaders. Instructional leadership is “dense” and “distributed” in successful schools; leadership derives from the teachers coordinating collaborative teacher teams, from instructional coaches, the principal and even district leaders. Both teachers and administrators provided an array of complementary instructional leadership.
8. Create professional school cultures characterized by ongoing discussion of good instruction, with teachers and administrators taking responsibility for the student performance results of their actions. Over time, the collaborative teams that deliver instruction produce a school culture characterized by: 1) high expectations of performance on the part of both students and teachers, 2) a systemic and school-wide approach to effective instructional practice, 3) a belief that instruction is public and that good instructional practices are expected to be deployed by every individual teacher, and 4) an expectation that the adults in the school are responsible for the achievement gains made or not made by students. Professionals in these schools accept responsibility for student achievement results.

9. Bring external professional knowledge into the school; for example, hiring experts to provide training, adopting new research-based curricula, discussing research on good instruction, and working with regional education service agencies as well as the state department of education. Successful schools do not attain their goals by pulling themselves up by their own boot straps. Faculty in successful schools aggressively seek outside knowledge, find similar schools that produce results and benchmark their practices to them, and operate in ways that typify professionals.
10. Finally, talent matters. Many improving schools today consciously seek to recruit and retain the best talent, from effective principal leaders to knowledgeable, committed, and effective teachers. They seek individuals who are mission-driven to boost student learning particularly students from poverty and EL backgrounds, willing to work in a collaborative environment where all teachers are expected to acquire and deliver the school's view of effective instructional practice, and who are accountability focused.

Such successful schools also create a learning atmosphere inside the schools. They also have a school-wide approach to discipline and classroom management, which requires that every student be accountable to any adult for his/her behavior and that all adults take interest in all students and hold them accountable for the behavioral practices in the school. In addition, these effective schools reach out to parents, ensure parents know the expectations of the school and help their children with homework, and welcome all parents into the school.

In sum, the schools that have boosted student performance are strongly aligned with those embedded in the EB Model. These practices bolster the study team's claim that if such funds are provided and used to implement these effective and research-based strategies, then significant student performance gains should follow.

Three Tier Approach

It should be clear that the design of the EB Model reflects the RTI model. RTI is a three-tier approach to meeting student needs. Tier 1 refers to core instruction for all students. The EB Model seeks to make core instruction as effective as possible with its modest class sizes, provisions for collaborative time, and robust professional development resources, including school-based, instructional coaches. Effective core instruction is the foundation on which all other educational strategies depend. Tier 2 services are provided to students struggling to achieve to standards before being given an IEP and labeled as a student with a disability. The EB Model's current Tier 2 resources, which are provided to every at-risk and EL student, include one core tutor for every prototypical school and then additional resources, triggered by at-risk and EL student counts, for tutoring, extended day, summer school, and additional pupil support. To that is added even more language resources for EL students. The robust levels of Tier 2 resources allow schools to provide a range of extra help services that often are funded only by special education programs that get many modestly struggling students back on track, and thus reduce the levels of special education students. Tier 3 includes all special education services.

Case Studies

As part of the study, several school level case studies were undertaken. The case studies provide the study team an opportunity to understand how successful Nevada schools utilize resources and to compare that resource utilization to the principles in the evidence-based approaches noted in this chapter. In this section, we describe the school selection process, detail the protocols used with the schools, and provide a summary of the common elements found between the schools. Summaries for each of the seven case study schools are included in Appendix J.

School Selection

Since this study's emphasis is on the resources needed for special needs students, the study team focused its case study school selection on those schools outperforming other Nevada schools with at-risk and EL students. The study team did not identify schools based on special education performance, as interventions and resources for these students are IEP specific and lessons learned are likely less transferrable across schools.

To identify schools that are successful serving at-risk and EL students, the study team analyzed two years of available 3rd-8th grade state assessment data to create a single composite proficiency percentage across both years, both subjects (math & reading), and all grades for every school in the state. Results were disaggregated for EL and FRL students. Based upon this data, the study team identified a pool of top-performing schools that were both performing at or above the statewide average overall and performing at the 90th percentile or higher for a given subpopulation. For FRL students, that meant schools had at least 55 percent of FRL students achieving proficiency based upon the composite score. For EL students, this benchmark was set at 40 percent. From the pool of top-performing schools, the study team attempted to select schools from different districts and of different sizes where possible. The study team also considered the 2015 results of the school performance framework system as confirmatory data point.

Two schools were selected because they had higher FRL concentrations, and were performing well with both EL and FRL students:

- Bracken Elementary, Clark County School District (CCSD) (5 out of 5 stars on 2015 SPF)
- Mackey Elementary, CCSD (4 out of 5 stars on 2015 SPF)

Three schools were selected as performing well with FRL students (though they had smaller concentrations of these students), highly rated (all 5-star schools), where of various school sizes, and provided geographic diversity.

- Hunter Lake Elementary, Washoe (5 out of 5 stars on 2015 SPF)
- Pahrnagat Valley Elementary, Lincoln (5 out of 5 stars on 2015 SPF)
- Pleasant Valley Elementary, Washoe (5 out of 5 stars on 2015 SPF)

The study team also selected Vegas Verdes Elementary, which while not a highly rated school on the performance framework, has a high ELs concentration and is performing well with ELs comparatively:

- Vegas Verdes Elementary, CCSD (2 out of 5 stars on 2015 SPF)

Finally, the study team selected the one middle school that met the 55 percent or high-performance threshold with FRL students:

- Indian Springs Middle, CCSD (5 out of 5 stars on 2015 SPF)

The study team was limited in the number of schools that could be visited during the study and the seven schools identified above were selected to represent schools that were performing well with special needs populations; they are not the only schools that met the performance criteria.

Interview Protocol

The study team visited each school with the goal of understanding the structures the schools were using to achieve the student performance identified during the case study school selection process. An interview protocol was developed, which can be seen in Appendix J. The study team had two individuals visit each school site when possible. The day was structured with an initial meeting with the school principal and other leadership staff, where applicable, to discuss the protocol in its entirety. The remainder of the day was spent in one-on-one or small group teacher and staff interviews. For two schools, the interviews were conducted via phone. The interview protocol was used with both groups and was broken into nine areas:

- **General Background** – The study team asked about the community the school was in and any recent changes in student demographic changes.
- **School Staffing** – The study team asked about teacher turnover and acquired a detailed list of all staff in the building.
- **Student Achievement** – The study team asked about how student successes have been achieved with a focus on the types of specific improvement goals that had been set by the school.
- **Class Schedule** - The study team asked to understand the class schedule and where interventions and teacher professional development fit into the schedule.
- **Curriculum and Instruction** – The study team asked what instructional arrangements had been put in place to improve achievement, if the school had instructional coaches, what types of grouping practices were used, and if there were any specific instructional strategies in place for the special need populations. The study team also asked about the specific curriculum being used by the school.
- **Instructional Interventions** – The study team asked about specific interventions for struggling students including how those students were identified and monitored over time.
- **Assessments** - The study team asked for a list of the types of assessments used by the school and for which students each assessment was used.
- **Professional Development** – The study team discussed what professional development looked like in the school, including how it was developed and who implemented the professional development in the school.
- **School Culture** – The study team asked about school culture, including the positives and areas where there might be challenges.

The interviewers worked to have free flowing discussions with all participants. The goal was to cover each subject area, but not necessarily in the order identified in the protocol.

Summary Findings

Though the seven schools are in different districts and serve different student populations, several common themes came out of site visits. Not every school was found to have each of the characteristics listed below but, in each case, the clear majority of schools did have the characteristic.

- **Smaller class sizes (25 or below)** - Schools had smaller class sizes, especially in kindergarten through third grade. Some schools had larger class sizes in 4th and 5th grade due to budget constraints.
- **Leaders who trust and give autonomy to their teachers** – Though every school had its unique structure, a common theme of leadership was trust of teachers. This included strong grade level teams and teachers in leadership positions in the school.
- **A collaborative culture** – Schools discussed the importance of collaboration at all levels of the school. Schools discussed setting aside time for grade level collaboration and teams set up to implement the RTI system. Schools also saw parents and the greater community as important partners in the school.
- **A relatively stable teaching staff** – Many of the schools reported having very low teacher turnover rates, which contributed to consistency from year to year, and enabled a greater focus on continuous improvement.
- **Extended learning time** – Some of the schools offer extended learning time opportunities to the extent their budgets and staff allowed. Examples included computer lab and library availability before school; afterschool tutoring, often targeted to those students needing extra help; and summer school programs.
- **Data-driven decision making** – Schools discussed the importance of using student level data to drive instruction and in the implementation of RTI. Many teachers were able to produce student level data reports for their classes during interviews. Some schools had large data walls where students could track performance over time. Some schools had staff members dedicated to pulling student data reports and working with teachers to identify groupings and students needing additional support.
- **Strong RTI systems for struggling students** – Each school was implementing RTI to support students. Examples of RTI practices included a schoolwide RTI team that met each Wednesday morning examining the needs of all students by grade level. Schools had different levels of additional RTI support with most schools having some additional RTI support staff. One school fully embedding the RTI in the classroom, lacking any additional resources for RTI.
- **Preschool Programs** – Most of the schools had some form of preschool. For schools that offered preschool, programs ranged from universal to targeted based on student need.

The study team found that these schools are implementing the strategies in the EB model to varying degrees, supporting the use of the model to cost out an adequate level of resources for Nevada schools.

Using the EB Model to Identify Adequacy for Nevada Schools

This section provides the formulas and funding levels of every element in the EB Funding Model. The elements of the EB Funding Model are divided into five sections:

1. Staffing for core programs, which include preschool, full-day kindergarten, core teachers, elective/specialist teachers, substitute teachers, instructional facilitators/coaches, core tutors, core guidance counselors and nurses, supervisory aides, librarians, school computer technicians, principals/assistant principals, and school secretarial and clerical staff.
2. Dollar-per-student resources for gifted and talented students, professional development, instructional materials and supplies, formative/short cycle assessments, computers and other technology, career and technical education equipment and materials, and extra duty/student activities.
3. Central functions, which include maintenance and operations, central office personnel and non-personnel resources.
4. Resources for struggling students including at-risk tutors, at-risk pupil support, extended day personnel, summer school personnel, EL personnel, alternative school personnel and special education.
5. Personnel compensation resources including salary levels, health insurance, benefits for workers' compensation, unemployment insurance, retirement, and social security.

Before providing the summary of the EB formulas and elements, this section summarizes two more general issues necessary to understand how the study team proceeded from school- and district-level resources to per-pupil funding figures: student counts and prototypical schools and districts.

Student Counts

The EB model recommends that states use an average daily membership student count to distribute general aid. The model also needs a measure of the number of students from poverty backgrounds to trigger specific resources. In the past, this usually has been the number of students eligible for the federal free and reduced-price lunch program. Since districts can now provide free lunches to all students if they have a large number of poverty students, the count of free and reduced lunch students may not be available in some districts, often the largest districts in the state. So, the issue is whether to use a different indicator. One state, Illinois, provides a good example of the latter and uses the non-duplicated count of children receiving services through the programs of Medicaid, the Supplemental Nutrition Assistance Program, the Children's Health Insurance Program, or Temporary Assistance for Needy Families. EL and special education students will be counted as currently defined by the state.

There is one more important nuance on student counts. Previously the EB model defined at-risk students as the non-duplicated count of poverty students and EL students. The model then provided additional resources for all these students, including tutoring, extended day, summer school, and additional pupil support. In addition, all EL students also received an additional allocation for English as a Second Language (ESL) services. This definition confused most people who concluded that the model provided EL students just the ESL resources (see for example, Jimenez-Castellanos & Topper, 2012). Consequently, the EB model has changed its approach. For the purposes of the EB approach, and the

resultant per-pupil figures and weights, all EL students receive tutoring, extended day, summer school, ESL, and additional pupil support resources. Then, all non-EL at-risk students also receive resources for tutoring, extended day, summer school and additional pupil support resources.

Prototypical Schools

A key component of the EB model is the use of prototypical schools and districts to indicate the general level of resources in schools and districts and to serve as a heuristic to calculate the base per-pupil amount and the student weights. The EB model identifies resources for prototypical elementary, middle, and high schools, as well as a prototypical district. The model needs to use specific sizes in order for the prototypes to indicate the relative level of resources in the schools. Although modeling is based on these prototypes, this does not imply Nevada or any other state should adopt new policies on district size.

Prototypical School Sizes in the Evidence-Based Model

The EB approach starts by identifying resources for prototypical elementary, middle, and high schools with enrollments of 450, 450, and 600 respectively, drawing from research on effective school size (see Odden & Picus, 2014). It uses this approach and these prototypes to indicate the relative level of resources in schools, as well as to calculate a base per-pupil cost. These prototypical school sizes reflect research on the most effective school sizes, although few schools are exactly the size of the prototypes. Although many schools in Nevada and other states are larger or smaller than these prototypical school sizes, these prototypical sizes can still be used to determine a new base per-pupil figure, as the new base per-pupil figure would be provided for all students in a school or district, whatever the actual size. States such as Arkansas, New Jersey, and North Dakota have taken this approach.

Additionally, the EB model begins with a prototypical district size of 3,900, which comprises four 450-student elementary schools, two 450-student middle schools, and two 600-student high schools. This configuration is then used to estimate a district-level central office cost per student. Several states, including Arkansas, New Jersey, and North Dakota have used the micro-EB formulas and ratios to estimate a base per-pupil cost estimate for their foundation school finance formula structure. Although actual school sizes vary, the prototypes provide good estimates of a base cost per pupil in the context of each of those states. The Wisconsin Study (Odden et al., 2007) estimated a base per-pupil cost using prototypical schools and a prototypical district, then compared that to a district-specific figure created by adapting the ratios and formulas to every school and district size. That study found that the difference between the two methods was about \$50 per pupil, a small amount in a base spending level of approximately \$10,000 per pupil. The EB prototypes should not be construed to imply Nevada needs to replace all school sites with smaller or larger buildings or break school districts into smaller units; they are used as heuristics to determine the estimated base cost per student.

2018 Core EB Nevada Recommendations

Table 5.1 provides a detailed summary of the core 2018 EB Nevada model resources:

Table 5.1 Summary of 2017 Nevada Adjusted Evidence-Based Model Recommendations

Model Element	2016 Evidence-Based Recommendation
Staffing for Core Programs	
1a. Preschool	Full day preschool for children aged 3 and 4. One teacher and one aide in classes of 15.
1b. Full-Day Kindergarten	Full-day kindergarten program. Each K student counts as 1.0 pupil in the funding system.
2. Elementary Core Teachers/ Class Size	Grades K-3: 15 Grades 4-5/6: 25. (Average class size of 17.3)
3. Secondary Core Teachers/ Class Size	Grades 6-12: 25. Average class size of 25
4. Elective/Specialist Teachers	Elementary Schools: 20% of core elementary teachers Middle Schools: 20% of core middle school teachers High Schools: 33 1/3% of core high school teachers
5. Instructional Facilitators/Coaches	1.0 Instructional coach position for every 200 students
6. Core Tutors/Tier 2 Intervention	One tutor position in each prototypical school (Additional tutors are enabled through at-risk and EL pupil counts in Elements 22 and 26)
7. Substitute Teachers	5% of core and elective teachers, instructional coaches, tutors (and teacher positions in additional tutoring, extended day, summer school, EL, and special education)
8. Core Pupil Support Staff, Core Guidance Counselors, and Nurses	1 guidance counselor for every 450 grade K-5 students 1 guidance counselor for every 250 grade 6-12 students 1 nurse for every 750 K-12 students, which supports a half time nurse in each prototypical elementary and middle school and a full-time nurse in each prototypical high school. (Additional student support resources are provided on the basis of at-risk and EL students in Element 23)
9. Supervisory and Instructional Aides	2 for each prototypical 450-student elementary and middle school 3 for each prototypical 600-student high school
10. Library Media Specialist	1.0 library media specialist position for each prototypical school
11. Principals and Assistant Principals	1.0 principal for the 450-student prototypical elementary school 1.0 principal for the 450-student prototypical middle school 1.0 principal and 1.0 assistant principal for the 600-student prototypical high school
12. School Secretarial and Clerical Staff	2.0 secretary positions for the 450-student prototypical elementary school 2.0 secretary positions for the 450-student prototypical middle school 3.0 secretary positions for the 600-student prototypical high school
13. Gifted and Talented Students	\$40 per pupil
14. Intensive Professional Development	10 days of student-free time for training built into teacher contract year, by adding five days to the average teacher salary \$125 per pupil for trainers (In addition, PD resources include instructional coaches [Element 5] and time for collaborative work [Element 4])
Dollar-Per-Student Resources	
15. Instructional Materials	\$190 per pupil for instructional and library materials

	\$50 per pupil for each extra help program triggered by at-risk and EL students as well as special education
16. Short Cycle/Interim Assessments	\$25 per pupil for short cycle, interim and formative assessments
17. Technology and Equipment	\$250 per pupil for school computer and technology equipment
18. CTE Equipment/Materials	\$10,000 per CTE teacher for specialized equipment
19. Extra Duty Funds/Student Activities	\$300 per student for co-curricular activities including sports and clubs for grades K-12 \$50 per preschool student
Central Office Functions	
20. Operations and Maintenance	Separate computations for custodians, maintenance workers and groundskeepers, and \$305 per pupil for utilities
21. Central Office Personnel/Non-Personnel Resources	A dollar per student figure for a prototypical 3,900 student central office based on the number of FTE positions generated – 8 professional and 15 classified positions – and the salary and benefit levels for those positions. The per-pupil figure also includes \$300 per pupil for misc. items such as Board support, insurance, legal services, etc.
Resources for Struggling Students	
22. Tutors	1.0 tutor position for every 100 EL students and one tutor position for every 100 non-EL, at-risk students.
23. Additional Pupil Support Staff	1.0 pupil support position for every 125 EL students and one tutor position for every 125 non-EL, at-risk students.
24. Extended Day	1.0 teacher position for every 120 EL and for every 120 non-EL, at-risk students.
25. Summer School	1.0 teacher position for every 120 EL and for every 120 non-EL, at-risk students.
26. Staff for English Learner (EL) Students	As described above: 1.0 tutor position for every 100 EL students; 1.0 pupil support position for every 125 EL students; 1.0 extended day position for every 120 EL students; and 1.0 summer teacher position for every 120 EL students. In addition, 1.0 ESL teacher position for every 100 EL students.
27. Alternative Schools	One assistant principal position and one teacher position for every 7 students in an alternative program. One teacher position for every 7 Welcome Center eligible EL students.
28. Special Education	8.1 teacher positions per 1,000 students, which includes: 7.1 teacher positions per 1,000 students for services for students with mild and moderate disabilities and the related services of speech/hearing pathologies and/or OT PT. This allocation equals approximately 1 position for every 141 students. Plus 1.0 psychologist per 1,000 students to oversee IEP development and ongoing review, included in the central office calculation. This provides 3.9 psychologist positions in the central office. In addition Full-state funding for students with severe disabilities, and state-placed students, and Federal Title VIB, with a cap on the number covered at 2% of all students.

Calculating the Base Per-Pupil Cost and Pupil Weights

To estimate adequacy costs based on the model described in Table 5.1, the study team developed an Excel-based simulation that provides the evidence-based core or foundational cost per pupil as well as computes pupil weights for special education, at-risk students, and EL students. Critical to these estimates are the costs of personnel. Salary and benefit data used is included in Appendix I.

With these compensation estimates, the per-pupil EB base expenditure is estimated to be \$9,983, with extra weights of 0.31 for at-risk students and 0.40 for EL students. The per-pupil EB preschool cost estimate is \$13,628, which computes to an extra weight of 0.37 relative to the base per-pupil expenditure estimate of \$9,983. The cost estimate for alternative schools and the EL Welcome Center program for refugee EL students is \$16,219 per pupil, which computes to an extra weight of 0.62 relative to the base per-pupil figure of \$9,983.

We note that the EL per-pupil weight is a combination of extra tutoring (\$902), extended day (\$760) and summer school (\$760) programming, additional pupil support (\$691), and additional English language service (\$902)—a total extra of \$4,015, which equates to an extra weight of 0.40 relative to the base of \$9,983. In calculating the extended day and summer school portions, however, the model assumes only half the EL students would attend the programs, drawing from research on attendance for these programs. If the model assumed a larger percentage of EL students would attend the extended day and summer school programs, the weight would increase. At 100 percent attendance, the total extra cost would be doubled for each of extended day and summer school, or \$1,520. That would bring the total extra resources for EL to \$5,535 (\$4,015 plus \$1,520). The EL weight would then be 0.55. Thus, the model predicts the EL extra weight could range from 0.40 to 0.55, depending on the assumed percentage of attendance for extended day and summer school programs, with the lower weight based on the traditional 50 percent assumed attendance.

The EB model includes an EL Welcome Center program for EL students entering schools after experiencing refugee status, violence in their home countries, no previous formal education, or other forms of trauma, who need a program to more slowly acculturate them into a regular Nevada school. The estimated per-pupil figure for the *EL Welcome Center program* for refugee EL students is \$16,219 per pupil, which computes to an *extra weight of 0.62*.

The non-EL, per-pupil, at-risk weight could also vary depending on assumed attendance. The total extra for non-EL, at-risk students is a combination of extra tutoring (\$902), extended day (\$760), and summer school (\$760) programming, additional pupil support (\$691) or a total of \$3,113, which equates to an extra weight of 0.31. The model would add \$1,520 to that if it assumed 100 percent attendance for extended day and summer school programs, which would bring the total for non-EL, at-risk students to \$4,633, which equates to an extra weight of 0.46. Thus, we could conclude that the non-EL, at-risk weight could range from 0.31 to 0.46, depending on the assumed percentage of attendance for extended day and summer school programs, with the lower weight based on the traditional 50 percent assumed attendance.

The EB model assumes the state funds 100 percent of the excess costs of programs for students with severe and profound disabilities. To estimate costs for students with mild and moderate disabilities, the EB model uses a “census” approach and computes an additional amount based on the count of *all* students in a district—not on a count of the special education students in each district. The EB estimate for the cost of special education for students with mild and moderate disabilities is \$654 per pupil for *all* students. This equates to a weight of 0.07 applied to the total number of students in a district (or state). The effect is that the total revenue generated through the EB Model for special education for children with *mild and moderate disabilities* is equal to the base EB cost estimate (in this model \$9,983) times 0.07 for all students in the district (or state).

If a census approach was not used and a weight was instead applied to just mild and moderate students—about 10 percent of total enrollment— the weight would be .70, generating \$6,988 per mild and moderate special education student.

VI. Draft Recommendations and Additional Stakeholder Feedback

The following chapter presents the draft recommendations from the study team's August 1st report, then feedback from stakeholders gathered in September. Chapter VII will present the finalized recommendations and fiscal impact.

Draft Recommendations

The 2012 AIR report made a number of recommendations focused on modifying Nevada's existing funding system. The current study team's recommendations center on an approach to replace the existing funding system with a weighted student formula. Many of the recommendations made in this report could be applied to the existing system but the study team believes an overhaul of the system, likely phased in over time, would provide the state an equitable and student-oriented funding system that meets the characteristics of a good state-level funding formula described in Chapter 1. The study team recommends Nevada implement a new funding formula that will be:

Cost-based, with a base amount and adjustments for student and district characteristics determined by the resources needed to meet state standards and requirements.

Responsive to student need, through the use of adjustments, or weights, the system should provide additional resources to students based on need, such as being an at-risk, EL, or special education student. Currently, the system provides resources through categorical funding streams for these students. A weighted formula would instead ensure all students that have these needs receive the same resources regardless of the availability of categorical funds for their school.

Responsive to district characteristics, through three separate adjustments: (1) a district size adjustment, (2) a comparative wage index (CWI), and 3) a necessarily small schools adjustment. Currently, the state applies a basic support ratio that accounts for size, density, and cost differences by creating a relative cost factor, meaning the sum of these district characteristics in relation to the state average. The study team believes the funding system's treatment of these characteristics should be: (1) unpackaged into separate adjustments, and (2) not measured in relative terms. For example, currently if a district experienced increased cost-of-living pressures, the funding system would only make an adjustment to its funding in relationship to the experience of other districts. So, if all the districts experienced the same increase in cost pressures—therefore increasing the statewide average—the relative change would be zero, even though it would be more costly to operate in all districts. The new approach would treat each adjustment for each district individually allowing for the recognition of all changing needs.

Transparent and flexible. By providing resources through a straightforward base and weights applied to generate resources for all students, not just those in schools that receive targeted funding streams, the formula should ensure the funding system is easy to understand and provides greater flexibility in how resources can be used to serve students. This increased transparency might also make it easier for districts to design student-weighted systems for their school-level funding.

Equitable. While a full equity analysis was outside of the scope of this study, the study team puts forth the following consideration: the resources inside the system meet equity criteria, but the combination of a low level of state support and unlimited use of outside local resources may be creating inequities in actual expenditures between districts. Increasing the level of state support that is equalized through the use of a cost-based funding model should begin to address this issue. As analysis in chapter 3 showed, the state’s current system has been measured as more inequitable overtime by national publications.

Recommended Base Costs and Adjustments

To determine the appropriate base amount and adjustments for a new weighted student formula, the study team considered all available data about current practices in the state and nationally, as well as adequacy findings from the current study and prior studies conducted in Nevada. This included:

- The current study’s professional judgment and evidence-based approach findings.
- The results of the 2012 AIR study and the study team’s updated analysis of current student need adjustments in comparison states. Since the updated comparison state analyses were focused on current practice in comparison states, and were not necessarily adequacy or cost-based adjustments, the study team also used results of adequacy studies conducted nationally over the past 10 years as another contextual comparison point.
- The 2006 study conducted by APA for the legislature, which used two approaches to set both a “current” funding target (successful schools approach) and a “goal” funding target (professional judgment approach). The successful schools approach developed a base cost by examining the spending of schools that successfully meet academic performance standards at the time as a starting point for phasing in an adequate funding system tied to increased funding as performance expectations increased.
- The professional judgment findings from the 2015 APA PJ study for the Lincy Institute at UNLV.

Base

Table 6.1 presents possible base amounts from the results of this current study, compared to the state’s FY17 Basic Support Guarantee and the results of prior adequacy study work done by APA in Nevada.

Table 6.1: Base Amount Alternatives

	Basic Support Guarantee (16-17)	2006 Study Successful Schools	2006 Study PJ	2015 PJ/ 2018 PJ	2018 EB
Prior Study Figure	-	\$4,660	\$7,229	\$8,577	-
Data Year	FY17	FY04	FY04	FY13	FY17
Inflation Factor	-	1.29	1.29	1.08	-
2016-17 Figure (Inflated)	\$5,387 ³²	\$5,988	\$9,289	\$9,238	\$9,983

To make the figures comparable, the study team inflated the results of the 2006 and 2015 studies into FY2017 dollars. The resulting base amounts present three different methods of determining a base:

³² Nevada’s 2016-17 BSG in statute is \$5,774. The figure shown is that amount less \$387 for transportation.

- The state’s FY2017 Basic Support Guarantee (BSG)- excluding transportation- which is not cost-based, and is instead based on available resources;
- The 2006 Successful Schools base amount, which is cost-based and represents the resources needed (at that time) to perform at the level of the most successful schools in the state. This is a relative performance level and did not represent what it takes to meet all state standards and requirements.
- The 2006 PJ base, 2015 PJ/2018 PJ base, and the 2018 EB base are also cost-based and reflect the resources needed to ensure all students can meet all state standards and requirements.

In FY17, the Basic Support Guarantee once transportation dollars were excluded was \$5,387 per student. This amount does not include “outside” local revenues for districts so reported differences between recommendations and actual would be lower if those resources were included.

The inflation-adjusted 2006 successful schools base cost is \$601 more per student than the FY17 BSG, at \$5,988. While this does not represent a full adequacy base amount, it is at least a cost-based amount for consideration as a starting point for a new system. The study team recommends an update to the successful schools data analysis to ensure the amount is similar once the pool of schools is updated to reflect the current spending of schools performing at the highest levels in the state.

The 2006 PJ, 2015 PJ, and 2018 EB base amounts would be considered the cost of full adequacy at the base level, or the resources needed to meet all standards and requirements. The figures range from \$9,238 to \$9,983. To be conservative, the state could use the lower of the two figures as the base amount, or choose to implement another amount within this range.

Student Need Adjustments

To determine student needs adjustments, the study team compared the results of all adequacy studies (2006, 2015, and 2018) against the results of the AIR study/updated analysis and results of other adequacy studies nationally for the past 10 years.³³ Weights are presented in two ways, against the full adequacy base of each study, or against the starting base amount recommended (\$5,988 derived from the 2006 successful schools approach). For results from other states, the weight shown is against that state’s base amount (current or adequacy recommendation).

At-Risk

Table 6.2 looks at possible adjustments for at-risk students from each of the data sources.

³³ Aportela, A., Picus, L., Odden, A. & Fermanich, M. (2014). *A Comprehensive Review of State Adequacy Studies Since 2003*. Augenblick, Palaich and Associates (2018). *Alternative Approaches to Recalibration and Reconciliation of Study Results to Provide Final Recommendations*.

Table 6.2: At-Risk Adjustment Alternatives

Nevada Studies				
	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	.35	.35	.20-.29	.31-.46
Scaled to Apply to Base of \$5,988	.54	.54	.31-.45	.52-.77
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: .22 (average)				
National Adequacy Comparison, Weight Against Adequate Base: .35 (average)				

At-risk weights compared to an adequacy base ranged from 0.20 (lowest point in the 2018 PJ results) to .46 (highest point for the 2018 EB results). Within that range is the .35 weight that was recommended in 2006 and 2015 in Nevada, and is the average weight seen in other adequacy studies across the country. Each of these weights represent the total resource need from all available funding sources- state, local and federal. To determine the weight to be included in a new funding system in Nevada, the weight would need to be adjusted to represent the resource level needed from state and local sources, knowing that federal funding would be available separately.

In comparison states, the imputed at-risk weight was .22 on average based on the updated AIR analysis which is similar to the low end of the Nevada adequacy study range. The .22 weight represents the resources currently allocated to at-risk students in each of the comparison states, and is not necessarily representative of the resources needed for students to be successful (“what is” vs. “what should be”) so it is not surprising that the figure is lower than most of the adequacy study findings.

Using this information, the study team’s recommendation is an at-risk weight of .30. The study team believes that this weight, while higher than seen on average in the comparison states, is a more accurate representation of the level of state and local resources needed to serve at-risk students. Federal resources through Title I would be a separate funding stream. A weight of .30 would generate \$2,771 per at-risk student when applied to the full adequacy base of \$9,238, or \$1,796 when applied to the lower base of \$5,988. To generate the \$2,771 dollar amount on the lower base would require a scaled weight of .46.

English Learners

The study team considered the range of alternatives for EL weights, as shown in Table 6.3.

Table 6.3: English Learners Adjustment Alternatives

Nevada Studies				
	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	0.47	0.41	.57 (average)	.40-.55
Scaled to Apply to Base of \$5,988	0.73	0.63	.88	.67-.92
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: .44 (average)				
National Adequacy Comparison, Weight Against Adequate Base: .49 (average)				

Results of all adequacy studies ranged from .40–.57 (single EL weight). Both the comparison states and national adequacy recommendations were in the same range at .44 and .49 respectively. The study team recommends the state use a weight of .50 for ELs. Applied against the full adequacy base, the weight would generate \$4,619 and a scaled weight would be .77 against the \$5,988 base.

The single EL weight could also be disaggregated into a three-tier weight based on student language acquisition level based up their WIDA results. Using the relationship seen in the 2018 PJ study, weights of .78 for L1/L2s, .40 for L3/L4s, and .32 for L5/L6s could be used. The state could also consider whether a student that is eligible for an at-risk weight and an EL weight should receive both weights, the higher of the two weights or a lower combined weight.

Special Education

Table 6.4 next looks at alternatives for a special education adjustment; figures are shown as the combined weight for all special education need levels unless otherwise noted.

Table 6.4: Special Education Adjustment Alternatives

Nevada Studies				
	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	1.2	1.1	1.4	.70 (mild and mod)
Scaled to Apply to Base of \$5,988	1.9	1.7	2.16	1.17 (mild and mod)
Comparison to Other States/Studies				
AIR Study/ Updated Analysis, Weight in Each State Against their Base: .9 (average)				
National Adequacy Comparison, Weight Against Adequate Base: 1.1 (average)				

The 2018 EB results include a single weight for mild and moderate special education (.70) and suggest all higher cost students be paid for directly by the state. The three PJ data points are intended to provide the resources needed for all special education students, including higher need/cost students, and range between 1.1 (2015 PJ)–1.4 (2018 PJ). This range is at or above the results of national adequacy recommendations, on average. Again, these weights represent total need from all available funding sources and often a weight for a state funding system would be lower, recognizing that federal resources are available. From the AIR study, a .9 weight, on average, was seen in practice in other state funding systems.

The study team would recommend that the state consider a 1.1 full adequacy weight (representing state and local share) applied to all special education students, which would generate \$10,162 per special education student applied to the adequacy base and \$6,587 per student applied to the lower base. The scaled weight would need to be 1.9 to generate the \$10,162 adequacy dollar level on the lower base. If the state would like to develop a three-tier funding model for special education and provide differentiated weights by student need, the proportionate relationship from the 2018 study could be applied to the combined full adequacy weight of 1.1, which would result in weights of .63 for mild students in the general education 80 percent or more of the day), 1.18 for moderate students (in the general education classroom 40 to 79 percent of the day), and 2.70 for severe students (in the general

education less than 40 percent of the day). The scaled weight would result in tiered weights of 1.08, 2.03, and 4.60.

The state could also consider the model recommended by the 2018 evidence-based approach providing a weight for mild and moderate special education students (either applied to actual student counts or on a census basis), then continue to fund higher need students separately.

Gifted and Talented

Information about a possible gifted and talented adjustment was more limited, as shown in Table 6.5.

Table 6.5: Gifted and Talented Adjustment Alternatives

Nevada Studies				
	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	–	–	–	Less than 0.01
Scaled to Apply to Base of \$5,988	–	--	–	0.01
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: weights range from .02 to .60 (if the student has an IEP).				
National Adequacy Comparison: not available				

Neither the 2006 or the 2015 PJ study addressed gifted and talented student funding. The 2018 PJ panelists believed that with an adequate base no additional resources would be needed to serve gifted and talented, and the resources identified by the EB approach were minimal. Looking nationally, resources provided tended to be less than \$200 a student. Higher weights, such as the .60 noted as the highest of the range were seen when a student had an IEP and would therefore be eligible for a special education adjustment. As such, the study team would not necessarily recommend an additional weight for gifted and talented if an adequate base is implemented. However, if a lower base amount is used, the study team would recommend a 0.05 weight.

Summary of Base Cost and Student Need Adjustment Alternatives

The study team recognizes the implementing the full adequacy base amount of \$9,238 is significantly higher than the current Basic Support Guarantee (BSG), and further, the state does not currently provide funds for at-risk and EL students outside of categorical funding streams. Therefore, in this section we present three alternative scenarios for implementing the above recommendations:

1. Full adequacy base and weights
2. Lower base and scaled weights
3. Lower base and relative weights

Full Adequacy

This alternative would represent the cost of fully implementing adequacy recommendations using a base cost derived from the 2018 EB/2015 PJ (\$9,238) and the full adequacy weights recommended in

each section above. Single weights or tiered weights for EL and for special education could be used, in this scenario and the two that follow.

Table 6.6: Base and Weights in Full Adequacy Scenario

Full Adequacy Scenario	
Base	\$9,238
Student Need Weights	
At-Risk	.30 (\$2,771)
English Learners	.50 (\$4,619)
Special Education	1.1 (\$10,162)

Scaled Weights

The second alternative would use the inflated 2006 successful schools base of \$5,988 and then use a set of scaled weights to generate the same dollar figure per at-risk, EL, or special education student, as was generated in the full adequacy scenario. The study team would also recommend implementing a weight for gifted and talented, if the full adequacy base was not used. This approach would target additional resources towards at-risk, EL, special education, and gifted students first.

Table 6.7: Base and Weights in Current Base and Scaled Weights Scenario

Scaled Adjustments Scenario	
Base	\$5,988
Student Need Weights	
At-Risk	.46 (\$2,771)
English Learners	.77 (\$4,619)
Special Education	1.70 (\$10,162)
Gifted and Talented	.05 (\$299)

Relative Adjustments

The final alternative would also use the inflated 2006 successful schools base (\$5,988) and then apply the full adequacy weights to that amount, which would result in a lower level of resource generated, but at the same relative level in terms of the base. Though this change is below adequacy level for the special need students, it would be a dramatic shift towards a more student-centered funding approach, providing targeted dollars to all eligible students, and allow resources to grow similarly between the base and special needs funding over time.

Table 6.8: Base and Weights in Current Base and Relative Weights Scenario

Relative Weights Scenario	
Base	\$5,988
Student Need Weights	
At-Risk	0.30 (\$1,794)
English Learners	0.50 (\$2,994)
Special Education	1.1 (\$6,587)
Gifted and Talented	0.05 (\$299)

Prior to implementing a relative weight for special education, a comparison against current expenditures were need to be made to ensure that funding does not drop below current funding and violate federal maintenance of effort and fiscal support requirements.

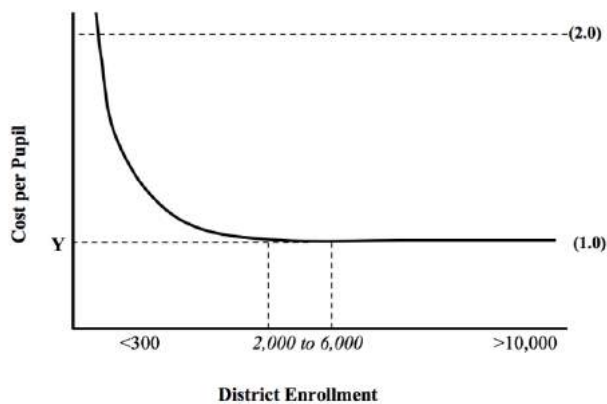
Adjustments for School/District Characteristics

In any scenario above, the study team also recommends providing three additional adjustments to address school/district characteristics: district size, cost of living through a comparable wage index (CWI), and necessarily small schools.

District Size

Given the more limited scope of the 2018 study, district size was not addressed. However, the study team believes that the state funding system needs to include an adjustment that accounts for the different costs experienced in districts due to having differing economies of scale. The 2012 AIR report also highlighted that such an adjustment would be necessary and provided the following depiction of such a relationship between size and cost (creating a J curve) as seen in school finance research:

Figure 6.1: J Curve



This relationship is consistent with the results of the 2018 EB and PJ studies, that while based on two different district sizes (3,900 for EB, and 50,000 for PJ) were similar in terms of per-pupil costs. The \$9,238 figure from the PJ would be the floor figure where the size adjustment would be 1.0 and the higher EB figure of \$9,983 supports the concept that costs increase slightly as size decreases to a certain point and then increase exponentially.

The study team looked to the findings of the 2006 study- including both a minimum data point at 50 students and a smaller data point at 780 students- to update a size adjustment for Nevada. An updated formula was developed to generate the different base amounts needed at each of the size data points that is as follows:

*For districts above 3,900 students: size adjustment factor = $(-.000001735 * \text{enrollment}) + 1.0868$*

*For districts below 3900 students: size adjustment factor = $(-0.281 * \ln(\text{enrollment})) + 3.4$*

Table 6.9 presents the size adjustment factor for districts at different size points. The study team recommends that these size adjustment factors be applied to the base separately from any other adjustments for district characteristics or student need.

Table 6.9: Possible District Size Adjustment

District Enrollment	Size Adjustment Factor
50	2.30
100	2.11
250	1.85
500	1.65
1,000	1.46
2,000	1.26
3,000	1.15
4,000	1.08
7,500	1.00
10,000	1.00
50,000	1.00
300,000	1.00

Comparable Wage Index

As describe in chapter 3, APA believes the CWI is the best metric to use in looking at the differential in costs facing school districts related to personnel, as long as other district characteristics, such as size, are being taken into account elsewhere. The most recent national data on CWI comes from Lori Taylor of Texas A&M University³⁴ and has been updated through 2013. Every district in the country and each state has an identified CWI figure. The figures can be used to compare districts to one another, but adjustments need to be made, which will be described below. Table 6.10 shows the raw CWI figures for each Nevada district along with the statewide average for each year.

Table 6.10: Raw CWI Figures for Nevada Districts

	2011	2012	2013
Clark	1.557	1.573	1.590
Churchill	1.349	1.358	1.374
Elko	1.349	1.358	1.374
Esmeralda	1.349	1.358	1.374
Eureka	1.349	1.358	1.374
Humboldt	1.349	1.358	1.374
Lander	1.349	1.358	1.374
Lincoln	1.349	1.358	1.374
Mineral	1.349	1.358	1.374
Nye	1.349	1.358	1.374
Pershing	1.349	1.358	1.374
White Pine	1.349	1.358	1.374

³⁴ http://bush.tamu.edu/research/faculty/Taylor_CWI/

	2011	2012	2013
Douglas	1.419	1.428	1.445
Lyon	1.419	1.428	1.445
Carson City	1.419	1.428	1.445
Storey	1.453	1.453	1.463
Washoe	1.453	1.453	1.463
State	1.520	1.531	1.547

The table above also shows one of the issues with using the CWI figure. Detailed data is not always available for each specific district; the limited data means there are only four different CWI figures generated for Nevada, with Clark County the only district with its own CWI figure. The other figures can be looked at as regional adjustments. Table 6.10 data shows CWI figures increasing for each year, based on the increased cost of staff.

To use the figures to compare cost differences between districts in Nevada, one of two adjustments can be used. Table 6.11 shows an adjustment that uses the lowest CWI figure as the baseline for the state. This would ensure that no district loses funding as the CWI is applied. The lowest CWI figure is divided into all other CWI figures to create this adjustment. Applying the CWI in this manner ensures no loss of funding but might overestimate the total funding needed in the state if the CWI is being applied to a cost-based funding figure that was derived using statewide average cost salaries.

Table 6.11: CWI Indexed to Lowest Cost Counties

	2011	2012	2013	Three Year Average
Clark	1.154	1.158	1.157	1.156
Churchill	1.000	1.000	1.000	1.000
Elko	1.000	1.000	1.000	1.000
Esmeralda	1.000	1.000	1.000	1.000
Eureka	1.000	1.000	1.000	1.000
Humboldt	1.000	1.000	1.000	1.000
Lander	1.000	1.000	1.000	1.000
Lincoln	1.000	1.000	1.000	1.000
Mineral	1.000	1.000	1.000	1.000
Nye	1.000	1.000	1.000	1.000
Pershing	1.000	1.000	1.000	1.000
White Pine	1.000	1.000	1.000	1.000
Douglas	1.051	1.051	1.051	1.051
Lyon	1.051	1.051	1.051	1.051
Carson City	1.051	1.051	1.051	1.051
Storey	1.077	1.069	1.064	1.070
Washoe	1.077	1.069	1.064	1.070

The CWI figure above was indexed using a 1.000 baseline range from 1.000 to 1.157 in 2013. This means the highest CWI district, Clark County, needs to pay an estimated 15.7 percent more than the lowest

CWI districts to attract the same personnel. The table also shows a three-year average for each district. It is often suggested that use of a multiyear average can smooth out any fluctuations in the figures over time. The three-year average CWI figures range from 1.000 to 1.156. Though the minimum and maximum figures do not show much change with the averaging from the 2013 figures, Washoe and Storey receive a .006 percentage point increase using the averaging.

The other adjustment option is to index each district against the statewide average CWI figure. This adjustment does mean some districts would have resources adjusted down when the CWI is applied but may be more appropriate when applied to a statewide average cost-based funding figure. Table 6.12 shows the CWI figures when adjusting to the statewide average. The 2013 CWI ranges from a low of .888 to a high of 1.028. This means the lowest CWI districts would receive 88.8 percent of the funding that the CWI is applied to and the highest would receive 2.8 percent more. The relative difference between the lowest and highest CWI figures remains similar to the 1.000 figure. Again, a three-year average would smooth the CWI differences and would result in a range of .888 to 1.026.

Table 6.12: CWI Indexed to Statewide Average

	2011	2012	2013	Three-Year Average
Clark	1.025	1.028	1.028	1.027
Churchill	0.888	0.887	0.888	0.888
Elko	0.888	0.887	0.888	0.888
Esmeralda	0.888	0.887	0.888	0.888
Eureka	0.888	0.887	0.888	0.888
Humboldt	0.888	0.887	0.888	0.888
Lander	0.888	0.887	0.888	0.888
Lincoln	0.888	0.887	0.888	0.888
Mineral	0.888	0.887	0.888	0.888
Nye	0.888	0.887	0.888	0.888
Pershing	0.888	0.887	0.888	0.888
White Pine	0.888	0.887	0.888	0.888
Douglas	0.934	0.933	0.934	0.934
Lyon	0.934	0.933	0.934	0.934
Carson City	0.934	0.933	0.934	0.934
Storey	0.956	0.949	0.946	0.950
Washoe	0.956	0.949	0.946	0.950

Regardless of the CWI chosen, it should only be applied to a portion of the funding dollars since it is a wage adjustment. Often a factor around .90 is used to adjust for the portion of funding that is non-personnel related. Another way this sort of factor could be implemented is to adjust this cap by the percentage of operating budget that is related to salaries, which is often a smaller percentage in rural communities; Colorado is an example of this sliding scale application.

Necessarily Small Schools

If Nevada elects to adopt a foundation formula model, the study team recommends adopting one of several approaches for compensating for small and/or isolated schools that is better aligned with the foundation concept than the current grouping of districts within the DSA. Each of these approaches is currently used in one or more states and could be adapted for use in Nevada. The three approaches described here include 1) student weights; 2) student count adjustments; and 3) minimum staffing/funding.

Student Weights

Arizona provides the best example of using student weights for generating additional revenues specifically for small and/or isolated schools. Under Arizona's formula, schools in districts with fewer than 600 students qualify for small school student weights. A qualifying district receives two sets of weights, one for elementary students (defined as students in grades K-8) and another for secondary students (defined as students in grades 9-12). The size of the weights decrease as district enrollment increases, with the highest weights for districts under 100 students, the next highest for districts between 100 and 499 students, and the lowest weight for districts between 500 and 600 students.

Districts that are eligible for small schools funding may also qualify for isolation funding if they meet certain criteria (a small isolated school district must contain no school that is fewer than thirty miles, or fifteen miles if road conditions and terrain cause driving to be slow or hazardous, from another in-state school serving similar grade ranges). Like the small school weighting, there are two sets of student weights, one each for elementary and secondary students, and the weights decrease as district enrollment increases up to the 600-student threshold.

Although the Arizona model is applied at the district level, a similar weighting scheme could be used for individual schools meeting specific size and isolation criteria that are appropriate to Nevada.

Adjusted Student Counts

A second approach to providing additional funding for small and/or isolated schools is to adjust its enrollment up to generate more formula funding. Minnesota uses this type of approach. Under this approach, a formula is used to increase the enrollment of schools that meet specific enrollment and isolation criteria. Minnesota applies two different formulas, one for elementary school sparsity and a second for secondary school sparsity. Both sparsity formulas are calculated at the school level.

Under the Minnesota example, schools qualifying for sparsity revenue must be both small (elementary schools with fewer than 20 students per grade and high schools with fewer than 400 students) and isolated (elementary schools at least 19 miles from the next nearest elementary school and high schools with an isolation index – a function of attendance area geographical size and miles to the nearest high school – greater than 23). Similar to a student weight, both formulas effectively increase enrollment in proportion to the maximum qualifying enrollment (140 students for elementary schools and 400 students for high schools) and multiply the foundation base amount by the additional enrollment count.

Minimum Staffing/Funding

The third approach provides either 1) a minimum number of staff, or 2) a minimum school funding amount, for schools whose enrollment falls below a certain enrollment threshold. Wyoming and California provide examples of these two methods.

In Wyoming, any school with 49 or fewer students is guaranteed staffing of a 1.0 FTE assistant principal plus 1.0 FTE teachers for every seven students. These schools also receive per-pupil funding allocations for instructional materials and supplies, technology, gifted and talented programs, professional development, assessments, and student activities. This formula applies to both elementary and secondary schools.

California's formula, which was modeled as an alternative in the AIR report, guarantees a minimum amount of funding to qualifying "necessarily small" schools based on enrollment and the number of teachers employed at the school. Qualifying elementary schools must serve fewer than 101 students and be situated such that students would have to travel more than 10 to 15 miles one way, depending on the school's enrollment, to the next nearest school. Qualifying high schools must serve fewer than 287 students and be located such that students would have to travel at least 7.5 to 30 miles round trip, depending on the school's enrollment size, to attend the next closest high school.

Minimum funding under California's formula in 2017-18 for necessarily small elementary schools ranged from \$153,050 for a school with 24 or fewer students and one teacher, to \$612,200 for a school with between 73 and 96 students and four teachers. For high schools, necessarily small school funding ranged from \$124,250 for schools with 19 or fewer students and one teacher, to \$2,043,300 for a school with between 249 and 286 students and 15 teachers.

The study team is not recommending any one of the three approaches described above at this time, but it does recommend the state further consider which of the three options may best meet the context and needs of the state's necessarily small schools.

Stakeholder Feedback on Draft Recommendations and Implementation

Following the release of the draft report on August 1, a second round of stakeholder feedback was collected via regional educator listening sessions and another online survey. Information about each was distributed to each district's superintendent through NDE. Superintendents then shared provided meeting and survey notices with staff and their communities.

The week of September 17, the study team conducted a series of seven educator listening sessions in five different cities around the state. The listening sessions were open to any interested education practitioners, including school leaders, teachers, other instructional staff, central office administrators and staff, and board members. Each session included a short introduction of the study, then provided educators the opportunity to give their feedback on the study's draft recommendations and how the finance system should be revised to best address the needs of students, schools and districts.

Listening sessions were held on the following dates, at the given locations:

Date	Location
Monday, September 17, 2018 5:30-7:30 p.m.	Library at White Pine High School 1800 Bobcat Drive, Ely, NV 89301
Tuesday, September 18, 2018 5:30-7:30 p.m.	Auditorium at Tonopah High School 1 Tennant Drive, Tonopah, NV 89049
	Hart Theater at Earl Wooster High School 1331 East Plumb Lane, Reno, NV 89502
	Vegas PBS 3050 East Flamingo Road, Las Vegas, NV 89121
Wednesday, September 19, 2018 5:30-7:30 p.m.	Auditorium at District Office Building 690 South Maine Street, Fallon, NV 89406
	Cafeteria at Damonte Ranch High School 10500 Rio Wrangler Parkway, Reno, NV 89521
	Vegas PBS 3050 East Flamingo Road, Las Vegas, NV 89121

An online survey was also be open from September 17-28 to gather feedback on the draft recommendations from educators, parents, and community members who could not attend a session in person.

About 800 individuals participated in the listening sessions and online survey, with participation roughly equally split between educators and the general public. About 80 percent of participants were from Clark County, with another 15 percent from Washoe and the remaining five percent from other districts in the state (primarily Churchill and White Pine). Participation in the listening sessions was relatively low — less than 100 individuals. The study team believes this is in part due to the availability of the online survey, which was less of a time commitment during the busy school year, and some skepticism the study would result in any change in how the state funds schools, a point that was highlighted during multiple listening sessions.

Survey Results

In the online survey, participants were asked questions in the following areas:

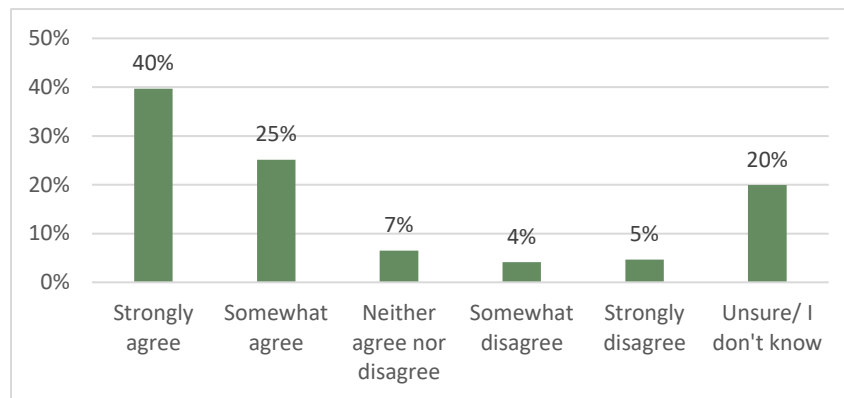
1. Should the state increase funding for all students, certain student groups, or not at all?
2. Should the state change the way it allocates funding to schools and districts?
3. Should the state implement the study’s recommended funding approach? If not, what should the state do instead?
4. If the state adopted a new funding approach, what student need and district characteristic adjustments should be included? Should it include a hold harmless provision?
5. Should resources be allocated at the district level, with or without restrictions, or at the school level?
6. Would they support implementing additional resources over time?
7. Would they support the state setting guidelines or requirements related to how resources are used?

Feedback on Draft Recommendations

Overall, 90 percent of participants thought the state should increase funding for all students and six percent thought that funding should only be increased for certain student groups. Similarly, 89 percent of participants believe the state should change the way it allocates funding to schools and districts, and eight percent were unsure.

Participants were then asked if the state should adopt the funding approach recommended by the study (Figure 6.1).

Figure 6.1: Should the State Implement the Study's Recommended Funding Approach?



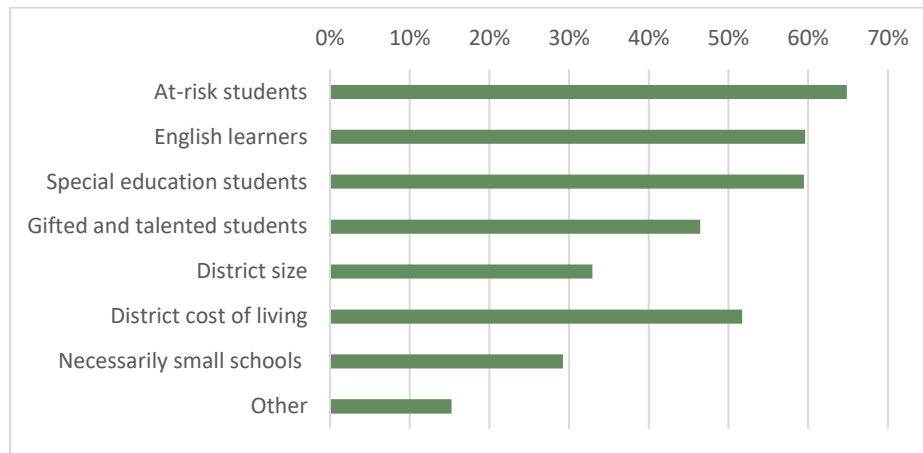
Sixty-five percent of participants either “somewhat” or “strongly” agreed the state should implement the recommended funding approach; 20 percent were unsure. Table 6.13 shows what participants that did not agree thought the state should do instead.

Table 6.13: What Should the State Do Instead of the Recommended Funding Approach?

Response	Percent
Keep the current funding system	4%
Make changes to the current funding system, but not replace it entirely	36%
Implement a different type of funding approach other than the one recommended by the study	23%
Unsure/I don't know	38%

If the state were to adopt a new funding approach, participants were asked if adjustments or additional resources should be provided for the following student need and district characteristics (Figure 6.2).

Figure 6.2: What Adjustments for Student Need and District Characteristics Should be Included in the State’s Funding Approach?



The majority of participants thought additional resources should be provided for at-risk, EL, and special education students, as well as for district cost of living. Around 30 percent of participants thought the funding approach should adjust for district or school size (providing additional resources for smaller settings); however, it is important to remember that nearly all survey participants were from the two largest districts in the state. Salaries and class sizes were the two primary “other” areas that participants felt should be addressed in the funding approach.

The study team’s recommendation was to implement a district-level funding approach, but there are different ways that funding could be allocated. As such, the survey asked participants to indicate how they thought funding should be allocated, including at the district level, with or without restrictions, or more directly to schools (Table 6.14).

Table 6.14: How Should School Funding be Allocated to Schools and Districts?

Response	Percent
To districts to allocate to their schools	9%
Directly to schools	41%
To districts with a set percentage required to go directly to schools	19%
To districts but require that targeted funding for student need go directly to schools	24%
Other method for allocating	3%
Unsure/I don't know	4%

Forty-one percent of participants would prefer funding was allocated directly to schools. Another 43 percent of participants wanted a mixed approach, with requirements placed on how resources allocated to districts were the distributed to schools, either though requiring a set percentage of funding to go

directly to schools (19 percent), or through targeted funding for certain student groups that went directly to schools (24 percent).

Feedback on Implementation

Knowing that immediate implementation of full adequacy recommendations was unlikely, the survey also asked participants for feedback on implementation, including a possible phase in. Sixty-five percent of participants would support phasing in resources over time, with the remainder of responses split between “would not support” and “unsure.”

If new resources were phased in over time, 60 percent would recommend distributing resources equally to all students, which would suggest targeting resources first towards the base and relative weights used (given earlier support of adjustments for those students in a prior question). About 35 percent would instead recommend targeting resources first to specific student groups (the scaled weight scenario).

Three-quarters of participants also indicated the state should implement a hold harmless provision during the transition to a new funding formula (meaning a district would not be harmed by the funding formula change and would not receive less funding than it received in the prior year). Responses for how long the hold harmless provision should be in place varied: 1-2 years ((27 percent); 3-4 years ((18 percent), 5 or more years, but not permanently (11 percent); and permanently (21 percent). Six percent of participants felt a hold harmless should not be included, and the remaining 17 percent were unsure.

The last question in this area was how supportive participants would be of the state setting guidelines or requirements related to how additional resources should be used (Table 6.15). A range of options were presented and participants were asked the degree to which they would support a given option.

Table 6.15: Support for State Setting Guidelines or Requirements for Resource Use

Option	Would not support	Would consider supporting	Would support
Requiring targeted resources for specific student group are used to serve those students	14%	34%	52%
Requiring development and submission of a plan the state for how resources will be used	12%	39%	49%
Requiring that resources be used to implement an option from a menu of choices	22%	53%	25%
Requiring implementation of specific programs	36%	43%	21%
Requiring specific staffing ratios	8%	30%	61%

Sixty-one percent of participants would support the state requiring specific staffing ratios. About half would also support: 1) requiring targeted resources for a given student group are used to serve those students (52 percent), and 2) requiring development and submission of a plan to the state for how resources will be used (49 percent)). Participants were least supportive of the state requiring implementation of specific programs (21 percent)).

Other Areas of Concern

Finally, survey participants were asked if there were any other areas of concern that were not specifically addressed by the study (Table 6.16). These areas included raising teacher salaries, transparency in how resources should be used, the use of revenue streams, and lowering district administration staffing levels and salaries. In the “Other” response category, responses primarily focused on class sizes and increasing salaries of other non-teacher school-level positions. Raising teacher salaries had the most support of all the additional areas of concern (24 percent).

Table 6.16: Other Areas of Concern Not Specifically Addressed by the Study

Response	Percent
Raising teacher salaries	24%
Transparency in how resources should be used	19%
What new or existing revenue streams are needed to fund education	17%
Lowering district administration staffing levels/salaries	16%
Preschool	8%
Governance	7%
Other	7%
Resources for specific group or program not mentioned	3%

Listening Session Feedback

During the educator listening sessions, study team members provided an overview of draft recommendations from both the study and the team. Following the overview, the study team invited comments from attendees. Several key themes emerged across the listening sessions.

Support for Additional Funding for Schools. Attendees were generally supportive of additional funding for Nevada schools. In several listening sessions, attendees mentioned recently released national rankings that put Nevada among the lowest-spending states for education funding, and supported increasing the overall amount of education funding available to schools and districts. Several attendees noted that the base amount allocated to every student should be at a level sufficient to run a school, without considering any categorical or additional funding. Attendees were also concerned about identifying potential sources of additional revenue, and expressed skepticism that an increase in education funding was likely.

Categorical Funding. The state’s current practice of using categorical funding was a topic of conversation across the state. The study team heard frustration with the extent of categorical funding in the state. The administrative and reporting requirements that come along with multiple revenue streams was identified as one perceived problem with categorical funding. Several attendees noted that every student with an identified need should receive additional funding, not just those students who attend certain schools selected for categorical funds. Attendees also suggested that schools and districts should not have to compete with others for basic funding opportunities. Other attendees mentioned the

fear of losing awarded categorical funding after making gains in student achievement as another drawback to categorical funding, and noted that resources are still required to maintain student growth.

At the same time, some attendees were concerned that if categorical funding were eliminated and simply included in a district's allocation, those funds might not be spent on the intended students (i.e. funds generated by EL students should be spent on EL students). Some attendees were also concerned that a benefit of categorical funds is their "protection" from negotiations, and that protection could be lost if categorical funding were eliminated.

Flexibility at the Local Level. Listening session attendees were generally supportive of additional flexibility for districts and schools to decide how funds should best be spent to serve their students, both in regard to base funding and categorical or additional weighted funding. Multiple attendees suggested more site-based decision making, with community input, would better serve students. Several attendees noted that the restrictive nature of some current categorical funding requires implementing programs that might work in some districts, but aren't necessarily the best fit statewide. Other attendees noted that interventions designated for certain student groups could also benefit other struggling students in the same schools.

Requirements for Ensuring Funding is Used as Intended. As previously noted, a concern about moving from categorical funding to a weighted student formula is how to ensure the additional funds generated by at-risk, EL, and special education weights are used to serve those students. Attendee suggestions to address this concern included requiring districts to create a plan for use of the targeted funds; enacting a simple reporting requirement showing how funds were expended; creating a state requirement that special needs funding be spent on the student populations that generated the funds; and enacting state- or district-level expectations around expenditure of those funds.

Adjustments for Rural and Small Schools. Across the listening sessions held in rural Nevada there was concern that rural districts and small schools will continue to receive additional funds to support schools in areas where it costs more to educate students due to geography or size. Rural attendees were generally supportive of the adjustments suggested in the recommendations, although the study team heard a concern about the cost-of-living adjustment and how that may impact small schools and districts. For example, purchasing some items in remote rural districts is more expensive because of transportation costs and fewer suppliers. Likewise, costs to attend trainings or bring a trainer into the district can cost significantly more due to travel time/transportation issues.

Transportation Funding. Although outside the scope of this study, transportation funding was consistently mentioned as a concern at educator listening sessions across the state. Attendee suggestions included a recommendation that transportation should be funded based on actual transportation costs, taking into consideration density, miles driven, etc., and that the state should revisit the practice of providing transportation funding to all schools, including those that don't transport students.

Stability in Education Funding. Attendees across the state noted the difficulty of running districts without consistency in the expected level of education funding. Identified issues included not knowing

the amount of funding a district will receive until after the legislative session ends, and sometimes until after school has started; and the budgeting challenges associated with monthly allocation of funds from the state. This was also noted as a challenge for strategic planning, particularly related to categorical funds.

Transitioning to a New System. Attendees noted that it is unlikely the state would be able to raise the revenue needed to implement the full adequacy recommendation in a single year. Attendees suggested the state should phase in annual or biannual increases over a period of years – some attendees suggested focusing initial phase-ins to the base amount – and attendees suggested hold harmless provisions should be included to ensure no school receives less funding than they currently receive.

VII. Revised Recommendations and Fiscal Impact

This chapter presents the study team's revisions to the draft recommendations, and also models the fiscal impact of the new funding approach as compared to current funding.

Revised Recommendations

The study team revised a number of the draft recommendations based on additional information and stakeholder feedback.

Use the 2017 Successful Schools Base Cost Developed by NDE

The study team recommended using a base cost figure (\$5,988) identified through the 2006 successful schools approach as a starting point for implementing a new funding approach with a longer-term target of reaching the full adequacy base cost level (\$9,238) in the future. The study team also recommended that the successful schools base cost figure be updated using the most recent available financial and performance information. Since the release of the draft report, NDE with support from the study team has developed an updated 2018 successful schools base cost figure using the methodology detailed in the 2006 APA study, "Estimating Cost of an Adequate Education in Nevada."

The selection of "successful schools" was intended to identify schools that were on their way to meeting future state student performance standards. In other words, the selection criteria was not just schools that were outperforming their peers against current expectations, but were also showing rates of performance improvement needed to meet the escalating future standards. The strength of this approach is that it does not simply identify schools that are doing well today and who may enroll students who are already likely to meet performance expectations. Instead, the approach identifies schools that either consistently attained performance levels called for in the future, or show an improvement in performance that trended toward meeting those future goals.

The elementary and middle schools had sufficiency of longitudinal data to exactly replicate the methodology from 2006. The high schools also had sufficient data but it was required that the currently adopted ACT cuts be applied retroactively in order to determine longitudinal trend in terms of proficiency on the ACT. Also, the school code change and subsequent split of the state charter schools eliminated the possibility of a longitudinal analysis for SPCSA schools. This impacted only the achievement prediction aspect of the analysis. As a proxy, charter schools achieving in the highest quartile in both math and ELA in 2018 were identified as meeting the all students performance prediction. The 2018 subgroup analysis for these schools was performed using the same method as for the non-charter schools. Finally, it should be noted that n-size filters were applied to this analysis. No measure was considered with fewer than 10 records. This did not eliminate schools from consideration, only certain subgroup measures.

Using the selection criteria and methods described above, NDE identified 55 schools (Appendix K). The next step to replicate the 2006 successful schools approach was to identify the base spending amount for each successful school using the In\$ite data collection system. This provides data for every school in the state and breaks down such data by different types of spending. The study team supported NDE to

analyze this data, to isolate “base” spending by excluding spending for at-risk students, special education students, ELL students, transportation, food service, adult education, and capital.

Based upon this updated school selection process and expenditure data analysis, the 2018 successful schools base cost figure identified is \$6,197. The study team recommends using this new figure as the basis of a new funding approach since it reflects the most up-to-date and accurate estimation of what it takes, at the base level, for schools to be successful as measured by the state’s current standards. The state should still consider the full adequacy base figure of \$9,238 as a future funding target as state performance expectations increase over time.

It should also be noted that this figure does not include federal funds, transportation, food service, adult education and capital which should continue to be funded at the level each is at currently.

Apply the Relative Weights for Student Need

In the draft recommendations chapter, the study team presented two different approaches for generating additional resources for students with identified needs (at-risk, EL, special education, and gifted and talented). The first approach was to set weights at a level high enough to generate the full adequacy amount (scaled weights), the second was to keep the same weights identified by the adequacy approaches and apply them to the lower base amount, generating a lower dollar amount (relative weights). Based upon stakeholder feedback, it appears the best approach for Nevada would be to implement the relative weights which would distribute additional resources more equally to all students instead of targeting resources to a greater degree towards students in certain need categories. The table below summarizes these weights and dollars generated.

Table 7.1: Recommended Base and Weights

2017 Successful Schools Base	\$6,197
Student Need Weights	
At-Risk	0.30 (\$1,859)
English Learners	0.50 (\$3,099)
Special Education	1.1 (\$6,817)
Gifted and Talented	0.05 (\$310)

Apply a District Size Adjustment and Necessarily Small Schools Adjustment as Previously Recommended

The study team continues to recommend an adjustment for district size and has modeled the specific formulas identified in the draft recommendations section. The study team has also modeled Wyoming’s approach to funding necessarily small schools for illustrative purposes.

Further Explore the Inclusion of a Comparable Wage Index (CWI) Adjustment

The draft recommendations included a few different ways that a CWI could be applied, using raw figures, indexed to the lowest cost counties or indexed to the statewide average. In the next section, the study team will model the impact of the third option- indexed to statewide average- with a caveat for

implementation, and discuss additional considerations and updated analysis needed for the state to explore the inclusion of a CWI.

Include a Hold Harmless Provision and an External Cost Adjustment

Two funding formula elements not addressed in the prior recommendations were a hold harmless provision and an external cost adjustment.

A hold harmless provision is intended to ensure districts are not negatively impacted by a change in funding approach. This could mean the difference between prior year funding and the recommended funding from the new approach would be calculated, then any district that would have received a higher level for funding in the prior year would receive an adjustment equal to the difference so that they are not “harmed” by the change. This could continue for a limited number of years and be scaled down over time. The study team would not recommend that a hold harmless provision be a permanent inclusion in the funding system and would suggest a limited implementation.

The state should also adjust for at least inflation each year. Adjusting for inflation ensures that the base cost figure, which drives the entire funding system, increases in pace with the costs districts face. The state could also consider a broader external cost adjustment. Such an adjustment would consider changes over time in other cost pressures districts face such as for materials, utilities or health care. Wyoming is a good example of a state that has such an external cost adjustment.

Consider Guidelines and Requirements for Funding Use

Based upon stakeholder feedback, there appears to be support for the state setting guidelines or requirements for how resources allocated through this funding approach can be used, such as:

- Requiring districts to submit plans to the state for how resources will be used.
- Requiring that targeted funding for identified student groups be used to serve those students.
- Requiring that specific staffing ratios be implemented.
- Allocating a portion of funding (a percentage or specific targeted funding for student need) directly to schools.

As this is a governance issue, the study team is not making a specific recommendation but offering this as a consideration for the state to decide.

Fiscal Impact

The following section identifies the recommended per student funding in each district based on the recommended funding approach, and compares those amounts to current available funding in Nevada.

Student Counts

For modeling the fiscal impact of the recommended funding approach, the study team used current student counts available from NDE to model the results of the study. Alternative decisions could be used for a number of these counts. A brief description of the student count used and considerations/alternatives for each count are provided below.

Enrollment: The study team used the Nevada’s current enrollment counts to model the results. States use a variety of student counts including average daily membership, average daily attendance, and single day counts. Even when using similar terminology, no to states tend to count students in exactly the same way. Considerations when determining which enrollment figure to use include the use of membership versus attendance. Membership measures all the students a district must serve while attendance measures the average number of students served each day. Attendance counts often more heavily impact districts with higher student needs.

At-Risk: The study team used free and reduced-price lunch (FRL) counts as a proxy of at-risk. It is important to remember that as the Community Eligibility Provision (CEP) of the school lunch count becomes more prevalent this count will likely become less reliable. With this in mind a number of states are looking at using, or are currently including, direct certification counts in the proxy. This means using eligibility for federal programs such as Medicaid as part of the count. Additionally, the state could look to use actual performance data, such as it uses for 178 funding, as part of the proxy.

EL: The study team used data from NDE on EL student counts for modeling. EL counts are generally based on testing data such as those related to the WIDA standards. EL counts may become more important in the future as federal policies may deter families from accessing other federal programs. In this case, EL eligibility could also be used as qualified factor to be included in the at-risk count.

Special Education: The study team used special education figures for all LEAs provided by NDE. During implementation of a weighted formula the state would need to decide if they want to utilize a cap on the percentage of special education students that could be funded.

Gifted and Talented: The study team utilized a common percentage across LEAs for modeling purposes. This approach assumes an equal distribution of students across districts.

Recommended Funding

Tables 7.2a and 7.2b on the following three pages provide district- and /charter-level calculation of the recommended funding based on the 2018 successful schools base figure, relative weights, district and school size adjustments, prior to applying a CWI. The figures do not include either transportation, food service, adult education, or capital. The study team recommends the state continue to fund these items at their present level until further review (if the state so desires).

Table 7.2a: Additional Funding for Student Need and District Characteristics, School Districts

Additional Funding for Student Need and District Characteristics: School Districts								
District	Base Resources	At-Risk Funding	Special Education Funding	EL Funding	Gifted Funding	District Size	Necessarily Small Schools	Total Funding Before CWI
Churchill	\$20,883,890	\$2,946,674	\$3,272,016	\$765,330	\$52,210	\$2,464,299	\$0	\$30,384,418
Clark	\$2,035,980,971	\$408,477,734	\$265,728,599	\$195,936,746	\$5,089,952	\$0	\$2,687,180	\$2,913,901,182
Douglas	\$35,886,827	\$3,253,425	\$5,541,977	\$1,106,165	\$89,717	\$2,763,286	\$623,599	\$49,264,996
Elko	\$61,443,255	\$7,213,308	\$8,595,859	\$3,259,622	\$153,608	\$4,301,028	\$1,466,015	\$86,432,695
Esmeralda	\$452,381	\$72,505	\$57,737	\$43,379	\$1,131	\$540,143	\$163,591	\$1,330,867
Eureka	\$1,803,327	\$126,419	\$224,951	\$30,985	\$4,508	\$1,453,482	\$113,247	\$3,756,918
Humboldt	\$22,129,487	\$3,156,752	\$3,653,751	\$1,316,863	\$55,324	\$2,235,078	\$1,646,708	\$34,193,962
Lander	\$6,345,728	\$546,575	\$899,804	\$244,782	\$15,864	\$2,868,269	\$154,653	\$11,075,675
Lincoln	\$6,550,229	\$974,168	\$1,158,839	\$46,478	\$16,376	\$2,901,751	\$338,569	\$11,986,410
Lyon	\$55,215,270	\$9,827,203	\$8,180,040	\$1,490,379	\$138,038	\$3,920,284	\$162,974	\$78,934,188
Mineral	\$3,488,911	\$554,012	\$524,886	\$176,615	\$8,722	\$2,163,125	\$138,367	\$7,054,638
Nye	\$33,023,813	\$7,598,142	\$5,248,859	\$1,245,597	\$82,560	\$2,575,857	\$1,521,285	\$51,296,113
Carson	\$49,991,199	\$6,804,306	\$7,689,238	\$4,139,596	\$124,978	\$3,649,358	\$0	\$72,398,674
Pershing	\$4,133,399	\$676,712	\$743,020	\$136,334	\$10,333	\$2,368,438	\$293,919	\$8,362,156
Storey	\$2,745,271	\$273,288	\$490,802	\$144,452	\$6,863	\$1,888,746	\$143,971	\$5,693,394
Washoe	\$414,957,317	\$55,120,456	\$62,781,807	\$34,538,980	\$1,037,393	\$0	\$911,606	\$569,347,559
White Pine	\$12,115,135	\$963,014	\$1,833,692	\$105,349	\$30,288	\$3,283,202	\$690,130	\$19,020,810

Table 7.2b: Additional Funding for Student Need and District Characteristics, Charter LEAs

Additional Funding for Student Need and District Characteristics: Charter LEAs								
Charter LEA	Base Resources	At-Risk Funding	Special Education Funding	EL Funding	Gifted Funding	District Size	Necessarily Small Schools	Total Funding Before CWI
University	\$1,065,884	\$128,966	\$136,061	\$56,083	\$2,665	\$0	\$0	\$1,389,659
American Leadership Academy	\$6,240,379	\$755,092	\$545,336	\$328,379	\$15,601	\$0	\$0	\$7,884,787
Legacy Traditional School	\$7,795,826	\$442,466	\$722,570	\$523,647	\$19,490	\$0	\$0	\$9,503,998
Futuro Academy	\$681,670	\$163,601	\$86,981	\$120,842	\$1,704	\$0	\$0	\$1,054,798
Mater Academy Northern Nevada	\$1,047,293	\$239,824	\$88,617	\$179,713	\$2,618	\$0	\$0	\$1,558,065
Democracy Prep	\$6,903,458	\$1,394,325	\$627,136	\$347,032	\$17,259	\$0	\$0	\$9,289,210
Sports Leadership and Management Academy	\$4,573,386	\$448,043	\$429,452	\$167,319	\$11,433	\$0	\$0	\$5,629,634
Equipo Academy	\$4,703,523	\$1,411,057	\$327,202	\$384,214	\$11,759	\$0	\$0	\$6,837,754
Mater Academy	\$10,881,932	\$2,297,848	\$920,255	\$2,692,597	\$27,205	\$0	\$0	\$16,819,835
American Preparatory Academy	\$9,630,138	\$1,165,247	\$552,153	\$151,827	\$24,075	\$0	\$0	\$11,523,439
Founders Academy of Nevada	\$3,829,746	\$213,797	\$340,835	\$49,576	\$9,574	\$0	\$0	\$4,443,528
Leadership Academy of Nevada	\$1,753,751	\$59,491	\$115,884	\$92,304	\$4,384	\$0	\$0	\$2,025,815
Learning Bridge	\$1,109,263	\$134,227	\$163,601	\$58,376	\$2,773	\$0	\$0	\$1,468,240
Doral Academy	\$32,057,081	\$351,370	\$2,883,464	\$529,844	\$80,143	\$0	\$0	\$35,901,901
Honors Academy of Literature	\$1,332,355	\$161,221	\$265,851	\$70,119	\$3,331	\$0	\$0	\$1,832,877
Pinecrest Academy of Nevada	\$25,568,822	\$916,536	\$2,801,664	\$272,668	\$63,922	\$0	\$0	\$29,623,612
Somerset Academy	\$41,451,733	\$1,838,650	\$5,535,160	\$1,251,794	\$103,629	\$0	\$0	\$50,180,967
Discovery Charter	\$2,404,436	\$139,433	\$156,784	\$126,543	\$6,011	\$0	\$0	\$2,833,206
Oasis Academy	\$3,544,684	\$150,587	\$381,735	\$40,281	\$8,862	\$0	\$0	\$4,126,149

Additional Funding for Student Need and District Characteristics: Charter LEAs								
Charter LEA	Base Resources	At-Risk Funding	Special Education Funding	EL Funding	Gifted Funding	District Size	Necessarily Small Schools	Total Funding Before CWI
Doral Academy Northern Nevada	\$997,717	\$120,730	\$68,167	\$52,489	\$2,494	\$0	\$0	\$1,241,597
Elko Institute for Academic Achievement	\$1,072,081	\$129,728	\$122,701	\$56,424	\$2,680	\$0	\$0	\$1,383,613
Quest Academy	\$4,573,386	\$728,767	\$463,536	\$257,176	\$11,433	\$0	\$0	\$6,034,298
Imagine School Mountain View	\$4,244,945	\$269,570	\$347,652	\$250,979	\$10,612	\$0	\$0	\$5,123,757
Alpine Academy	\$824,201	\$57,632	\$224,951	\$43,379	\$2,061	\$0	\$0	\$1,152,224
Silver Sands Montessori	\$1,976,843	\$113,405	\$115,884	\$104,017	\$4,942	\$0	\$0	\$2,315,091
Nevada State High School	\$3,048,924	\$250,979	\$389,097	\$34,084	\$7,622	\$0	\$0	\$3,730,706
Argent Preparatory Academy	\$824,201	\$96,673	\$252,218	\$43,379	\$2,061	\$0	\$0	\$1,218,532
Nevada Connections Academy	\$19,824,203	\$2,089,628	\$1,833,692	\$92,955	\$49,561	\$0	\$0	\$23,890,039
Nevada Virtual Academy	\$12,995,109	\$1,829,354	\$1,670,092	\$96,054	\$32,488	\$0	\$0	\$16,623,096
Coral Academy of Science Las Vegas	\$18,603,394	\$721,331	\$1,090,672	\$350,131	\$46,508	\$0	\$0	\$20,812,036
Beacon Academy of Nevada	\$2,379,648	\$409,002	\$477,169	\$117,743	\$5,949	\$0	\$0	\$3,389,511
Total – All Districts and Charter LEAs	\$3,005,086,422	\$527,813,270	\$400,762,450	\$253,669,609	\$7,512,716	\$39,376,345	\$11,055,815	\$4,245,276,627

The prior tables, 7.2a and 7.2b, show the funding levels for the each of the student- and district-level adjustments recommended in the study other than CWI. Looking at the final row of Table 7.2b, the total recommended base funding for the state using the 2018 successful schools base would be just over \$3.0 billion. Additional funding for at-risk students is \$527 million, for special education students \$400 million, EL students \$253 million, and gifted \$7.5 million. The district size adjustment generates about \$40 million in funding. These results show that the focus of the recommended formula is heavily weighted towards student needs.

Tables 7.3a and b show the total funding and the impact of the CWI adjustment, with each district benchmarked to the statewide average CWI.

Table 7.3a: District Funding, Adjusted for CWI

District LEA Funding, Adjusted for CWI			
District	Total Funding Before CWI	Adjusted for CWI	Adjusted for CWI, per student
Churchill	\$30,384,418	\$26,981,363	\$8,006
Clark	\$2,913,901,182	\$2,992,576,514	\$9,109
Douglas	\$49,264,996	\$46,013,506	\$7,946
Elko	\$86,432,695	\$76,752,233	\$7,741
Esmeralda	\$1,330,867	\$1,181,810	\$16,189
Eureka	\$3,756,918	\$3,336,144	\$11,464
Humboldt	\$34,193,962	\$30,364,239	\$8,503
Lander	\$11,075,675	\$9,835,200	\$9,605
Lincoln	\$11,986,410	\$10,643,932	\$10,070
Lyon	\$78,934,188	\$73,724,531	\$8,274
Mineral	\$7,054,638	\$6,264,518	\$11,127
Nye	\$51,296,113	\$45,550,948	\$8,548
Carson	\$72,398,674	\$67,620,362	\$8,382
Pershing	\$8,362,156	\$7,425,594	\$11,133
Storey	\$5,693,394	\$5,408,725	\$12,209
Washoe	\$569,347,559	\$540,880,181	\$8,078
White Pine	\$19,020,810	\$16,890,479	\$8,640

Table 7.3b: Charter LEA Funding, Adjusted for CWI

Charter LEA Funding, Adjusted for CWI			
Charter LEA	Total Funding Before CWI	Adjusted for CWI	Adjusted for CWI, per student
University	\$1,389,659	\$1,234,017	\$7,175
American Leadership Academy	\$7,884,787	\$7,001,691	\$6,953
Legacy Traditional School	\$9,503,998	\$8,439,550	\$6,709
Futuro Academy	\$1,054,798	\$936,660	\$8,515
Mater Academy Northern Nevada	\$1,558,065	\$1,383,562	\$8,187
Democracy Prep	\$9,289,210	\$8,248,819	\$7,405
Sports Leadership and Management Academy	\$5,629,634	\$4,999,115	\$6,774
Equipo Academy	\$6,837,754	\$6,071,926	\$8,000
Mater Academy	\$16,819,835	\$14,936,014	\$8,506
American Preparatory Academy	\$11,523,439	\$10,232,814	\$6,585
Founders Academy of Nevada	\$4,443,528	\$3,945,853	\$6,385
Leadership Academy of Nevada	\$2,025,815	\$1,798,924	\$6,357
Learning Bridge	\$1,468,240	\$1,303,797	\$7,284
Doral Academy	\$35,901,901	\$31,880,888	\$6,163
Honors Academy of Literature	\$1,832,877	\$1,627,595	\$7,570
Pinecrest Academy of Nevada	\$29,623,612	\$26,305,768	\$6,376
Somerset Academy	\$50,180,967	\$44,560,698	\$6,662
Discovery Charter	\$2,833,206	\$2,515,887	\$6,484
Oasis Academy	\$4,126,149	\$3,664,020	\$6,406
Doral Academy Northern Nevada	\$1,241,597	\$1,102,538	\$6,848
Elko Institute for Academic Achievement	\$1,383,613	\$1,228,649	\$7,102
Quest Academy	\$6,034,298	\$5,358,456	\$7,261
Imagine School Mountain View	\$5,123,757	\$4,549,896	\$6,642
Alpine Academy	\$1,152,224	\$1,023,175	\$7,693
Silver Sands Montessori	\$2,315,091	\$2,055,801	\$6,445
Nevada State High School	\$3,730,706	\$3,312,867	\$6,733
Argent Preparatory Academy	\$1,218,532	\$1,082,056	\$8,136
Nevada Connections Academy	\$23,890,039	\$21,214,355	\$6,632
Nevada Virtual Academy	\$16,623,096	\$14,761,309	\$7,039
Coral Academy of Science Las Vegas	\$20,812,036	\$18,481,088	\$6,156
Beacon Academy of Nevada	\$3,389,511	\$3,009,886	\$7,838
Total – All Districts and Charter LEAs	\$4,245,276,627	\$4,219,717,950	\$8,702

Since the CWI was indexed to the statewide average, most districts see a reduction in revenue when the CWI is applied. Total funding without the CWI adjustment is \$4.425 billion and that would be reduced to \$4,219 billion with the CWI. District per-pupil funding amounts range across districts and charters from \$6,156 to \$16,189. In many cases, the impact of the CWI was significant enough to offset the benefit of the district size adjustment, for a district which is concerning to the study team. However, at the same time, the study team would not recommend going to the lowest cost-based CWI figure. The study team feels that applying the lowest cost-based adjustment adds costs to the system that are not representative of actual cost faced by districts. The state could instead explore creating Nevada-specific CWI figures. The figures used in this report are based on a nationally generated CWI figure that uses specific personnel positions. A Nevada-specific CWI to account for the unique industries in the state and use the most recent data available (the figures referred to in this report were from 2013). The national database used in CWI creation would allow for this Nevada CWI to be created and easily updated each year.

In the interim, the state could use the statewide average figures but only apply them to districts with a number above 1.0, currently only Clark County.

Comparison to Current

The study team worked closely with NDE to create a comparison of current funding to the study recommendations. The best data for comparison purposes was district-level funding data. Since charter school students are required to receive the same funding as students from the home district, the study team felt that going with the most reliable data at the district level was the correct approach. Due to differences in student count methods between the district/charter funding calculation model and the current funding information, comparisons to current funding levels focus on per-pupil figures only. The study team believes the per-pupil lens provides the best comparative figures for this work.

A determination of how wealth is measured and included in the state's funding formula was outside of the scope of this study. With this in mind, the study team has chosen to include information on the state DSA funding amounts with and without the wealth adjustment along with identifying the additional revenues available to each district beyond the DSA calculation through categorical funding.

In this comparison section, the study team takes the CWI approach of only applying the factor for those districts with a factor above 1.0. Table 7.4 compares the per-pupil funding figures using the 2018 successful schools base figure, relative weights, district and school size adjustments with the statewide average CWI figure applied for those with a factor above 1.0. It is important to remember that the successful schools recommendation is a starting point recommendation and meant to be used as the beginning of a phase in of funding towards a more adequate system.

Table 7.4: Per- Pupil Comparison with Successful Schools Base, Relative Weights, District Size Adjustment, and Statewide CWI* Above 1.0 Only

(1)	(2)	(3)	(4)	(5)	(6)	(7)
District Code	District	Recommended Funding	DSA Basic Support w/o Wealth Adjustment plus Categoricals	DSA Basic Support w/ Wealth Adjustment plus Categoricals	Local Outside Revenue less Federal	Total Currently Available (5+6)
01	Churchill	\$9,016	\$7,283	\$7,022	\$1,217	\$8,239
02	Clark	\$9,109	\$6,461	\$6,531	\$1,052	\$7,582
03	Douglas	\$8,507	\$7,665	\$6,419	\$2,744	\$9,163
04	Elko	\$8,717	\$8,729	\$8,883	\$1,378	\$10,260
05	Esmeralda	\$18,231	\$23,083	\$21,758	\$8,794	\$30,552
06	Eureka	\$12,910	\$18,455	\$12,422	\$22,669	\$35,090
07	Humboldt	\$9,575	\$8,204	\$7,561	\$2,289	\$9,850
08	Lander	\$10,816	\$9,202	\$6,992	\$6,301	\$13,293
09	Lincoln	\$11,340	\$10,957	\$11,290	\$1,443	\$12,733
10	Lyon	\$8,859	\$7,471	\$7,800	\$993	\$8,793
11	Mineral	\$12,530	\$10,944	\$10,735	\$1,770	\$12,505
12	Nye	\$9,626	\$8,450	\$8,349	\$1,545	\$9,894
13	Carson	\$8,975	\$7,902	\$8,025	\$1,110	\$9,135
14	Pershing	\$12,537	\$10,625	\$9,871	\$3,213	\$13,085
15	Storey	\$12,852	\$10,665	\$7,872	\$6,658	\$14,530
16	Washoe	\$8,503	\$6,746	\$6,609	\$1,275	\$7,885
17	White Pine	\$9,729	\$10,193	\$9,871	\$1,650	\$11,521
	State	\$8,917	\$6,700	\$6,708	\$1,164	\$7,872

* The figures above exclude federal funds, transportation, food service, adult education, and capital. Funding for these areas would need to be continued at its current level.

The recommended per-pupil funding (column 3) for each district ranges from \$8,503 to \$18,231, with a statewide average of \$8,917. The DSA Basic Support funding plus categorical funding prior to the wealth calculation (column 4) ranges from \$6,641 to \$23,083, with a statewide average of \$6,700. Thirteen districts have higher recommended funding then the current non-wealth adjusted funding. The DSA Basic Support funding plus categorical funding after the wealth calculation (column 5) ranges from \$6,419 to \$21,758, with a statewide average of \$6,708. (The statewide averages are slightly off due to a rounding error.) Fourteen districts have higher recommended funding then the current wealth-adjusted funding.

The table also shows outside local funding available to each district (column 6). As with all other figures, these amounts do not include any federal funding. Districts range from \$993 to \$22,669 in additional local available funding available outside of the Nevada Plan, with a statewide average of \$1,164 of outside funding. Combining the wealth-adjusted DSA funding with the other local available funding

(column 7) provides insight into the total amount of funding currently available to serve students. Districts range from \$7,582 to \$35,090 per pupil, with a statewide average of \$7,872. The study team recognizes that local funding is used for many purposes and that not all dollars are necessarily available to pay for the study recommendations.

With that important caveat in mind, the Total Currently Available (column 7) shows that five districts are not currently funded at a level to meet or exceed funding recommendations using the 2018 successful schools base figure. However, since one of those districts is also the largest, it is also true that the statewide total resources are below what is necessary.

Table 7.5 shows the same information but utilizes the full adequacy target.

Table 7.5: Per- Pupil Comparison with Full Adequacy Base, Relative Weights, District Size Adjustment, and Statewide CWI* Above 1.0 Only

(1)	(2)	(3)	(4)	(5)	(6)	(7)
District Code	District	Recommended Funding	DSA Basic Support w/o Wealth Adjustment plus Categoricals	DSA Basic Support w/ Wealth Adjustment plus Categoricals	Local Outside Revenue less Federal	Total Currently Available (5+6)
01	Churchill	\$13,441	\$7,283	\$7,022	\$1,217	\$8,239
02	Clark	\$13,572	\$6,461	\$6,531	\$1,052	\$7,582
03	Douglas	\$12,593	\$7,665	\$6,419	\$2,744	\$9,163
04	Elko	\$12,874	\$8,729	\$8,883	\$1,378	\$10,260
05	Esmeralda	\$24,636	\$23,083	\$21,758	\$8,794	\$30,552
06	Eureka	\$18,666	\$18,455	\$12,422	\$22,669	\$35,090
07	Humboldt	\$13,889	\$8,204	\$7,561	\$2,289	\$9,850
08	Lander	\$15,968	\$9,202	\$6,992	\$6,301	\$13,293
09	Lincoln	\$16,540	\$10,957	\$11,290	\$1,443	\$12,733
10	Lyon	\$13,193	\$7,471	\$7,800	\$993	\$8,793
11	Mineral	\$18,366	\$10,944	\$10,735	\$1,770	\$12,505
12	Nye	\$14,140	\$8,450	\$8,349	\$1,545	\$9,894
13	Carson	\$13,379	\$7,902	\$8,025	\$1,110	\$9,135
14	Pershing	\$18,136	\$10,625	\$9,871	\$3,213	\$13,085
15	Storey	\$18,674	\$10,665	\$7,872	\$6,658	\$14,530
16	Washoe	\$12,664	\$6,746	\$6,609	\$1,275	\$7,885
17	White Pine	\$14,255	\$10,193	\$9,871	\$1,650	\$11,521
	State	\$13,273	\$6,700	\$6,708	\$1,164	\$7,872

* The figures above exclude federal funds, transportation, food service, adult education, and capital. Funding for these areas would need to be continued at its current level.

Using the full adequacy base figure, no districts have higher DSA and categorical funding without or with wealth adjustment than the recommended amount. Only two districts have total current available funding higher than the recommended full adequacy amount.

Phase-In

Based on feedback from across the state, the study team has recommended changing the state's funding formula starting with the successful schools as the base figure. It is important that as the new system is implemented a phase-in plan is put in place at the same time. The public feedback was that providing new funding across the new funding model equally was the best plan and the study team has included this in our recommendation. With this structure, as the base amount is increased funding for all student and district adjustments will also increase. This allows the phase-in process to focus on just the base figure. If a ten-year phase-in is identified, a straight approach is to simply increase the base, with an inflation adjustment, by 1/10th each year. This means increasing from the \$6,197 2018 successful schools base to the full adequacy base of \$9,238 over that time.

For context, based upon information for the National Education Association's annual *Rankings of the States*,³⁵ Nevada ranked 47th nationally in per-student current expenditures. If the state started by increasing funding to the recommended level using the 2018 successful schools base, it would move up to 37th, then over time move up to 15th if it fully implemented the adequacy recommendations.³⁶

³⁵ NEA Research. (2018). *Rankings of the States 2017 and Estimates of School Statistics 2018*. Washington, D.C.: National Education Association.

³⁶ In the *Ranking of the States*, Nevada's reported total expenditures per student were \$8,156. The study team added the difference between recommended funding and total available for successful schools and for full adequacy (\$1,045 and \$5,401, respectively) to that reported amount (which includes transportation and federal funds), then compared the new totals for Nevada against the ranked per student expenditures of the other states.

Appendix A: Basic Characteristics of a Strong School Finance System

Basic Characteristics of a Strong School Finance System

1. The allocation of state support is positively related to the needs of school systems, where needs reflect the uncontrollable demographic characteristics of students and school systems.
2. The allocation of state support is inversely related to the wealth of school systems, where wealth reflects the ability of school systems to generate revenue for elementary and secondary education.
3. The allocation of state support is sensitive to the tax effort made by school districts to support elementary and secondary education, which might consider some, but not all, local tax efforts made on behalf of schools.
4. The amount of state support allocated to school systems reflects the costs they are likely to incur in order to meet state education standards and student academic performance expectations.
5. All school systems are spending at adequate levels, and the variation in spending among school systems can be explained primarily by differences in the needs of school systems and the tax effort of districts and is not only related to differences in school district wealth.
6. School systems have similar opportunities to generate revenues to reach those adequate spending levels.
7. School systems have a reasonable amount of flexibility to spend the revenues they obtain as they want, provided they are meeting, or making acceptable progress toward meeting, state education standards and student academic performance expectations.
8. The school finance system covers current operating expenditures as well as capital outlay and debt service expenditures.
9. State aid that is not sensitive to the needs of school systems and is not wealth-equalized, such as incentive grants or hold harmless funds, are limited relative to state support that is need-based and wealth-equalized.
10. Property taxpayers are treated equitably. Property is assessed uniformly within different classes of property and low income taxpayers are relieved of some of the obligation to pay property taxes.
11. The state has a procedure to define and measure school finance equity for students and taxpayers and periodically assesses the equity of the school finance system.
12. The state has a procedure to define and measure the adequacy of revenues school systems obtain for elementary and secondary education and periodically determines whether adequate revenues are available in all school systems.

Appendix B: State Funding Formulas

State	Formula	Base Per-Pupil Funding (FY 2017-18)	Legislation
Alabama	Resource Allocation	Teaching Units	Ala Code: 16-13-230.
Alaska	Foundation Formula	\$5,930.0	AS §: 14.17.010.
Arizona	Foundation Formula	\$3,683.3	ARS 15-901.B.2:
Arkansas	Foundation Formula	\$6,713.0	A.C.A. § 6-20-2305:
California	Foundation Formula	(K-3: \$7,941), (4-6: \$7,301), (7-8: \$7,518), (9-12: \$8,939)	California Education Code 42238.02(d):
Colorado	Foundation Formula	\$6,546.2	C.R.S.A. 22-54-104(5)(a)(XXIV)
Connecticut	Foundation Formula	\$11,525.0	https://www.cga.ct.gov/2017/SUM/2017SUM00002-R01SB-01502-SUM.htm#P1684_217091
Delaware	Resource Allocation	Teaching Units	Title 14, Section 1703:
Florida	Foundation Formula	\$4,204.0	Florida Statutes Title XLVII, Chapter 1011, Section 62
Georgia	Hybrid system - Foundation & P.A.	\$2,541.6	Georgia Statute: Section 20-2-161
Hawaii	Single District		

Idaho	Resource Allocation	Teaching Units	Idaho Statutes: Chapter 33-1002.
Illinois	Foundation Formula	Differs per district	Public Act 100-0465
Indiana	Foundation Formula	\$5,352.0	Indiana Code: Title 20, Article 43
Iowa	Foundation Formula	\$6,664.0	Iowa Code: Chapter 257
Kansas	Foundation Formula	\$4,006.0	Senate Bill 19 (2017)
Kentucky	Foundation Formula	\$3,981.0	
Louisiana	Foundation Formula	\$3,961.0	RS 17:15.1, but the Louisiana Board of Elementary & Secondary Education is responsible for actually implementing (Section 1107 of state rules)
Maine	Hybrid system - Foundation & P.A.	Varies by district	Title 20, Part 7, Chapter 606-B
Maryland	Foundation Formula	\$7,012.0	Maryland State Code § 5-202:
Massachusetts	Other	Varies by district	Title VII, Chapter 70
Michigan	Other	Varies by district - based off of expenditures in 1994	Michigan - State School Act of 1979 (Section 388.1620):
Minnesota	Foundation Formula	\$6,188.0	Minnesota Statutes: 126C.10;
Mississippi	Foundation Formula	\$5,382.0	Mississippi Statute: Section 37-151-7

Missouri	Foundation Formula	\$6,241.0	https://law.justia.com/codes/missouri/2005/t11/1630000011.html
Montana	Foundation Formula	Elementary: \$5,471; High School: \$7,005	Montana Legislation: 20-9-306
Nebraska	Foundation Formula - Based on Expenditures	Based on expenditures from comparable districts	Nebraska Revised Statute: 79-1007.16:
Nevada	Foundation Formula - Based on Expenditures	Based on district's pervious year expenditures - averages \$5,897	Nevada Revised Statutes: Chapter 387
New Hampshire	Foundation Formula	\$3,636.1	Title XV, Chapter 198:
New Jersey	Foundation Formula	Varies by district	Section: 18a:7
New Mexico	Foundation Formula	\$4,053.6	Chapter 22, Article 8
New York	Foundation Formula	\$6,422.0	Title V, Article 73:
North Carolina	Resource Allocation	Teaching Units	Senate Bill 257 (2017)
North Dakota	Foundation Formula	\$9,646.0	Section 15.1-27-04.1(3)(a)(1)(a)
Ohio	Foundation Formula	\$6,010.0	Ohio Revised Code 3317.022
Oklahoma	Foundation Formula	\$3,031.8	Title 70, Chapter I, Article XVIII-B, Section 18-200.1
Oregon	Foundation Formula	\$4,500.0	ORS 327.013(1)(b)(A)

Pennsylvania	Other	\$151.9	Article 24, Section 2502.53
Rhode Island	Foundation Formula	\$9,163.0	Section 16-7.2-3
South Carolina	Foundation Formula	\$2,425.0	Section 59-20-10
South Dakota	Resource Allocation	Teaching Units	Section 13-13-10.1
Tennessee	Resource Allocation	Teaching Units	Section 49-3-307
Texas	Foundation Formula	\$5,140.0	Texas Education Code: 42.101
Utah	Foundation Formula	\$3,311.0	Title 53F-2
Vermont	Other	NA	Title 16, Chapter 133
Virginia	Hybrid system - Foundation & P.A.	Varies by district	2016-18 budget bill: https://budget.lis.virginia.gov/item/2018/2/HB5001/Introduced/1/139/ . Standards of Quality - Chapter 13.2: https://law.lis.virginia.gov/vacode/title22.1/chapter13.2/
Washington	Resource Allocation	Teaching Units	House Bill 2242 (2018)
West Virginia	Resource Allocation	Teaching Units	WV Code Chapter 18, Article 9A
Wisconsin	Other	NA	Section 115.437
Wyoming	Other	Varies by district	Title 21, Chapter 13, Article 3

Appendix C: Funding Mechanisms for Special Education

State	System	Description	Amount (Dollar Amount or Weight)	Citation
Alabama	Census-Based System	The adjustment for special education reflects 5% ADM, weighted 2.50	2.5 for 5% of the ADM	Ala.Code 1975 § 16-13-232
Alaska	Single Student Weight or Dollar Amount and High-Cost Adjustment	Special needs funding factor: 1.20 Intensive Services Funding: intensive student count multiplied by 13	$1.2 + (\text{intensive student count}) \times 13$	AS § 14.17.420
Arizona	Multiple Student Weights System	Fourteen different categories based on the student's specific disability	Ranging from 1.003 to 8.947	A.R.S. § 15-943
Arkansas	Only High-Cost	Special education-catastrophic occurrences funding: Arkansas only provides funding for very high-cost students		A.C.A. § 6-20-2305
California	Census-Based System	Based on the total number of students enrolled, regardless of students' disability status	Not less than 10 percent	West's Ann.Cal.Educ.Code § 56836.145
Colorado	Single Student Weight or Dollar Amount and High-Cost Adjustment	Districts receive \$1,250 for each student with a disability. An additional \$6,000 for children with certain disabilities may be provided	\$167,017,698 for budget year 2017-18.	C.R.S.A. § 22-20-103
Connecticut	Only High-Cost	District is responsible for cost, up to four and one-half times average per-pupil educational costs. Above that threshold, the state provides assistance.		C.G.S.A. § 10-76g

Delaware	Resource-Based System	Resource allocation model using increased teacher-student ratios	Preschool: 12.8 K-3: 16.2 4-12 Regular Education: 20 4-12 Basic Special Education (Basic): 8.4 Pre K-12 Intensive Special Education (Intensive): 6 Pre K-12 Complex Special Education (Complex): 2.6	14 Del.C. § 1703
Florida	Multiple Student Weights System and High-Cost Adjustment	Fixed funding for special education students not receiving level 4 or 5 services is provided through an Exceptional Student Education guaranteed allocation.	Kindergarten and Grades 1, 2 and 3 with ESE Services: 1.107 Grades 4, 5, 6, 7 and 8 with ESE Services: 1.000 Grades 9, 10, 11 and 12 with ESE Services: 1.001 Support Level 4: 3.619 Support Level 5: 5.526	West's F.S.A. § 1011.62
Georgia	Multiple Student Weights System	Five categories based on individual disabilities	2.37989 to 5.7509	Ga. Code Ann., § 20-2-161
Hawaii	Resource-Based System	Based on state appropriations for a single school district	\$409,869,091 FY2019	http://www.hawaiiipublicschools.org/DOE%20Forms/budget/Act49OpBudget.pdf
Idaho	Census-Based System and Resource Allocation Model	Districts receive special education funding at a rate of 6.0% of a district's total K–6 enrollment and 5.5% of a district's total 7–12 enrollment for additional support units. The percentage of a district's total enrollment eligible for exceptional child funding is divided by the exceptional child support unit divisor of 14.5 to determine the number of exceptional child support units generated by the district.	K-6: 6.0% 7-12: 5.5%	I.C. § 33-1002

Illinois	Resource-Based System and Census-Based System	<p>Resource-based: One FTE teacher position for every 141 special ed students One FTE instructional assistant for every 141 special ed students One FTE psychologist for every 1,000 special ed students</p> <p>Census-based: Annually, the State Superintendent shall calculate and report to each Organizational Unit the amount the unit must expend on special education and bilingual education pursuant to the unit's Base Funding Minimum, Special Education Allocation, and Bilingual Education Allocation.</p>	105 ILCS 5/18-8.15
Indiana	Multiple Student Weights System	Dollar amounts based on severity and disability	<p>(1) Severe disabilities: \$9,156 (2) Mild and moderate disabilities: \$2,300 (3) Communication disorders: \$500 (4) Homebound programs: \$500 (5) Special preschool education programs: \$2,750</p> <p>IC 20-43-7-6</p>
Iowa	Multiple Student Weights System	Three different weights based on where the student is educated	<p>Regular classroom: 1.8 Little integration in regular classroom: 2.2 Severe/multiple disabilities: 4.4</p> <p>I.C.A. § 256B.9</p>
Kansas		The Kansas Supreme Court ruled the state's education funding formula unconstitutional on October 2, 2017 and reiterated this finding on June 25, 2018. The Court has set a deadline of June 30, 2019 for the creation of a constitutional funding system.	

Kentucky	Multiple Student Weights System	Three weights	Each category is given an additional weighting of 2.35, 1.17, and 0.24	KRS § 157.200
Louisiana	Single Student Weight or Dollar Amount	Flat weight for all students with disabilities	2.5	LSA-R.S. 17:7
Maine	Multiple Student Weights System and High-Cost Adjustment	Students are assigned to three different categories based on the concentrations of students with disabilities in their districts.	Up to 15%: 2.277 More than 15%: 1.38 Fewer than 20 students: 1.29 Additional funding for very high cost students	20-A M.R.S.A. § 15681-A
Maryland	Single Student Weight System	Flat weight for all students with disabilities	1.74	MD Code, Education, § 5-209
Massachusetts	Census-Based System and High-Cost Adjustment	Census-based system	Assumed in-district special education enrollment: 3.75 percent Vocational enrollment: 4.75. Reimbursement for very high cost students	M.G.L.A. 71B § 5A
Michigan	Reimbursement System	Not to exceed 75% of the total approved costs of operating special education programs	\$956,246,100 for 2017-2018 from state sources and all available federal funding	M.C.L.A. 388.1652
Minnesota	Reimbursement System and Multiple Student Weights	Minnesota funds special education using a hybrid system incorporating multiple student weights and partial reimbursement.	56% reimbursement of a formula (reimbursement) plus additional funding based on students slotted into three categories	M.S.A. § 125A.76
Mississippi	Resource-Based Allocation	One teacher unit is provided for each approved class of exceptional students. The funding allocated is based on the teacher's certification and experience.		Miss. Code Ann. § 37-23-35

Missouri	Single Student Weight System	Flat weight for all students with disabilities, if the count exceeds the special education threshold	1.75	V.A.M.S. 163.011
Montana	Block Grant	The superintendent of public instruction shall determine the total special education payment to a school district through a block grant formula.	(i) 52.5% through instructional block grants; (ii) 17.5% through related services block grants; (iii) 25% to reimbursement of local districts; and (iv) 5% to special education cooperatives and joint boards for administration and travel	MCA 20-9-321
Nebraska	Reimbursement System	For special education and support services provided in each school fiscal year, the State Department of Education shall reimburse each school district in the following school fiscal year a pro rata amount determined by the department.		Neb.Rev.St. § 79-1142
Nevada	Single Student Weight Or Dollar Amount	It is the intent of the Legislature, commencing with Fiscal Year 2016-2017, to provide additional resources to the Nevada Plan expressed as a multiplier of the basic support guarantee to meet the unique needs of certain categories of pupils, including, without limitation, pupils with disabilities, pupils who are English Language Learners, pupils who are at risk and gifted and talented pupils.		N.R.S. 387.121
New Hampshire	Single Student Weight or Dollar Amount and High-Cost Adjustment	Additional dollar amount in the formula	Additional \$1,956.09 for a special education student who has an individualized educational plan (FY18 and FY19). Extra funding for very high cost students.	N.H. Rev. Stat. § 186-C:18

New Jersey	Census-Based System	Census-based system	<p>SE = (RE x SEACR x AEC x 1/8) x GCA where RE is the resident enrollment of the school district or county vocational school district; SEACR is the State average classification rate for general special education services pupils; AEC is the excess cost for general special education services pupils; GCA is the geographic cost adjustment as developed by the commissioner.</p>	N.J.S.A. 18A:7F-55
New Mexico	Multiple Student Weights System	Students are assigned to four different categories based on the services they receive.	Class A and Class B: 1.7 Class C: 2.0 Class D: 3.0	N. M. S. A. 1978, § 22-8-21
New York	Single Student Weight System	Flat weight for all students with disabilities	2.41	McKinney's Education Law § 3602
North Carolina	Single Student Weight System	Flat weight for all students with disabilities, which depends on state allocations	Depends on state allocations with a 12.5% cap	N.C.G.S.A. § 115C-107.1
North Dakota	Single Student Weight System	Flat weight for all students with disabilities	1.082	NDCC, 15.1-27-03.1
Ohio	Multiple Student Weights System	Students are assigned to six different categories based on their specific disabilities.	Category 1: \$1,578 Category 2: \$4,005 Category 3: \$9,622 Category 4: \$12,841 Category 5: \$17,390 Category 6: \$25,637	R.C. § 3317.013

Oklahoma	Multiple Student Weights System	Students are assigned to ten different categories based on their specific disabilities.	Vision Impaired: 4.8 Learning Disabilities: 1.4 Deaf or Hard-of-Hearing: 3.9 Deaf and Blind: 4.8 Educable Mentally Handicapped: 2.3 Emotionally Disturbed: 3.5 Multiple Handicapped: 3.4 Physically Handicapped: 2.2 Speech Impaired: 1.05 Trainable Mentally Handicapped: 2.3	70 Okl.St. Ann. § 18-201.1
Oregon	Single Student Weight System	Flat weight for all students with disabilities	2.0 with an 11% cap	O.R.S. § 327.013
Pennsylvania	Multiple Student Weights System	Multiple student weights based on cost	Three categories based on student costs <ul style="list-style-type: none"> • Category 1: < \$25,000/year • Category 2: \$25,000 - \$49,999/year • Category 3: \$50,000 and up/year Weights are assigned to each cost category <ul style="list-style-type: none"> • Category 1: 2.51% • Category 2: 4.77% • Category 3: 8.46% 	24 P.S. § 25-2509.5
Rhode Island	Reimbursement and High-Cost Adjustment	Reimbursement capped at 110% of the state average Categorical for very high-cost students		Gen.Laws 1956, § 16-24-6 Gen.Laws 1956, § 16-7.2-6
South Carolina	Multiple Student Weights System	Different weights based on disability	Ten categories ranging from 1.114 to 3.57	Code 1976 § 59-20-40

South Dakota	Multiple Student Weights System	Six levels of disability based on individual disability	Additional dollar amounts ranging from \$5,527.09 to \$28,161.22	SDCL § 13-37-35.1
Tennessee	Resource-Based System	Resource allocation model where teachers, assistants, and supervisors are allocated based on the number of students with disabilities	Teachers: 10 options based on disability and severity Supervisors: 750:1 Assessment Personnel: 600:1 Assistants: 60:1 Materials: \$36.50 Equipment: \$17.25 Travel: \$17.25	Tenn. Comp. R. & Regs. 0520-01-09-.02
Texas	Multiple Student Weights System	Different weights based on where the student is educated and the resources provided	Ranging from 1.1 to 5.0	V.T.C.A., Education Code § 42.151
Utah	Block Grant	Block grant based on prior 5 years of allocations with a growth factor	Capped at 12.18%	U.C.A. 1953 § 53A-17a-111
Vermont	Resource-Based Allocation and High-Cost Adjustment		Resource-based allocation: Teacher salary weighted 1.6 for special education. 9.75 special education teaching positions per 1000 students. Reimbursement for very high cost (one child costs over \$50,000)	16 V.S.A. § 2961
Virginia	Resource-Based System	Resource-based system	Based on the cost of staff positions in a district	West's Ann.Cal.Educ.Code § 56836.10
Washington	Single Student Weight System	Flat weight for all students with disabilities	1.9309 with a cap of 13.5%	West's RCWA 28A.150.390
West Virginia	Only High-cost	Hybrid resource-allocation and reimbursement for only high-cost students	FTE calculated for teacher, therapist, aides, and bus drivers	http://wvde.state.wv.us/osp/fiscalmonitoring.html

Wisconsin	Reimbursement System and High-Cost Adjustment	Partial reimbursement	Additional funding for students costing over \$30,000	W.S.A. 115.881
Wyoming	Reimbursement System	The amount provided for special education shall be equal to 100% of the amount actually expended by the district during the previous school year for special education programs and services.		W.S.1977 § 21-13-321

Appendix D: Funding Mechanisms for At-Risk Students

State	Mechanism	Description	Program Name	Amount	Citation
Alabama	Single weight or dollar amount	\$100 per student defined as “at risk.” These funds are required to be spent on tutorial assistance programs for students one or more grade levels below the national norm.	Assistance program for at-risk students	\$100 per student	Ala.Code 1975 § 16-6B-3
Alaska	None				
Arizona	Single weight or dollar amount	Each school district and charter school shall submit to the state board of education a plan for improving the reading proficiency of its pupils in kindergarten programs and grades one, two and three.	K-3 Reading Program	1.040 Weight	A.R.S. § 15-211
Arkansas	Multiple weights or dollar amounts	Sliding scale based on the percentage of students in the national school lunch program.	National School Lunch State Categorical Funding	FY2018: >90%: \$1,576 70%-90%: \$1,051 <70%: \$526	A.C.A. § 6-20-2305
California	Single weight or dollar amount	Supplemental Grant: English Language Learners (ELL), eligible for free or reduced-price meal (FRPM), foster youth, or any combination of these factors (unduplicated count).	Supplemental Grant	1.2	West's Ann.Cal.Educ.Code § 42238.02
	Single weight or dollar amount	Concentration Grant: Additional 50 percent of the adjusted base grant multiplied by ADA and the percentage of targeted pupils exceeding 55 percent of a local educational agency’s (LEAs) enrollment.	Concentration Grant	1.5 for the percentage of at-risk students exceeding 55%	West's Ann.Cal.Educ.Code § 42238.02

Colorado	Multiple Weights	Eligibility for participation in the federal free lunch program is used as a proxy of each school district's at-risk pupil population.	At-Risk Funding	Range: 1.12 to 1.30 depending on at-risk percentage	C.R.S.A. § 22-54-136
Connecticut	Single weight or dollar amount	Eligibility for federal assistance under Title I of the Elementary and Secondary Education Act as of each October 1 counts an extra 33%.	Poverty Count	1.33	C.G.S.A. § 10-262f
Delaware	None				
Florida	Categorical	Each school district receiving funds from the Supplemental Academic Instruction Categorical Fund shall submit to the Department of Education a plan that identifies the students to be served and the scope of supplemental academic instruction to be provided.	Supplemental Academic Instruction Funds	\$712,207,631 for the 2017-18 fiscal year	http://www.fldoe.org/core/fileparse.php/7507/urlt/Fefpdist.pdf
Georgia	Resource-Allocation Model	Additional funding for remedial students, defined as students identified as not reaching or not maintaining adequate academic achievement relative to grade level.	Remedial Program	Sufficient funds to pay the beginning salaries for instructors needed to provide 20 additional days of instruction for 10 percent of the full-time equivalent count.	Ga. Code Ann., § 20-2-184.1
Hawaii	Single weight or dollar amount	"Economically disadvantaged," which is defined as qualifying for free and reduced price lunch.	Economically Disadvantaged Count	1.1	https://www.hawaiipublicschools.org/Reports/FY18WSFOECweights.pdf
Idaho	Resource-Allocation Model	12 students in grade 6-12 at an alternative school generate an alternative support unit.	Alternative Support Units		I.C. § 33-1002

Illinois	Multiple Weights	Count of children receiving services through the programs of Medicaid, the Supplemental Nutrition Assistance Program, the Children's Health Insurance Program, or Temporary Assistance for Needy Families.	GSA Grant	<15%: \$355 15%-100%: $[294.25 + (2,700 \text{ (Low-Income Percentage)}^2)] \times \text{low-income pupils}$	105 ILCS 5/18-8.05
Indiana	Single weight or dollar amount	Complexity grants are used to help school corporations serving high poverty children.	Complexity Grant	\$4,587 for FY2015	IC 20-43-13-4
Iowa	Single weight or dollar amount	Only for grades 1-6, eligibility for free and reduced price meals	At-Risk Programs	0.048 times the percentage of pupils in a school district, grades 1-6 who are eligible for free and reduced price meals, multiplied by the enrollment in the school district, plus 0.156 times the enrollment of the school district.	I.C.A. § 257.11
Kansas	Multiple Weights	The Kansas Supreme Court ruled the state's education funding formula unconstitutional on October 2, 2017 and reiterated this finding on June 25, 2018. The Court has set a deadline of June 30, 2019 for the creation of a constitutional funding system.	High-Density At-Risk Student Weighting	If >10%: 1.484 If <10%: assume 10% is at-risk If 35-50%: Subtract 35% and multiply by 1.7 if >50%: 1.105	K.S.A. 72-5151
Kentucky	Single weight or dollar amount	Average daily membership of students approved for free meals the prior fiscal year and the number of state agency children.	At-Risk Student Amount	1.15	702 Ky. Admin. Regs. 3:270
Louisiana	Single weight or dollar amount	Eligibility for free or reduced lunches and students identified as English Language Learners (non-duplicated count).	At-Risk Students	1.22 times the base amount	LSA-Const. Art. 8, § 13

Maine	Single weight or dollar amount	Eligibility for free or reduced-price meals	Economically Disadvantaged Students	1.15	20-A M.R.S.A. § 15675
Maryland	Single weight or dollar amount	“Compensatory education enrollment count” means the number of students eligible for free or reduced price meals for the prior fiscal year.	Compensatory education enrollment count	1.97	MD Code, Education, § 5-207
Massachusetts	Single weight or dollar amount	Low-income status is reported on the basis of eligibility for free and reduced lunch programs.	Low-income status	FY16: \$2,809	M.G.L.A. 70 § 2
Michigan	Single weight or dollar amount	<p>One of the following criteria: did not achieve proficiency on the ELA, math, science, or social studies content areas of the state summative assessment; is at risk of not meeting the district's core academic curricular objectives in ELA or math; is a victim of child abuse or neglect; is a pregnant teenager or teenage parent; has a family history of school failure, incarceration, or substance abuse; or is enrolled in a priority or priority successor school.</p> <p>Or two of the following: eligible for free or reduced price breakfast, lunch, or milk; absent more than 10 percent of enrolled days or 10 school days during the school year; homeless; migrant; an English language learner; an immigrant who has immigrated within the immediately preceding three years; did not complete high school in four years and is continuing in school.</p>	At-risk	1.115	M.C.L.A. 388.1631a

Minnesota	Single weight or dollar amount	Eligibility for free or Reduced Price Lunch	Compensatory Pupil Units	Compensatory Revenue = (Basic Formula Allowance – \$415) x .6 x Compensatory Pupil Units	M.S.A. § 126C.05
Mississippi	Single weight or dollar amount	Eligibility for free Lunch	At-risk component	1.05	Miss. Code Ann. § 37-151-7
Missouri	Single weight or dollar amount	Eligibility for free and reduced price lunch if the district meets a minimum threshold	Free and reduced price lunch weighting	1.25	V.A.M.S. 163.011
Montana	Categorical	The At-Risk Student payment is intended to address the needs of at-risk students; money is distributed in the same manner as Title I monies are distributed to schools.	At-risk student payment		MCA 20-9-328
Nebraska	Multiple Weights	Poverty students are determined by Free and reduced Lunch status.	Poverty student count	<ul style="list-style-type: none"> • 1.0000 for the first 5% • 1.0375 for 5 - 10% • 1.0750 for 10 - 15% • 1.1125 for 15 - 20% • 1.1500 for 20 - 25% • 1.1875 for 25 - 30% • 1.2250 for more than 30% of formula students 	Neb.Rev.St. § 79-1007.06
Nevada	Single weight or dollar amount	It is the intent of the Legislature, commencing with Fiscal Year 2016-2017, to provide additional resources to the Nevada Plan expressed as a multiplier of the basic support guarantee to meet the unique needs of certain categories of pupils, including, without limitation, pupils with disabilities, pupils who are English learners, pupils who are at risk and gifted and talented pupils.			N.R.S. 387.121

New Hampshire	Single weight or dollar amount	Eligibility for free and reduced-price meals	Differentiated aid for free and reduced-price meal eligible students	Additional \$1,780.63	N.H. Rev. Stat. § 198:40-a
New Jersey	Multiple Weights	Free and reduced price lunches	At-risk pupil weight	FY2017: <20%: 1.41 >40%: 1.46 Sliding scale in between	N.J.S.A. 18A:7F-51
New Mexico	Single weight or dollar amount	Units calculated based on a factor or index determined by establishing a three-year average of the following: 1) percentage of membership used for Title I allocation; 2) percentage of membership classified as English language learners (using the Office of Civil Rights (OCR), and, 3) percentage of student mobility.	At-risk units	Three-Year Average Total Rate x 0.106 = At-Risk Index	N. M. S. A. 1978, § 22-8-23.3
New York	Single weight or dollar amount	Three-year average percentage of students in grades K-6 who are eligible for the free and reduced price lunch program and the census count of students in poverty.	Extraordinary needs pupil count	(National School Lunch Program and Poverty) X 0.65 + (ELL) X 0.5 + (Sparsity Count)	McKinney's Education Law § 3602
North Carolina	Resource-Allocation Model	Every LEA receives the following: 1. Funding equivalent to School Safety Officer salary (\$37,838) per high school 2. Remaining funds allocated based 50% on Federal Title I headcount (\$329.77/pupil) and 50% on allotted ADM (\$88.37/pupil) NOTE: Each LEA must receive at least the equivalent of two teachers and two instructional support personnel (\$249,288).	At-risk student services		http://www.ncpublicschools.org/docs/fbs/allotments/general/2014-15policymanual.pdf

	Resource-Allocation Model	<p>Disadvantaged students supplemental funding:</p> <p>Step 1: Use the average statewide (K-12) teacher-to-student classroom teacher allotment for the Fundable Disadvantaged Population, which is 1:21.</p> <p>Step 2: The targeted allotment ratios for the Fundable Disadvantaged Population are:</p> <ul style="list-style-type: none"> • If low wealth % is > 90%, one teacher per 19.9 students • If low wealth % is > = 80% but < = 90%, one teacher per 19.4 students. • If low wealth % is < 80%, one teacher per 19.1 students. <p>Step 3: Convert the teaching positions to dollars by using the state average teacher salary (including benefits).</p>	Disadvantaged students supplemental funding		http://www.ncleg.net/documentsites/committees/JLSCPSF/2007-12-13%20Meeting/2007.12.13%20Pt.6_DS_SF.pdf
North Dakota	Single weight or dollar amount	The three-year average percentage of students in grades three through eight who are eligible for free or reduced lunches.	Weighted ADM for students eligible for free or reduced lunches	1.025	NDCC, 15.1-27-03.1
Ohio	Single weight or dollar amount	<p>The square of the quotient of that district's percentage of students in its total ADM who are identified as economically disadvantaged as defined by the department of education, divided by the percentage of students in the statewide total ADM identified as economically disadvantaged.</p> <p>Eligibility for Free or Reduced-Price Lunch, recipient of public assistance, or title 1 application.</p>	Economically disadvantaged index for a school district	$\$272 \times ((\# \text{ at-risk students in district} / \# \text{ at-risk students in state})^2 \times \# \text{ at-risk in district})$	R.C. § 3317.022

Oklahoma	Single weight or dollar amount	Eligibility for free/reduced meal status. Note: starting in 2015, free and reduced meals no longer used as proxy for economic disadvantage for some types of schools (http://sde.ok.gov/sde/sites/ok.gov.sde/files/Econ.%20Disadv.%20Memo%20Final.pdf).	Economically disadvantaged weight	1.25	70 Okl.St. Ann. § 18-201.1
Oregon	Single weight or dollar amount	The number of children in poverty families, as determined by the Department of Education based on rules adopted by the State Board of Education; and the number of children in foster homes in the district; and the number of children in the district in state-recognized facilities for neglected and delinquent children.	Poverty weight	1.25	O.R.S. § 327.013
Pennsylvania	Multiple Weights	Various weights based on concentration	Poverty average daily membership	1.3 or 1.6	24 P.S. § 25-2502.53
Rhode Island	Single weight or dollar amount	PK-12 students eligible for free and reduced lunch	Student success factor	1.4	Gen.Laws 1956, § 16-7.2-3
South Carolina	Single weight or dollar amount	(1) District poverty index as detailed on the most recent district report card, which measures student eligibility for the free or reduced price lunch program and Medicaid; and (2) Number of students not in poverty or eligible for Medicaid but who fail to meet state standards in either reading or math.	Students at risk of school failure	1.2	http://ed.sc.gov/finance/financial-services/manual-handbooks-and-guidelines/funding-manuals/fy-2014-2015-funding-manual/
South Dakota	None	None			

Tennessee	Resource-Allocation Model	Based on 1:15 class size reduction for grades K-12, estimated at \$542.27 per identified at-risk ADM by eligibility for free and reduced price lunch	K-12 At-risk class size reduction		T. C. A. § 49-3-361
Texas	Single weight or dollar amount	Educationally disadvantaged student, determined by averaging the highest six months of student enrollment in the National School Lunch Program for free or reduced-price lunches for the prior federal fiscal year.	State compensatory education	1.2	V.T.C.A., Education Code § 42.152
Utah	Categorical	<p>One or more of the following risk factors: (1) Low performance on U-PASS tests; (2) Poverty; (3) Limited English Proficiency; and (4) Mobility.</p> <p>"Mobility" means the number of students enrolled less than 160 days or its equivalent in one school within one school year.</p> <p>"Poverty" means the total number of students eligible for free or reduced-priced lunch.</p>	Enhancement for At-Risk Students Program	Annual appropriation	U.A.C. R277-708
Vermont	Single weight or dollar amount	Additional 25% for students, ages 6-17, from families receiving food stamps.	Poverty ratio	1.25	16 V.S.A. § 4010
Virginia	Multiple Weights	<p>1) A minimum 1.0 percent add-on for each child who qualifies for the federal Free Lunch Program; and</p> <p>2) An addition to the add-on, based on the concentration of children qualifying for the federal Free Lunch Program. Based on its percentage of Free Lunch participants, each school division will receive between 1.0 and</p>	Remedial Education Payments for federal free lunch participants	Range: 1.01 to 1.13 based on the percentage of at-risk students	https://budget.lis.virginia.gov/get/budget/3279/

		13.0 percent in additional basic aid per Free Lunch participant.			
Washington	Single Student weight or dollar amount	Districts receive LAP allocations based on the number of students in poverty, as measured by eligibility for free or reduced-price lunch.	Learning Assistance Program	2014-2015: Additional \$463	http://leg.wa.gov/Senate/Committees/WM/Documents/K-12%20Booklet_2015%202-10-15.pdf
West Virginia	Single weight or dollar amount	The total funds are distributed proportionally to each district on the basis of net enrollment, regardless of at-risk status.	Allowance for Alternative Education Programs	\$18 per student	W. Va. Code, § 18-9A-21
Wisconsin	Categorical	A school district is eligible for aid if at least 50 percent of the district's student enrollment is eligible for free or reduced-price lunch.	Aid to High Poverty Districts	\$16,830,000 in 2017-18 and 2018-19	W.S.A. 121.136
Wyoming	Single weight or dollar amount	Eligibility for the federal free and reduced lunch program. A district receives an EDY adjustment if the percentage of eligible children within any of its schools exceeds 150% of the statewide average concentration level for each school type.	Economically disadvantaged youth	If >150% of state average, additional \$500 per at-risk student	W.S.1977 § 21-13-309

Appendix E: Funding Mechanisms for English Language Learners

State	Mechanism	Description	Amount (Dollar Amount or Weight)	Citation
Alabama	Categorical Grant	The amount is appropriated on a per student basis based on total state appropriations	\$2,755,334 for FY 18	2017 Alabama House Bill No. 171, Alabama 2017 Regular Session
Alaska	Flat Student Weight/Dollar Amount	Special needs funding is available to a district to assist the district in providing special education, gifted and talented education, vocational education, and bilingual education services to its students	1.2	AS § 14.17.420
Arizona	Flat Student Weight/Dollar Amount	English Learner Classroom Personnel Bonus Fund	1.115	A.R.S. § 15-943
Arkansas	Flat Student Weight/Dollar Amount		\$338 per identified student in FY2018	A.C.A. § 6-20-2305
California	Flat Student Weight/Dollar Amount		1.2	West's Ann.Cal.Educ.Code § 42238.02
Colorado	Multiple Weights and categorical	Formula: 1.2 weight in the formula, plus a bonus for districts with a high concentration of ELLs	If ELL < state average: 1.2 If ELL > state average, then districts get additional funding	C.R.S.A. § 22-54.5-201 C.R.S.A. § 22-24-104
Connecticut	Categorical Grant	Districts shall annually receive, within available appropriations, a grant in an amount equal to the product obtained by multiplying 1,916,130 by the ratio which the number of eligible children in the school district bears to the total number of such eligible children state-wide	1,916,130 X Ratio of ELL students to statewide average	2017 Connecticut Senate Bill No. 1502, Connecticut General Assembly - June Special Session, 2017
Delaware	Resource-Allocation Model	The unit for academic excellence may be used to provide educational services for limited English proficient pupils		14 Del.C. § 1716
Florida	Flat Student Weight/Dollar Amount		1.212	West's F.S.A. § 1011.62

Georgia	Flat Student Weight/Dollar Amount	English for Speakers of Other Languages (ESOL) program	2.5558	Ga. Code Ann., § 20-2-161
Hawaii	Multiple Weights	Different weights depending on English language proficiency	Fully English Proficient: 1.0648 Limited English Proficient: 1.1944 Non-English Proficient: 1.3888 Aggregate: 1.2341	https://www.hawaiiipublicschools.org/Reports/FY18WSFOECweights.pdf
Idaho	Categorical Grant	Based on total state appropriations	\$3,820,000 in 2017-2018	2017 Idaho House Bill No. 287, Idaho Sixty-Fourth Idaho Legislature, First Regular Session - 2017
Illinois	Reimbursement	Each school district shall be reimbursed for the amount by which such costs exceed the average per pupil expenditure by such school district for the education of children of comparable age who are not in any special education program	Reimbursement	105 ILCS 5/14C-12
Indiana	Multiple Weights	Non-English-Speaking Program (NESP)	For 2017-2018: -\$250 base per-pupil allocation -\$131.50 additional per-pupil allocation for LEAs with an EL population in excess of 5% but less than 18% -\$165.16 additional per-pupil for LEAs with an EL population greater than 18%	IC 20-30-9-5
Iowa	Flat Student Weight/Dollar Amount	0.22, may be weighted for up to five years, beginning with the budget year for which the student was first determined to be limited English proficient	1.22	I.C.A. § 280.4

Kansas	Multiple Weights	Included in at-risk definition	Multiple weights based on concentration	K.S.A. 72-5151
Kentucky	Flat Student Weight/Dollar Amount		1.096	KRS § 157.200
Louisiana	Flat Student Weight/Dollar Amount		1.22	LSA-Const. Art. 8, § 13
Maine	Multiple Weights	Additional weight in formula depends on density of ELL students	A. Fewer than 15 ELL students: weight of 1.7 B. > 15 ELL students and < 251: weight of 1.5 C. 251 or more ELL students: weight of 1.525	20-A M.R.S.A. § 15675
Maryland	Flat Student Weight/Dollar Amount		1.99	MD Code, Education, § 5-208
Massachusetts	Multiple Weights	Additional weight in formula varies depending on grade level		I MA ST T. XII, Ch. 71A
Michigan	Multiple Weights		\$6,000,000 total: \$620 or \$410 per FTE depending on proficiency	M.C.L.A. 388.1641
Minnesota	Multiple Weights	There are two parts to the EL portion of basic skills revenue: the first part or basic formula is a set amount per EL pupil; the second part of the EL formula is a concentration formula	Flat allocation: \$704 for each ELL Second allocation: varies based on concentration (FY18)	M.S.A. § 124D.65
Mississippi	None			
Missouri	Flat Student Weight/Dollar Amount		If ELL > 1.94% of ADA, then weighted at 1.60 (FY18)	V.A.M.S. 163.031
Montana	None			
Nebraska	Flat Student Weight/Dollar Amount	Must be less than a district maximum and adjustments are made after the calculation	LEP allowance: 25% of the statewide average general fund operating expenditures per formula student X ELL	Neb.Rev.St. § 79-1007.08

Nevada	Categorical Grant	Zoom Schools Program in Clark and Washoe counties (plus 1,500 students in other counties) extended through 2019		2017 Nevada Senate Bill No. 504, Nevada Seventy-Ninth Regular Session
New Hampshire	Flat Student Weight/Dollar Amount		\$711.40 (FY18 and FY19)	N.H. Rev. Stat. § 198:40-a
New Jersey	Flat Student Weight/Dollar Amount	For the 2008-2009 through 2010-2011 school years, the LEP weight shall be 0.5. For subsequent school years, the LEP weight shall be established in the Educational Adequacy Report	0.47 (FY17)	N.J.S.A. 18A:7F-51
New Mexico	Flat Student Weight/Dollar Amount		1.35	N. M. S. A. 1978, § 22-8-22
New York	Multiple Weights	Included in Extraordinary Needs (EN) count	EN = Poverty Count + (English Language Learner Count × 0.5) + Sparsity Count	McKinney's Education Law § 3602
North Carolina	Resource-Allocation Model	Eligible LEAs/charter schools must have at least 20 students with limited English proficiency (based on a 3-year weighted average headcount), or at least 2.5% of the ADM of the LEA/charter school. Funding is provided for up to 10.6% of ADM	Each school receives the minimum of 1 teacher assistant position. 1. 50% of the funds (after calculating the base) will be distributed based on the concentration of limited English proficient students within the LEA. 2. 50% of the funds (after calculating the base) will be distributed based on the weighted 3-year average headcount.	http://www.ncpublicschools.org/docs/fbs/allotments/general/newpolicies17-18.pdf
North Dakota	Multiple Weights	Weight varies based on level of proficiency	1.40 categories 1-6 1.28 categories 7-12 1.07 categories 13-18	NDCC, 15.1-27-03.1

Ohio	Multiple Weights	Funding depends on duration of enrollment:	<p>(A) \$1,515 per student enrolled for 180 school days or less</p> <p>(B) \$1,136 per student enrolled for more than 180 school days</p> <p>(C) \$758 per student who does not qualify for inclusion under division (A) or (B) and is in a trial-mainstream period</p>	R.C. § 3317.016
Oklahoma	Flat Student Weight/Dollar Amount		1.25	70 Okl.St. Ann. § 18-201.1
Oregon	Flat Student Weight/Dollar Amount		1.5	O.R.S. § 327.013
Pennsylvania	Flat Student Weight/Dollar Amount		1.6	24 P.S. § 25-2502.53
Rhode Island	Flat Student Weight/Dollar Amount		1.1	Gen.Laws 1956, § 16-7.2-6
South Carolina	Flat Student Weight/Dollar Amount		1.2	2017 South Carolina House Bill No. 3720, South Carolina One Hundred Twenty-Second Session General Assembly - First Regular Session
South Dakota	Flat Student Weight/Dollar Amount		1.25	SDCL § 13-13-10.1
Tennessee	Resource-Allocation Model	The state's funding formula provides districts with funding for an additional teaching position for every 20 ELL students and an additional interpreter position for every 200 students		T. C. A. § 49-3-307

Texas	Flat Student Weight/Dollar Amount		1.1	V.T.C.A., Education Code § 42.153
Utah	Categorical Grant	ELLs are included in At-Risk Students Program	20% of at-risk funding goes to high-poverty districts 76% distributed based on districts' at-risk student enrollment. 4% to all districts	U.A.C. R277-708
Vermont	Flat Student Weight/Dollar Amount		1.2	16 V.S.A. § 4010
Virginia	Resource-Allocation Model	State funding shall be provided to support 17 full-time equivalent instructional positions for each 1,000 students identified as having limited English proficiency.	17 teachers per 1000 ELLs	VA Code Ann. § 22.1-253.13:2
Washington	Resource-Allocation Model	The formula provides 4.7780 hours of bilingual instruction per week. The formula translates to additional 11 funding of approximately \$923 per eligible student in the 2014-15 school year		West's RCWA 28A.180.080
West Virginia	Categorical Grant	In order to receive the funding, a county board must apply to the state superintendent	Any appropriation made pursuant to this section shall be distributed to the county boards in a manner that takes into account the varying proficiency levels of the students and the capacity of the county board to deliver the needed programs	W. Va. Code, § 18-9A-22
Wisconsin	Reimbursement	It is the policy of this state to reimburse school districts for the added costs of providing special programs		W.S.A. 115.95
Wyoming	Flat Student Weight/Dollar Amount	A district receives an EDY adjustment if the percentage of eligible children within any of its schools exceeds 150% of the statewide average concentration level for each school type	If >150% of state average, additional \$500 per at-risk student	W.S.1977 § 21-13-309

Appendix F: Funding Mechanisms for Gifted/Talented Students

State	Mechanism	Description	Amount (Dollar Amount or Weight)	Citation
Alabama	None			
Alaska	Flat Weight		1.2	AS § 14.17.420
Arizona	Census-Based and Flat Weight	4.0 percent assumed for all districts	\$75 per pupil for four per cent of the district's student count, or two thousand dollars, whichever is more	A.R.S. § 15-779.03
Arkansas	Categorical	Funds are appropriated to provide financial assistance to school districts operating programs for gifted and talented students.		A.C.A. § 6-42-106
California	None			
Colorado	Categorical		\$12.1 million plus an additional \$33 million from local and other resources.	C.R.S.A. § 22-20-205
Connecticut	Reimbursement	"Extraordinary learning ability" and "outstanding creative talent" shall be defined by the commissioner.	LEA is responsible for costs up to 4.5 times the average per-pupil educational costs. State reimburses the rest.	C.G.S.A. § 10-76a C.G.S.A. § 10-76g
Delaware	Resource Allocation Model	The unit for academic excellence may be used to provide educational services for gifted and talented pupils.		14 Del.C. § 1716

Florida	Categorical	The Exceptional Student Education (ESE) Guaranteed Allocation provides supplemental funding for students who have low to moderate handicapping conditions and/or are gifted students.	The guaranteed allocation is a fixed amount provided each district.	West's F.S.A. § 1003.57
Georgia	Flat Weight	Category VI of Special Education Funding - intellectually gifted	1.6589 for FY 2018 (adjusted annually)	Ga. Code Ann., § 20-2-161
Hawaii	Census-Based	The count used to determine the G/T enrollment at a school is based on a flat 3% assumption for each school.	1.265	https://www.hawaiiipublicschools.org/DOE%20Forms/WSF/COWFICreport081815.pdf
Idaho	Categorical	"Gifted/talented children" means those students who are identified as possessing demonstrated or potential abilities that give evidence of high performing capabilities in intellectual, creative, specific academic or leadership areas, or ability in the performing or visual arts and who require services or activities not ordinarily provided by the school in order to fully develop such capabilities.	\$1,000,000 in 2017-2018	2017 Idaho House Bill No. 287, Idaho Sixty-Fourth Idaho Legislature, First Regular Session - 2017
Illinois	Only if funding is available	When sufficient state funding is expected to be available to support local programs of gifted education, the State Superintendent of Education shall issue a Request for Proposals (RFP). To be considered for funding, an eligible entity shall submit for approval by the State Superintendent a plan for its program.		105 ILCS 5/14A-30
Indiana	Categorical	A school corporation may submit a grant proposal for planning or continuation of services. Proposals are reviewed to verify compliance with the High Ability Program Rule.	2016-2017: \$12,548,096	IC 20-36-2-1

Iowa	Flat Weight		\$82.67 per-pupil for 2017-2018	I.C.A. § 257.46
Kansas	None			
Kentucky	Multiple Weights	Funded under "Special Education Programs"		KRS § 157.200
Louisiana	Flat Weight	Funding for gifted and talented students with an IEP	1.6	2017 La. Sess. Law Serv. Hs. Conc. Res. 7 (WEST)
Maine	Categorical	The Gifted and Talented Allocation uses the most recent financial data for approved programs, or the approved budget amount, whichever is less, and multiplies that amount by an inflation adjustment.		20-A M.R.S.A. § 15672
Maryland	Only if funding is available	To the extent funds are provided in the state budget or are available from other sources, the State Board shall provide guidance, consultative and technical assistance, and fiscal support for programs that include.		MD Code, Education, § 8-204
Massachusetts	None			
Michigan	None			
Minnesota	Flat Weight	For fiscal year 2015 and later, the formula allowance is \$13 per pupil. The revenue must be reserved and spent only to: (1) identify gifted and talented students; (2) provide education programs for gifted and talented students; or (3) provide staff development	\$13 per pupil \$12,235,000 for 2018	M.S.A. § 126C.10

Mississippi	Resource Allocation Model	The gifted education program is an add-on program funded by the state legislature through the Mississippi Adequate Education Program.	<p>1. The first teacher unit shall be funded on the basis of a minimum of 20 identified and participating students.</p> <p>2. The second gifted teacher unit shall be funded when there are 41 identified and participating students.</p> <p>3. Additional gifted teacher units shall be funded based on the 40 + 1 formula.</p>	Miss. Admin. Code 7-96
Missouri	None			
Montana	Categorical	District must apply to the state for funding. State funds must be matched with local funds.		MCA 20-7-903 Mont.Admin.R. 10.55.804
Nebraska	Categorical	Local systems may apply to the department for base funds and matching funds	Each eligible local system shall receive 11/10 of 11% of the appropriation as base funds plus a pro rata share of the remainder of the appropriation based on identified students, up to 10 percent of the prior year's fall membership	Neb. Admin. R. & Regs. Tit. 92, Ch. 3, § 007
Nevada	Flat Weight	Funds will be distributed on a per pupil basis based on a count day(s) reporting mechanism to be established by the Department.		N.R.S. 388.5267
New Hampshire	None			
New Jersey	None			

New Mexico	Multiple Weights	Apply multipliers to the base per-pupil amount for gifted students; these multipliers vary depending on the degree of modification the students require to the general education program.	Varies by need	N.M. Admin. Code 6.29.1
New York	None			
North Carolina	Census-Based	All LEAs receive these funds regardless of the number of identified AIG students.	4% of ADM at \$1310.82 per pupil	N.C.G.S.A. § 115C-150.5
North Dakota	Reimbursement	Funds must be distributed to reimburse school districts or special education units for gifted and talented programs upon the submission of an application that is approved in accordance with guidelines adopted by the superintendent of public instruction.	\$800,000 in 2017	2017 North Dakota House Bill No. 1013, North Dakota Sixty-Fifth Legislative Assembly
Ohio	Flat Weight and Resource Allocation	The funding is distributed through 3 streams.	Identification Funding = (Formula ADM) X \$5.05 Coordinator Funding = [(Formula ADM – Community School ADM) / 3,300] x \$37,370 Specialist Funding = [(Formula ADM – Community School ADM) / 1,100] x \$37,370	OAC 3301-51-15
Oklahoma	Flat Weight		1.34	70 Okl.St. Ann. § 18-201.1
Oregon	Categorical	Any school district may apply for state funds for services for talented and gifted children identified in the district.		O.R.S. § 343.399

Pennsylvania	Reimbursement	The term “children with exceptionalities” shall mean children of school age who have a disability or who are gifted and who, by reason thereof, need specially designed instruction. The state reimburses at different rates based on total cost.	Category 1: <\$25k Category 2: \$25k-\$50k Category 3a: \$50k-\$75k Category 3b: >\$75k	24 P.S. § 13-1373
Rhode Island	None			
South Carolina	Flat Weight	The SCDE will annually calculate each district's allocation based on the number of gifted and talented students projected to be served in each district as it relates to the total of all such students in the state.	1.15 District minimum: \$15,000	S.C. Code of Regulations R. 43-220
South Dakota	None			
Tennessee	Resource Allocation Model	Part of special education funding. "'Child with disabilities' means the intellectually gifted."	Tiered teacher allocation system based on location of instruction and amount of specialized contact.	T. C. A. § 49-10-102 and T. C. A. § 49-10-113
Texas	Flat weight		1.12 with a 5% cap	V.T.C.A., Education Code § 42.156
Utah	Categorical	Enhancement for Accelerated Students	\$5,032,400 in FY 18	U.C.A. 1953 § 53A-17a-165
Vermont	None			
Virginia	Resource Allocation Model	An additional payment shall be disbursed by the Department of Education to local school divisions to support the state share of one full-time equivalent instructional position per 1,000 students	\$34,425,282 for FY 18	2016 Virginia House Bill No. 29, Virginia 2017 Regular Session

Washington	Census-based and Resource Allocation	5.0 percent of each school district's population	Provides 2.1590 hours per week in extra instruction with fifteen highly capable program students per teacher.	West's RCWA 28A.185.020
West Virginia	None			
Wisconsin	Categorical	The department shall award grants to nonprofit organizations, cooperative educational service agencies, institutions within the University of Wisconsin System, and school districts for the purpose of providing to gifted and talented pupils those services and activities not ordinarily provided in a regular school.	Maximum is \$30,000 per grant. Total is \$237,200 for FY18	W.S.A. 118.35
Wyoming	Flat Weight		\$40.29/ADM	2017 Wyoming House Bill No. 236, Wyoming Sixty-Fourth Legislature - 2017 General Session

Appendix G: Professional Judgment Panel Participants

Name	District	Panel
AJ Feuling	Carson	Special Education Panel
Becky Kaatz	CCSD	At-Risk Panel
Betsy Sexton	Washoe	Special Education Panel
Brian Prewett	Washoe	At-Risk Panel
Bruce Williams	Eureka	EL Panel
Deanna McHenry	CCSD	Special Education Panel
Derild Parson	Churchill	Special Education Panel
Ignacio Ruiz	CCSD	EL Panel
Janeen Kelly	Washoe	EL Panel
Jason Goudie	CCSD	At-Risk Panel
Jeana Curtis	Washoe	At-Risk Panel
Kimberly Ivanick	CCSD	At-Risk Panel
Laura Austin	Carson	EL Panel
Lisa Bliss	Churchill	At-Risk Panel
Mike Schroeder	Washoe	EL Panel
Pilar Muana	Washoe	Special Education Panel
Ramona Esparza	CCSD	EL Panel
Ron Coombs	Washoe	At-Risk Panel
Stacey Ting	Washoe	EL Panel
Trish Lozano	Washoe	Special Education Panel
Troy Parks	Washoe	EL Panel
Trudy Nunn	Washoe	EL Panel

Appendix H: Summary of Nevada Standards and Requirements and Instructions to Professional Judgment Panel Members

Summary of Nevada Standards and Requirements

April 2018

Compulsory Education

Any person having under his or her control or charge a child who is between the ages of 7 and 18 years shall send the child to a public school during the time school is in session in the school district of residence. A child must be five on or before September 30 to be admitted into kindergarten and a child must be six on or before September 30 to be admitted into first grade. Further, kindergarten is required before a student can go on to grade 1. If a child does not complete kindergarten in a public school program, a licensed private school, an exempt private school, or have on file with the school district a notification of intent to provide home instruction, then the child must pass a developmental screening test for grade 1 readiness.³⁷ If the district determines that the child is not prepared for grade 1, he or she must be admitted to kindergarten. The boards of trustees of each school district is required to provide at least 180 days of free school to their students.³⁸

Student-Instructor Ratio Requirements³⁹

NRS 388.700-NRS 388.725 requires the following statutory class-size ratios: kindergarten, grades 1 and 2, 16:1; and grade 3, 18:1. In grades 1 through 3, the flexibility allowing school districts to increase class size by up to two students was discontinued. The 2015 Legislature also passed A.B. 278 (Chapter 499, Statutes of Nevada), requiring the Department of Education to establish methods to monitor school district plans for class-size reduction, monitor the content and accuracy of quarterly reports concerning pupil-to-teacher ratios and average daily attendance, review and verify the accuracy of program variance requests, and provide documentation relating to the distribution and use of program funds as well as advising school district boards of trustees concerning its expectations for the use of funds.

Nevada's Read by Grade 3 Act⁴⁰

SB 391, Nevada's Read by Grade 3 Act, became effective on July 1, 2015. This statute was designed to dramatically improve student achievement by ensuring that all students will be able to read proficiently by the end of the 3rd grade. SB 391 requires all public school districts and charter schools to develop local K-3 literacy plans aligned to the Nevada State Literacy Plan and are aimed at improving the literacy of all K-3 grade level students. This statute also requires every elementary school in Nevada to designate a reading "learning strategist" to provide literacy-based professional learning, coaching, and guidance for all K-4 teachers at the site. SB 391 emphasizes the implementation of early intervention measures in reading achievement for all K-3 students who are determined to be struggling in reading as determined

³⁷ NRS 392.040

³⁸ NRS 388.090

³⁹ <https://www.leg.state.nv.us/Division/Research/Publications/Factsheets/Class-SizeReduction.pdf>

⁴⁰ <http://www.doe.nv.gov/RGB3/Home/>

by the Brigance, MAP, and Smarter Balanced assessments, which are detailed in the following section, **“Student Assessments.” Nevada Academic Content Standards**⁴¹

The Nevada State Board of Education adopted the Common Core State Standards (CCSS) for English Language Arts and Mathematics in 2010 and Next Generation Science Standards in 2014. The goal is to ensure all students are ready for college and careers. The Nevada Academic Content Standards are in place for all K-12 grades. The state defines standards in the following areas:

- ELA and mathematics (informed by the CCSS)
- Computer science
- Digital learning/distance education
- Fine arts
- World languages
- Health and physical education
- Pre-K
- Science (informed by the Next Generation Science Standards)
- Social studies

Career and technical education **Student Assessments**⁴²

The following assessments are required by grade:

Grades Pre-K-K: Brigance Early Childhood Screens III: all students are required to be assessed upon entrance to kindergarten to identify individual student needs and track progress, specifically regarding a student’s literacy level. The Brigance is a collection of quick, reliable, and highly accurate early childhood education assessments and data-gathering tools that are nationally standardized.

Grades K-3: Measures of Academic Progress (MAP): MAP was officially adopted by the State Board of Education to assess Nevada students as a part of the Read by Grade Three (RBG3) program and is a computer-adaptive assessment utilized to monitor student growth to inform and personalize instruction. With the implementation of MAP in school year 2017-18, Nevada will, for the first time, have aligned standards, professional development, assessments, and expectations in kindergarten through third grade.

Grades 3-8: Smarter Balanced Assessment (SBAC): Nevada uses the Smarter Balanced assessments aligned to new Common Core State Standards, in English language arts and mathematics statewide in third through eighth grades. The computer-adaptive format and online administration of the assessments provides meaningful feedback that teachers and parents can use to help students succeed. This assessment allows Nevada to measure itself with 15 other states that also administer the Smarter Balanced assessment.

Grades: 5, 8, and 10: Science: Science is federally required in fifth grade, eighth grade, and high school; the high school science assessment was developed as the End of Course (EOC) science exam that students will need to pass to fulfill high school graduation requirements (starting with the graduating

⁴¹ http://www.doe.nv.gov/Curriculum_Standards/

⁴² <http://www.doe.nv.gov/Assessments/>

class of 2020). Thescience assessments are a computer-based test administered at schools once a year in the spring.

Grades 7-13: End of Course Examinations (EOC): In 2017 State Board of Education approved recommendations related to the transition from EOC examinations to EOCEOC finals, as required by Assembly Bill 7 (AB 7) from the 2017 legislative session. The EOC final is administered in the following courses (or equivalent, state-approved courses): Math 1–Algebra 1, Math II–Geometry, Integrated Math I, Integrated Math II, and ELA–English 10. The State Board adopted a phased implementation of the EOC final: starting in 2018-19 the EOC final will count at 10 percent of the student’s final grade and increase 5 percentage points each year until reaching 20 percent of the grade in 2020-21.

Grade 11: College and Career Readiness Assessments (ACT): To be eligible for graduation, all students, free of charge, must participate in Nevada’s College and Career Readiness (CCR) assessment during their junior year of high school. The State Board of Education chose the ACT as Nevada’s CCR assessment.*Grades 3-13: Nevada Alternate Assessment (NAA):* The NAA is the state assessment of alternate achievement standards. The assessment is administered to less than 1 percent of all students in Nevada who meet the strict criteria required in order to be assessed with the NAA. The NAA assesses student academic performance on Nevada Content Standards through direct observation of specific tasks.

Grades K-13: English Language Proficiency Assessment (WIDA): The ESSA of 2015 requires students identified as Limited English Proficient (LEP) are annually assessed for English proficiency in the four domains of speaking, listening, reading, and writing on English Language Proficiency Assessment. The WIDA Consortium provides Nevada’s English Proficiency Examination.

Grades 4 and 8: National Assessment of Educational Progress (NAEP): The NAEP is a continuing and nationally representative assessment of student performance in several content areas including, but not limited to reading, mathematics, science, writing, and U.S. history. Assessment is done via student/school sampling and reported for the state.

Grades 9-13: Career & Technical Education (CTE): There are two types of career and technical education (CTE) assessments. The Workplace Readiness Skills Assessment measures student proficiency in the Employability Skills for Career Readiness state standards. The end-of-program technical assessments are program specific and measure the skill attainment of students who have completed a program course sequence. These assessments are aligned to the state standards. **Course and Graduation Requirements**

Students must complete required course work, take the ACT in Grade 11, and earn 22.5 credits in certain subjects.

High school pupils must enroll in four credits of English; four credits of mathematics, including Algebra I and geometry; three credits of science, including two laboratory courses; and three credits of social

studies, including American government, American history, and world history or geography.⁴³ This default curriculum includes more credits than are required for a diploma, but a pupil may request a modified course of study as long as it satisfies the requirements for a standard high school diploma or an adjusted diploma, as applicable.

There are currently six types of high school diplomas granted in Nevada: (1) standard; (2) advanced; (3) adult; (4) adjusted; (5) alternate; and (6) College and Career Ready. A standard diploma is awarded upon successful completion of 22.5 units (15 credits for required courses and 7.5 elective credits) and taking the ACT. An advanced diploma requires completion of a minimum of 24 credits, including all requirements for a standard diploma plus one additional credit each of mathematics, science, and social studies. In addition, the advanced diploma requires a minimum 3.25 Grade Point Average (GPA), which includes all credits applicable toward graduation. An adult diploma may be granted to a student who withdrew from high school before graduation, but has completed 20.5 units in a program of adult education or an alternative program for the education of pupils at risk of dropping out of high school. The alternate diploma as established in Assembly Bill 64 (2017) provides that a pupil with a disability may receive a standard high school diploma if he or she demonstrates through a portfolio of work, proficiency in the standards of content and performance established by the Council to Establish Academic Standards for Public Schools and satisfies the requirements set forth in his or her individualized education program (IEP). Assembly Bill 64 also provides that a pupil who has a significant cognitive disability may receive an alternative diploma if he or she passes an alternate assessment prescribed by the State Board. The College and Career Ready diploma is built on the foundation of an Advanced Diploma and requires a total of 24 units including 18 units of credit for the required courses, six units of credit for elective courses, a minimum 3.25 Grade Point Average (GPA) on a 4.0 grading scale, weighted or unweighted, must demonstrate proficiency in speaking not less than two languages, or have earned not less than two (2) units of credit used to complete the aforementioned requirements in the following: Advanced Placement (AP) courses, International Baccalaureate (IB) courses, dual-dual-credit/dual-enrollment (DC) courses, career and technical education (CTE) courses, work-based learning courses, or a world language course. Finally, students earning a College and Career Ready diploma must obtain one or both of the College-Ready or Career-Ready Endorsements.⁴⁴

Individuals with Disabilities Education Act (IDEA)⁴⁵

The Individuals with Disabilities Education Act (IDEA) requires that students with disabilities receive services that are included in their Individualized Education Program (IEP), and they receive free appropriate public education in the least restrictive environment.⁴⁶ The law requires linking records of migratory children with disabilities among states, developing alternate assessments aligned with the

⁴³Legislative Counsel Bureau, Policy and Program Report, April 2014.

<http://www.leg.state.nv.us/division/research/publications/pandpreport/10-ese.pdf>

⁴⁴ <https://www.leg.state.nv.us/App/NELIS/REL/79th2017/Bill/4745/Text>

⁴⁵ <http://www.ncld.org/disability-advocacy/learn-ld-laws/idea/what-is-idea>

⁴⁶ <http://www.ncld.org/disability-advocacy/learn-ld-laws/idea/what-is-idea>

state's content standards, reporting, specific performance goals and indicators, and special education teacher qualifications.

School Accountability/School Performance Framework⁴⁷

The Nevada School Performance Framework (NSPF) is Nevada's school accountability system that was revised in September 2017. The NSPF classifies schools within a five-star performance rating system. The Elementary and Middle School NSPF rating incorporates measures of student proficiency, student growth, English language proficiency, closure of achievement gaps, and attendance as a measure of student engagement. The High School NSPF rating is similar to the Elementary and Middle School NSPF rating but includes graduation rate and college and career readiness assessment results in lieu of student growth and closure of achievement gaps.

Educator Preparation and Effectiveness

A new educator evaluation system was implemented in the 2015-16 school year⁴⁸ to support and evaluate teachers' and school administrators' ability to teach the more rigorous Nevada Academic Content Standards. Assembly Bill 222 in 2011 and Senate Bill 407 in 2013 required the statewide educator performance evaluation and support models for teachers and school administrators.⁴⁹ For the 2017-2018 school year, the evaluation system requires 20 percent of the evaluation of an individual teacher or administrator to be based upon the academic achievement of pupils as measured with a Student Learning Goal. For the 2018-2019 school year and thereafter the percentage of the evaluation of an individual teacher or administrator to be based upon the academic achievement of pupils increases to 40 percent.⁵⁰ In addition, the measure provides that an evaluation of a probationary teacher or a post-probationary teacher must include an evaluation of whether the teacher employs practices and strategies to involve and engage the parents and families of pupils in the classroom. Finally, the evaluation system shall require that an employee's overall performance be determined to be "highly effective," "effective," "developing," or "ineffective."

Every Student Succeeds Act (ESSA) and Nevada's Consolidated Plan⁵¹

The Every Student Succeeds Act (ESSA) replaces the No Child Left Behind (NCLB) Act and reauthorizes the Elementary and Secondary Education Act of 1965, returning much of the state's authority and flexibility to set policies, creates timelines for progress, and develops school improvement plans that meet the needs of its students. NDE engaged stakeholders — parents, educators, civil rights organizations, the business community, and others — to develop its Consolidated State Plan, which was approved in April 2017. Nevada's plan is focused on implementing strategies related to: 1) develop school leaders, 2) use data to inform decisions impacting schools, and 3) identify and improve our lowest-performing schools.

⁴⁷ 2018 STIP State Improvement Plan, which was updated in March 2018

⁴⁸ <http://www.reviewjournal.com/news/education/test-scores-could-matter-less-teacher-evaluations>

⁴⁹ http://www.doe.nv.gov/NDE_Offices/Educator_Effectiveness/NEPF_Module_I-System_Overview/

⁵⁰ <https://www.leg.state.nv.us/NRS/NRS-388.html#NRS388Sec090>

⁵¹ http://www.doe.nv.gov/uploadedFiles/ndedoenvgov/content/Boards_Commissions_Councils/ESSA_Adv_Group/NevadaSubmittedConsolidatedPlanFinal.pdf

Instructions to Professional Judgment Panel Members

INSTRUCTIONS TO PROFESSIONAL JUDGMENT PANEL MEMBERS

Augenblick, Palaich and Associates

April 2018

Augenblick, Palaich and Associates (APA) is currently conducting a school funding study as required by Senate Bill 178 that includes identifying the resources needed to serve at-risk students, English language learners (ELLs), special education and gifted students. One approach the study team is using is the professional judgment (PJ) approach which relies on the experience and expertise of Nevada educators to identify the resources needed to ensure that students can meet state standards. Today, you will be serving on a PJ panel as a part of this approach.

Below you will find a number of instructions to help you in this process. It is important to remember that you are not being tasked to build your “Dream School.” Instead, you are being asked to identify the resources needed to meet the specific standards and requirements that the state expects students, schools and districts to fulfill. You should allocate resources as efficiently as possible without sacrificing quality.

1. You are a member of a panel that is being asked to design how programs and services will be delivered in representative school settings. These panels are being used to identify the resources that schools with a particular set of demographic characteristics should have in order to meet a specific set of “input” requirements and “output” objectives.
2. As a group, you will first review the resources allocated at the “base level” by prior PJ panels convened in 2014 for the Lincy Institute at UNLV, then you will address the addition resources needed for at-risk, English Language Learners (ELL), or special education and gifted students.
3. The characteristics of the representative school(s) are identified for each, including: (1) grade span; (2) enrollment; and (3) the proportion of students in the given student group.
4. The “input” requirements and “outcome” objectives that need to be accomplished by the representative school(s) are those required by the state. These requirements or objectives can be described broadly as education opportunities, programs, services or as levels of education performance. You will be provided a short summary of state expectations and performance standards; it is not meant to be exhaustive of all requirements that the state requires schools and districts to fulfill, but instead should be considered a refresher or reminder.
5. In designing the representative school(s), we need you to provide some very specific information so that we can calculate the cost of the resources that are needed to fulfill the

indicated requirements or objectives. The fact that we need that information should not constrain you in any way in designing the program of the representative school(s). Your job is to create a set of programs, curriculums, or services designed to serve students with particular needs in such a way that the indicated requirements/objectives can be fulfilled. Use your experience and expertise to organize personnel, supplies and materials, and technology in an efficient way you feel confident will produce the desired outcomes.

6. For this process, the following statements are true about the representative school(s) and the conditions in which they exist:

Teachers: You should assume that you can attract and retain qualified personnel and that you can employ people on a part-time basis if needed (based on tenths of a full-time equivalent person).

Facilities: You should assume that the representative school has sufficient space and the technology infrastructure to meet the requirements of the program you design.

Revenues: You should not be concerned about where revenues will come from to pay for the program you design. Do not worry about federal or state requirements that may be associated with certain types of funding. You should not think about whatever revenues might be available in the school or district in which you now work or about any of the revenue constraints that might exist on those revenues.

Programs: You may create new programs or services that do not presently exist that you believe address the challenges that arise in schools. You should assume that such programs or services are in place and that no additional time is needed for them to produce the results you expect of them. For example, if you create after-school programs or pre-school programs to serve some students, you should assume that such programs will achieve their intended results, possibly reducing the need for other programs or services that might have otherwise been needed.

Appendix I: Salaries and Benefits Used for Costing Out EB and PJ

	Benefit Amount/Rate
Health/Dental Amount per Eligible Employee	\$6,614
Retirement	28.00%
Workers Compensation	1.95%
Unemployment	1.69%
Position Title	Salary
<i>Instructional Staff</i>	
Teachers	\$54,555
Specials Teachers	\$54,555
Instructional Facilitator (Coach)	\$62,466
Teacher Tutor/ Interventionist	\$54,555
Librarians/Media Specialists	\$68,204
Technology Specialists	\$68,204
Media Aide	\$22,132
Instructional Aides	\$20,860
504 Aide	\$20,860
<i>Pupil Support Staff</i>	
Counselors	\$62,285
Nurses	\$57,341
Psychologist	\$68,798
Social Worker	\$68,798
Family Liaison	\$30,294
Behavior Interventionist (Alternative to/ In School Suspension)	\$58,300
Health Aide	\$20,526
Speech Pathologist	\$57,583
Therapists (OT/PT, Behavior, etc.)	\$57,583
Transition Coordinator	\$54,555
Job/Transitions Coach	\$20,860
<i>Administrative Staff</i>	
Principal	\$101,711
Assistant Principal	\$80,614
Attendance/ Registrar	\$33,351
Clerical/Data Entry	\$33,351
Bookkeeping	\$33,351
Athletic Director	\$80,614
<i>Other Staff</i>	
IT Technician	\$46,696
Substitute	\$61,875
Duty Aides	\$20,860
Security/ Duty Aides	\$20,860
School Resource Officer	\$54,555

<i>District</i>	
Superintendent	\$130,836
Assistant/Associate Superintendent	\$122,905
Director	\$103,145
Supervisor	\$83,752
Coordinator	\$75,527
Manager	\$71,061
Administrative Assistant	\$33,351
AP/AR Clerks	\$33,351
Payroll Clerks	\$33,351
Other Professionals	\$54,555
Data Specialist	\$54,555
Translator	\$33,351
Custodians	\$35,461
Groundskeepers	\$46,917

Appendix J: School Case Study Protocol and Summaries

Nevada School Case Study Interview Protocol

Can you tell me a little about the community in which your school is located? Who are your students? Their parents? Major employers?

How has your school changed in recent years?

Declining enrollment? Increased enrollment? Changes in demographic (SES, race/ethnicity, ELL)?

STUDENTS

What is student mobility like in this school?

What is student attendance like in this school?

How are students assigned to classrooms/courses?

What are the average class sizes in each grade?

PreK	KG	1	2	3	4	5	6	7	8	9	10	11	12

Demographic	Percent	Notes
FRL		
Special education		
ESL		

STAFFING FTEs

What is teacher turnover like in this school?

From a list of people working in the school, fill in the following FTEs.

Category	FTE	Notes
Licensed Staff		
Core Teachers		
Elective Teachers		
Instructional Coaches		
Special education self-contained		
Other Special education teachers		
ESL teachers		
Tutors/Tier 2 interventionists		
Librarian		
Career and Technical		
Gifted		
Non licensed staff		
Aides		
Instructional Aides (techs)		
Special Education Aides		
Supervisory/Duty Aides		
Library Techs		
Administration		
Principal		
Assistant Principal		
Athletic Director		
Secretary/Clerical		
Pupil Support		
Guidance Counselor		
Nurse		
Social Worker		
Other		

STUDENT ACHIEVEMENT

Tell me how the school accomplished the achievement levels/gains we identified.

Does the school have specific school or improvement goals that contributed to these achievement gains in the school? OR: Which school or improvement goals were most helpful in advancing student learning?

Probes: achievement gap goals, goals for ELL, free and reduced price kids, minority kids, etc.

How are these goals set (e.g., district, school administrators, or school personnel)?

Class Schedule

(Interviewer should attempt to obtain a copy of the school's class schedule prior to the school visit in order to ask clarification questions during the visit.)

Please tell me about how the school day is organized? Does it vary by grade levels? Total instructional minutes, how much time for interventions, for specials, for teacher PD. (This information will flesh itself out in the later questions, but it's best to have an overview to start.)

Curriculum and Instruction

Instruction:

What particular instructional arrangements have been particularly useful for improving student learning?

How are teachers organized for instruction?

How are teachers assigned to classrooms? In high school, to courses?

Probe: Are teachers assigned to their own classrooms or in collaborative teams? What kinds of collaborative teams are there?

Probe: How are new teachers assigned and mentored?

Does the school have instructional coaches? If so, how are they used?

How does the school use student grouping practices?

Probe for flexible groups (groups that change based on student need) vs. static groups (groups that stay the same over long time periods).

What specific instructional strategies are in place for ELL students?

Probe for sheltered English

Curriculum

I'd like learn more about the curriculum programs that you employ at your school. Try and get names of curriculum programs (including software), texts, or materials, any supplementary materials, etc.

Tell me about your reading/ writing/ language arts program.

Tell me about your math program.

INSTRUCTIONAL INTERVENTIONS

I'd like to learn what instructional interventions your school has in place for students who struggle after core classroom instruction, i.e., after the initial dose of instruction.

How are students who are struggling identified and monitored?

Probe: Data from a single assessment used once a year? OR: Multiple assessments examined throughout the year?

What kinds of extra help do you have in your school for struggling students?

When is extra help provided, for how long, and where?

Probes: tutoring (what does this look like?), Tier 2 intervention, etc.

Who does it? Licensed teachers and/or aides, and split between the two

Does the school provide an Extended day? Summer School?

How are the interventions for and progress of students monitored?

ASSESSMENTS

Now, let's talk about assessments. Tell me what kind of assessment system or systems in place in your school have been particularly useful for improving student learning.

Probe for (1) benchmark assessments (e.g., NWEA MAP) or (2) short cycle/formative (Renaissance Learning STAR, AIMESWEB, etc.).

How are these assessments administered?

Probes: By the teacher or online, adaptive, etc.?

What is the cost per pupil of these assessments?

How do teachers use data from these assessments?

For Reading, for math?

For ELL kids, for poverty struggling kids?

PROFESSIONAL DEVELOPMENT

I'm going to shift gears a little to professional development for teachers. Can you tell me what PD looks like in your school?

What kinds of professional development topics does professional development focus on in your school have been particularly helpful for improving student learning?

Probe for: professional development that focuses on instructional strategies; on extra help for ELL/struggling poverty kids; curriculum reforms; on using data; etc. Anything linked to their overall curriculum and instructional strategies and focused on ELL and poverty kids

How is professional development delivered in your school?

Probe for: is delivery school based? ongoing versus one shot; what kinds of follow-up is provided?

Type	Time Allocated	Notes
Individual planning		
Collaborative Work with other teachers		
Pupil-free days for PD		

SCHOOL CULTURE

I'd like to step back a little now and ask you to tell me about your school culture. What's it like to work here? What do you think it's like to be a student here? What do you think your colleagues would say if I asked them the same question?

How well connected do students feel to the school?

What do you see as current or potential challenges to continued improvements in student achievement?

Is there anything else you think is important for us to know in terms of understanding how your school achieves learning gains?

Walter Bracken Elementary School

Introduction

Bracken Elementary School is unique because it is both a magnet school and a franchise school in the Clark County School District. As a magnet school starting in first grade (kindergarten is provided to neighborhood students), Bracken has a particular focus — the Science, Technology, Engineering, The Arts, and Mathematics (STEAM) Academy — that draws students from outside its neighborhood via an application and lottery system. It is also a franchise school, so the Bracken principal leads more than one school in order to replicate the successful approach established at their original school. These distinctions also mean that Bracken has additional resources via the school district and other grant funds to staff and outfit the school’s STEAM labs.

Enrollment has been fairly consistent in recent years, at around 500 students. The school also has very low transiency and low teacher turnover; staff reported that this consistency has contributed to their success.

Table 1 identifies class sizes by grade.

Table 1: Bracken Elementary School Class Sizes

Grade Level	Class Size
Kindergarten	23
First	22
Second	21
Third	24
Fourth	28
Fifth	28

The school is 58 percent Latino, 18 percent white, 11 percent black, 6 percent Asian, and 6 percent multi-racial. Fifty-six percent of students qualify for free and reduced priced lunch, and 18 percent of students are English learners (ELs).

This case study summary has seven sections: 1) school staffing, 2) scheduling, 3) curriculum and instructional program, 4) assessments and data, 5) extra help strategies for struggling students, 6) professional development, and 7) school culture and leadership.

School Staffing

Staffing classrooms with quality teachers committed to Bracken’s STEAM mission is an important focus of school administration. When the school became the STEAM-focused magnet school, a number of teachers who did not support the school’s mission chose to leave the school. In recent years, when vacancies exist, applicants for the school tend to be those drawn to the mission and culture of the school. Bracken currently experiences little to no teacher turnover.

The principal explained that everything at Bracken is team based. Teachers work closely in grade-level teacher teams throughout the year. Each classroom in a given grade receives the same materials, which helps teachers to better work together and foster student learning. The teachers noted they often consult with each other on what worked well on a particular lesson to identify ways to better engage students with the content when lessons are less effective. The grade-level teachers also have a common prep time, which can be used for grade-level meetings, and are used once a week for professional learning community (PLC) time.

Table 2: Staffing at Bracken Elementary School

Category	FTE
<u>Administration</u>	
Principal	.3
Assistant Principal	1
Coordinators	2
Clerical	2
<u>Main Program</u>	
Core Teachers	22
Elective Teachers	4
Instructional Coaches	1
EL teachers	
Tutors/Tier 2 interventionists	3
Librarian	
Gifted	1
<u>Aides</u>	2
<u>Pupil Support</u>	
<u>Licensed</u>	
Guidance Counselor	1
Nurse	.5
Psychologist	
Social Worker	.2
FASA (Safety Assistant)	1

Table 2 shows that the school has 22.0 core teacher positions. These are the grade-level teachers who teach reading, math, science, and social studies. The school also employs four “elective” or “specials” teachers to provide instruction in art, music, physical education, and library. A typical staffing standard, and the EB model formula, for the number of specials teachers needed would have 20 percent specials/elective teachers above the total number of core teachers, which would equal 4.4 positions for this school (0.2×22). Bracken also has two coordinator positions, a theme coordinator and computer coordinator, to support the STEAM mission and computer-based testing.

The school has one instructional coach and three certified temporary tutors (CTTs). The CTTs provide push-in intervention support with students identified as needing additional support, including inclusion with non-resource students. Bracken has one special education teacher with a self-contained classroom for students with more severe disabilities. The school has additional pupil support staff, including one guidance counselor, a 0.5 nurse, a 0.2 social worker, and one first aid safety assistant. As previously noted, as part of the franchise school program, the principal at Bracken is also principal at two other schools, so the principal position is allocated at 0.33 FTE.

Note that these case studies were focused on identifying resources and supports for at-risk and EL students, so special education resources were not specifically identified.

School Schedule

The instructional day runs from 8:55 a.m. to 3:26 p.m. (a six-hour, 31-minute school day). Accounting for the 45-minute student and staff lunch and recess period and 15-minute morning recess, Bracken provides five hours and 45 minutes of instruction for students. Students attend five 50-minute class periods; core teachers provide instruction for five of these six periods. All teachers have one class period of pupil-free time daily, and grade levels have common planning time. Weekly, a dedicated common prep period is designated for PLC time, which also provides an opportunity for other school faculty and staff to meet with the entire grade level, if needed. Thus, there is time during the regular school day for grade-level teams to meet and collaborate on a daily basis.

Teachers at Bracken are free to structure their day as needed. The schedule does not specify requirements for minutes spent on any given content area for any particular grade level, but teachers within each grade level are expected to cover the same content during the year. During the pupil-free time for grade-level teachers, students rotate among art, music, physical education, and library instruction.

Curriculum and Instructional Program

As a magnet school, Bracken's curriculum and instructional program is designed to support its STEAM Academy mission. Technology is a key strategy in the school, with 1:1 student devices (iPads). In reading, the key program used is *Reading Wonders* in kindergarten through fourth grade. Additional reading programs are utilized, including Words Their Way, STAR Reading, Accelerated Reader, Study Island, and Myon, among others. The primary program used in K-5 math is GO Math!, with additional programs including Investigations, Rocket Math, IXL Math, Star Math, Front Row, and Study Island, among others.

Student choice is a key instructional practice at Bracken. For example, in Explorations classes, students choose their reading series, as well as science, engineering, technology, engineering, and math choice classes. Course topics are developed based on student and parent interest and input. Previous courses included Ooey Gooey Science, Lego Robotics, Recycled Engineering, Art Studio, and Computer Coding. Periodic special instruction days provide hands-on activities and day-long immersion in different topics. These days have included Mighty Math, Super Science, Exciting Engineering, and Multicultural Field Day. Additionally, every class has a garden bed on the school campus, which the students plant, maintain, and harvest. Each of these special programs contributes to the school's hands-on STEAM mission.

Assessments and Data

Data-driven decision making is a key component of Bracken's educational philosophy. Dynamic assessment systems inform instruction, and staff use evidence to continuously improve school programs. Progress monitoring is done weekly to ensure interventions for struggling students are successful. Regularly utilized assessments include AIMSweb, STAR, Study Island (summative), IXL (formative), and Core Phonics.

Bracken's teaching staff utilizes assessment data to modify their instruction and target interventions. Assessment data is also used to identify groups of students the school's three certified temporary tutors will work with throughout the day. CTTs work closely with teachers to provide additional "push in" intervention support to identified students.

Extra Help Strategies for Struggling Students

At Bracken, teachers use a variety of programs via 1:1 student devices to differentiate instruction and also do small group work within the classroom. There are also three certified temporary teacher positions to provide additional push-in or pull-out intervention support.

Staff reported that ELs are primarily served in the regular classroom using the same strategies that are proven to be beneficial to all, including Kagan strategies, Rally Robin, working with peers, providing opportunities to speak, lots of visuals, learning by observation of other students (ex: making slides), having technology, immersion, and working in pairs. Students also are provided summer school.

Professional Development

Professional development at Bracken is ongoing, at 67 minutes per full school week, as required by the district. The topics/areas of focus for professional development are generally determined by the requests of the teaching staff. The leadership style of the school administrators is to trust that the teachers work together and identify areas to improve, and the principal and assistant principal then do everything in their power to get their teachers the materials, training, and resources they request.

The school's weekly PLC time is taken seriously at Bracken. Grade-level teams work independently during those times, and other school staff know they can access the entire grade level during these times if needed. School administrators only attend the grade-level PLCs if requested by the teachers or if administrators determine there is a need to intervene. The school participates in the required district EL professional development but doesn't believe the district trainings add much value to their approach with EL students. The principal believes the school is doing well with their EL students, and that they should be exempt from the district EL professional development process.

As a franchise school, the principal expressed a desire for one or two full professional development days, so that she could bring staff from all three schools together. The current weekly professional development format prevents opportunities for cross-school collaboration. Particularly with the franchise model, it would be helpful for all the schools operating under a single principal to have joint collaborative time.

School Culture and Leadership

Bracken has a very close-knit, collaborative school culture. Teachers reported feeling very supported and trusted by the administration in the school. This allows them a safe space to share ideas, take chances, and continuously grow and refine their practice from year to year. A saying at the school is “find solutions, remove excuses.” Administration is also regularly in classrooms providing instructional leadership.

According to staff, students and families are very engaged through the consistent, close community that the school develops. The school regularly hosts family events and also shares data and progress reports with families. Students are particularly empowered to be active contributors to their education to foster their confidence and independence. Students and teachers work together to set “stretch goals” for student progress. Collaboration between students is also a focus of classroom instruction.

The school’s culture also is grounded in the importance of exploration, both via its focus on hands-on, project-based STEAM instruction, as well as through its series reading initiative. All staff have lending libraries in their rooms with book series. Students are encouraged to find a series that suit their interests to spark their love of reading and connect with teachers throughout the school. Teachers also stress they are focused on supporting the whole child and developing their individual skills and interests.

Hunter Lake Elementary School

Introduction

Hunter Lake is an elementary school in the Washoe County School District, and is located in a middle-class community about two miles from downtown Reno. In fall 2017, Hunter Lake enrolled 428 students in kindergarten through sixth grade. Hunter Lake was selected for a case study based on its success with free and reduced-price meal students. Overall, Hunter Lake is a highly collaborative, data-driven school, with a skilled and effective faculty. Interviewees at the school reported using student performance data to develop lesson plans, provide differentiated instruction, and evaluate.

Some students live within walking distance of the school, while other students are transported to school either by bus or parents. Though the campus is surrounded by modest, split-level homes, the principal explained that some of attending students live at weekly motels down the road and their parents are trying to get by day to day.

The school about 62 percent white, 25 percent Latino, 7 percent multi-racial, and 7 percent other. About 45 percent of the school's students qualify for free and reduced-price eligible, and zero are English learners. Hunter Lake is Title 1 designated but unfunded. The average class size is 22 students (Table 1 shows the average class size by grade level).

Table 1: Hunter Lake Elementary School Class Sizes

Grade Level	Class Size
Kindergarten (3 classes)	20
First (3 classes)	17
Second (3 classes)	17
Third (2 classes)	24
Fourth (2 classes)	28
Fifth (2 classes)	30
Sixth (2 classes)	27

There are three sections of kindergarten through second grade and two sections from fourth through sixth grades.

The case study report has nine sections: 1) school staffing, 2) scheduling, 3) curriculum and instructional program, 4) assessments and data, 5) extra help strategies for struggling students, 6) professional development, and 7) school culture and leadership.

School Staffing and Scheduling

Staffing classrooms with top-quality teachers is a prime strategy for Hunter Lake. When asked how the school produced its student performance results, the first thing the principal noted was her hiring practices. Of 100 applications for two recent positions, she chose 23 candidates and watched each of them teach. She then selected five to be interviewed by the hiring committee. The hiring committee then met as a group and decided on the applicant they thought would be the best fit. Any member of

the staff can be part of the hiring committee. Teachers supported this claim, citing the importance of finding hires who best fits with the school.

Teachers work in tightly knit, grade-level teacher teams, which helps provide peer support throughout the year. All of the grade-level teachers are expected to be within a few minutes of each other on lessons. When the principal first started and this practice was implemented, it was difficult to get buy-in from some teachers, and as a result, there was some staff turnover. Over time, this collaborative approach has shown results and led to growing performance. Currently the school has a very stable staff able to provide continuity of effective instruction in every class, every year.

Further, according to the principal and the teachers, the school seeks to place the most effective teachers in the classrooms with the students and student groups that need the most help.

Table 2: Staffing in Hunter Lake Elementary School

Category	FTE
<u>Administration</u>	
Principal	1.0
Assistant Principal	
Clerical	1.0
<u>Main Program</u>	
Core Teachers	17.0
Elective Teachers: 1.0 Music, .5 Art, .5 PE	2.0
Instructional Coaches	
Special Education Self-Contained (Severe and Profound)	
Special Education (Mild and Moderate)	
EL teachers	0.3
Librarian	0.8
Gifted	0.1
<u>Aides</u>	0.6
<u>Pupil Support</u>	
<u>Licensed</u>	
Guidance Counselor	1.0
Nurse	0.2
Psychologist	0.33
Speech	1.0

The staffing configuration of the school shows the importance of Hunter Lake's reliance on effective core teachers. Table 3 shows that the school has 17.0 core teacher positions for 428 students in kindergarten through sixth grade. Core teachers are grade-level teachers who teach reading, math, science, and social studies. For kindergarten through sixth grade, this staffing equates to an average

class size of approximately 22 students. However, as noted above, average grade-level class sizes vary from 17 in grades one and two to 30 in grade five, with other grades in the mid 20s.

The school also employs “elective” or “specials” teachers to provide instruction in art, music, physical education, and technology. Music is the only elective that is funded by the district; the rest has to come from additional funding. Two FTEs provide this instruction, including the librarian who teaches some of the specials class sections. A typical staffing standard, and the EB model formula, for the number of specials teachers would have 20 percent specials/elective teachers above the total number of core teachers would equal 3.4 positions for this school (0.2×17).

When asked about instructional coaches, the principal said she was not able to hire a coach or interventionist because they did not receive any Title 1 funding. The principal has her teachers provide interventions within classroom time.

Students needing tiered interventions are identified through monthly identification meetings tied to student performance scores. Students are then grouped and reassessed before every meeting to see if the interventions are still needed. Hunter Lake has two resource teachers and additional pupil support staff, including one guidance counselor, 0.2 nurse, one speech therapist, and .33 psychologist.

Note that these case studies were focused on identifying resources and supports for at-risk and EL students, so special education resources were not specifically identified.

School Schedule

The instructional day runs from 8:55 a.m. to 3:00 p.m. (a six-hour, five-minute school day). Accounting for the 45-minute student and staff lunch and recess period and a 15-minute morning recess, Hunter Lakes provides five hours of instruction for students.

Teachers provide instruction for five of these six hours. All teachers have 60 minutes of pupil-free time at least twice a week. Once a week, all teachers use their pupil-free time to meet as a grade-level team. As a result, there is time during the regular school day for grade-level teams to meet and collaborate on a daily basis.

During the pupil-free time for grade-level teachers, students rotate among art, music, physical education, and some library instruction. Students spend considerable time each day on reading (1.5 hours), math (1.5 hours), and science and social studies (1.5 hours combined).

Curriculum and Instructional Program

The school uses Core Knowledge for ELA curriculum and Bridges and Envisions for math curriculum for all grades. Teachers said the math curriculum allows for differentiation of work for students of varying ability within each classroom. This allows the teachers to create more tiered instruction and activities. Some teachers said it would be nice if they could find a reading curriculum that was similar. The principal found the curricula they are using to be successful. Teachers do supplement with additional materials in order to create the best instruction for their classroom. The principal wants to continue

with the current math and reading curriculums but needs to find an adequate and beneficial curriculum for social studies.

In addition to the literacy curriculum, the principal has a list of seven elements that must be present in the classrooms in order to create a literacy-rich environment:

1. A variety of books, resources, and reading materials are displayed and readily available to students: Books must be facing out to invite readers
2. Current, useable vocabulary is displayed in the form of a word wall.
3. A teaching concept bulletin board is displayed: including a Math Focus Wall or any designated area that corresponds to the curriculum.
4. Information on writing is posted; with examples for students to understand
5. Current student work is displayed in the form of exemplars and it “tells” why it is excellent.
6. Students have materials for learning and can easily access resources.
7. Rubrics are posted relating to some portion of the content area.

Assessments and Data

Hunter Lake makes use of multiple assessments, including the AIMSWEB+, MAPs, and DRA. Additionally, there are other formative assessments that are used by particular teachers. Many of the grade-level teachers also create weekly assessments on the information they have been teaching to check for understanding and to make sure students still understand past topics.

MAP is a benchmark assessment administered online in September, January, and June. The MAP test results are used by the school to track student growth throughout the year and then after summer. The scores are placed on the data board for everyone to see, and they show whether students are moving up, if they are remaining stagnant, or moving down.

All of the teachers are aware of the scores of their students on all of the assessments. Each teacher these study team spoke with had a data sheet for all the different test scores of their students, which were highlighted based on their performance. The teachers used this data to create work groups and decide if there were lessons that needed to be retaught. One teacher developed his own assessments for math concepts and would have different groups each week who would work with him on the concepts that needed more understanding.

Extra Help Strategies for Struggling Students

Hunter Lake provides extra help to “students who need more.” First, Hunter Lake counts on its grade-level teachers to provide strong instructional foundations, including many Tier 1 interventions. These Tier 1 interventions are facilitated via small groups during reading and math instructional blocks.

There is a Multi-Tiered System of Supports (MTSS) team that meets once a month with each grade level. The MTSS team includes the principal, counselors, and some teachers. During these meetings, the team identifies students that are “struggling” and decides whether they need Tier 2 interventions. The team also monitors previously identified students. These grade-level meetings ensure a continued focus on

identified students in the proper intervention tier with students moving between tiers throughout the year.

In addition, Hunter Lake has developed a 12-week, after-school program to provide more instruction for students who need extra learning time. This program focuses on making sure that kids are prepared for the MAP test. These students are able to work on concepts that they are falling behind on to build a better foundation.

Professional Development

According to the principal and most teachers, professional development in Hunter Lake is ongoing. It emanates first from intensive collaboration among all teachers, especially grade-level teams, where staff interacts over student data to improve lesson plans and overall instruction.

The monthly faculty meetings include professional development on specific issues and topics. These issues and topics are brought in by the teacher leader from her district meetings or from the principal and other staff. Additionally, teachers have personal planning time every day from 8:30 a.m. to 9:00 a.m. and from 3:00 p.m. to 3:30 p.m. There are also three non-pupil days where professional development occurs as a whole school with professional development provided by the principal. These days are usually used to build community among the staff and create excitement for the upcoming year.

School Culture and Leadership

The culture of Hunter Lakes is divided into three different categories:

1. Culture between staff and students
2. Culture between staff
3. Culture between staff and parents.

The staff works to hold the students accountable for their learning and their behavior. Students are well aware of all of their performance and know the particular concepts they need to work on. Students who earn the “Manager Badge” for good behavior get special privileges and their picture on the wall. Staff also hand out “Dragon Dollars” to students for good behavior. The students can use their “Dragon Dollars” at a school store to buy various prizes. Additionally, the principal at the end of school year does a raffle that includes a few large prizes and then smaller prizes. Every student receives a prize at the end of the school year.

The staff have started a mentoring program at the school. Every staff member receives an at-risk student. These are students who are struggling in school or need additional support to feel safe and comfortable at school. The staff member checks in with the student daily to see how they are doing and feeling. They also do weekly activities with the student. One of the teachers talked about going to his assigned student’s baseball game.

The culture between the staff is one of constant collaboration and support. The grade-level teachers meet as a team to create lesson plans and to check-in on each student’s performance and understanding of each lesson. The staff has bought into the performance of the whole school and not

just their students. There is a data wall that shows the performance of each student in each grade after each MAP test. It allows the teachers to see how students are progressing from one test cycle to the next. This allows the whole staff to support each other. The principal is very supportive of the teacher's ideas and encourages new ideas as well as consistent communication.

Hunter Lake Elementary creates a positive relationship with the community and parents. The principal reaches out to businesses within the community to gain contributions, whether a dollar donation or gift cards or services. The school also hosts parent nights to discuss data and other information within the school. The school provides food for the families, as well as some sort of performance from the children at these events.

Indian Springs Middle School

Introduction

Indian Springs is a small, relatively rural K-12 school in the Clark County School District. Located near Mount Charleston, the school serves children from Indian Springs, Cold Creek, Corn Creek, and Mt. Charleston, along with approximately 40 students from Las Vegas who open enroll in the school. The Creech Air Force Base in Indian Springs is the primary employer in the area for both military personnel and contractors who provide services and operations to support to the base. The principal said a lack of housing and employment opportunities has led to a decline in the town's population.

Indian Springs Middle School was selected as a case study based on its success with middle school students eligible for the free and reduced-price lunch program. Indian Springs has been a Title I school since 2011. Enrollment has been around 240 students for the past several years; the middle school enrollment is 45 middle school students. Overall, Indian Springs is highly collaborative school, with a skilled and effective faculty that sincerely believes small class sizes and high expectations are the key to its success.

Although the school's enrollment was previously in decline along with the town's population, Indian Springs has maintained a relatively stable student population over the past several years through open enrollment. Small class sizes and high expectations are main points the school advertises to draw additional families from Clark County to enroll in the school.

The school is 83 percent white, 9 percent Latino, and 9 percent American Indian. One hundred percent of students are free and reduced-price lunch eligible, and none are English Learners.

This case study summary has seven sections: 1) school staffing, 2) scheduling, 3) curriculum and instructional program, 4) assessments and data, 5) extra help strategies for struggling students, 6) professional development, and 7) school culture and leadership.

School Staffing

Keeping class sizes small, while staffing classrooms with high-quality teachers, is the prime strategy at Indian Springs. Most classes have between eight and 15 students per class. This year, the largest grade level had 26 students, so that grade was split into two classes to reduce the class size. As a small K-12 school, many of the school's staff members are shared among the elementary, middle, and high school classrooms. Administration, pupil support staff, and specials teachers are shared among the entire school. The middle school has designated math, English language arts, science, and social studies teachers. Other members of the staff work across the grades in the school. Therefore, it was not possible to quantify the percentage of staff time spent with middle school students vs. all students in the school.

Due to the size of the school, there is one teacher per content area for the middle school, which does not allow for grade-level collaborative teams. In recent years, the school has worked on both vertical

integration and cross-curricular planning, both across core subjects and between core subjects and electives/specials. Teachers are also supported by instructional coaches.

The school enjoys very low teacher turnover. Several staff members have been at the school for 30+ years, and most of the vacancies that occur at the school are due to retirement. The principal estimates that one teacher transfers to another school every several years. When hiring new staff, the principal believes that while content knowledge is important, the most important factor is the teacher's ability to create relationships with the kids. He believes that for students to be successful, they must have trust and a relationship with the teacher. Strong teacher-student relationships are the driving force behind the school's belief in small class sizes.

School Schedule

The instructional day begins at 8:04 a.m. and ends at 2:11 p.m. (a six-hour, seven-minute school day). Accounting for the 30-minute lunch period, Indian Springs provides five hours and 39 minutes of instruction for students.

Students attend six class periods per day. Student schedules are unique to each grade level, as middle school students need to cycle through each of the core middle school teachers' classrooms. Students are able to attend a variety of specials, including PE, band, health, technology, forensics, and theatre.

Teachers provide instruction for five of these six hours. All teachers have a daily prep period of 51 minutes of pupil-free time. At Indian Springs, it is relatively common for the school to "buy" prep periods for teachers willing to provide additional student academic or attendance support during those times.

The school is explicit in its expectations of what it means to be a highly effective teacher at Indian Springs Middle School, as outlined in the four-page document, "Our Vision of an Indian Springs Teacher." It outlines four key indicators: High Expectations; Building Student Rapport; Student Engagement; and Habits of Effective Teachers. For each indicator, the document outlines strategies for teachers to implement.

Curriculum and Instructional Program

The middle school does not utilize a standard curriculum, in part due to the small size of the school and not having multiple sections of a subject. The school recently identified a vertically aligned reading series that they will begin implementing next school year. The middle school math teacher uses her own curriculum, and supplements with an online math program, ALEKS, in which students are able to complete work at their own level. Currently, the middle school does not have a comprehensive curricular series in English language arts. The middle school teacher pulls materials from a variety of sources to address each Nevada Academic Content Standard.

The principal found the curricula the middle school teachers are using to be generally successful, therefore he gives the teachers autonomy and does not believe they need to change curricula unless they believe a change would be beneficial to students.

While no specific curriculum or lesson plan is required, the school does have requirements for lesson plan components:

1. The standard(s) being taught.
2. The student learning objective(s): must be written on the board using the “I can...” format.
3. Review: how will you connect new learning to prior learning?
4. Instructional procedures (including materials and resources, if applicable).
5. Guided, group, independent practice procedures.
6. Assessment of student learning: how will you be able to determine if the students understand the learning objective?

The middle school teachers also use common grading practices.

Assessments and Data

Indians Springs use AIMSweb and the Evaluate program for monitoring. They have found that regular assessment helps with pacing and supports decision-making. The school principal emphasized that their systematic, data-driven approach has been affective for supporting student learning. The school has “data walls” where results are posted so students can see their growth. They also regularly share data with parents and hold parent-teacher conferences (the number needed varying by the student).

Extra Help Strategies for Struggling Students

Indian Springs employs a number of strategies to support students identified as struggling, based on progress monitoring data and class performance. First, they implement Kagan strategies in the classroom to engage students and group students in heterogeneous groups of ability levels to provide differentiated instruction. Tutoring is also offered to students based on data. It is targeted to students identified as struggling, then tailored to the specific skill or content area they need more support in.

Third, the school also offers a homework club to provide extra support and a quiet learning environment. Fourth, the school also offers study skills classes. Being able to offer pull-out support to students is done by buying out prep periods of certified teaching staff. Finally, the school provides an extended school year (ESY) program for students with an Individualized Education Program (IEP). Since they do not have enough students to fill the program, they invite other struggling students (about 12) to participate. Through their ESY program they provide both academic support and enrichment for about six hours a day for a month to participating students.

Professional Development

With the school’s relatively stable teaching staff, the principal tries to limit the amount of professional development provided to teachers. The school participates in the contractually obligated site-based collaboration time (SBCT), which has replaced professional learning community time at the school. The SBCT time is used to work on cross-curricular strategies and analyze student data. SBCT time is

leveraged as needed; sometimes the time is used for schoolwide purposes, other times by content area, other times by vertical alignment teams.

Professional development is differentiated based on the need of teachers, and the school takes advantage of district-provided trainings on content and instructional strategies. Much of the non-district-provided professional development is around new curriculum and assessment: when the school started using the Evaluate assessment, they held extensive professional development on that assessment. Similarly, when the elementary level adopted a new reading and math series, professional development was focused on that series.

The school does pay for contact units teachers take on their own time, as long as it relates to the content taught. This provides teachers with out-of-school-time professional development, and helps them attain their recertification/continuing education requirements.

School Culture and Leadership

The Indian Springs school culture is based on having high expectations for both staff and for students and on developing strong relationships. For staff members, the school principal indicated they get teacher buy-in right from the start during the hiring process by setting the clear expectations about what it takes to be an Indian Springs teacher. Further, staff members are hired for content knowledge, but even more importantly for their ability to create relationships and build trust. Teachers are in regular communication with families, and teachers at Indian Springs are expected make positive phone calls home twice a week to every family to build a positive association and trust. As a result, when the school calls home, it is not always bad news or for when a child is not doing well. This helps ensure parents are engaged and see themselves and their child's teacher as partners in their child's education.

School leadership and teachers across the school have high expectations of students – students are not permitted to do anything other than their best work. For example, an expectation is that students must complete their homework; if a student has not completed their homework, they are given lunch detention and must complete their homework. Teachers also call home for any work that receives less than a "C" and students are encouraged to redo the assignment.

Jo Mackey Magnet School

Introduction

Jo Mackey Magnet School is an elementary school of about 550 students in the Clark County School District. About 25 percent of the students come from the surrounding neighborhood and the rest from across the Las Vegas Valley. Over 10 years ago the district received a federal magnet grant for the school that allowed Mackey to transition to a leadership-focused magnet program. Mackey received the 2018 National Award of Merit from Magnet Schools of America.

The demographics of the school have changed over time. When the school principal started 13 years ago, the school was 100 percent black, and now the school is predominately Latino. Historically, the school was a “Prime 6” school, which aimed to enhance learning opportunities in culturally and racially diverse school settings by integrating white students into Prime 6 schools and integrating black students from the neighborhood into other schools. With this designation, Mackey still receives additional staffing from the district, including an assistant principal, counselor, learning strategist, security monitor, one other professional, and three kindergarten aides.

Mackey’s student population is currently 46 percent Latino, 32 percent black, 11 percent white, 7 percent multi-racial, and 4 percent other. Seventy-six percent of students qualify for free and reduced priced lunch and about 10 percent of students are English learners (ELs). Mackey is a Title I school.

The school has very low mobility due to the magnet program and low teacher turnover. Attendance is also very high at 96 percent.

Kindergarten is a neighborhood program, and then the school has a lottery for admittance in first grade. Class sizes are shown in Table 1.

Table 1: Class Sizes

Grade Level	Class Size
Kindergarten	18-19
First	22-23
Second	24
Third	25
Fourth	30-31
Fifth	30-31

Class sizes range from 18-31 students, increasing at each grade level.

This case study summary has seven sections: 1) school staffing, 2) scheduling, 3) curriculum and instructional program, 4) assessments and data, 5) extra help strategies for struggling students, 6) professional development, and 7) school culture and leadership.

School Staffing

Table 2: Staffing at Mackey Magnet School

Category	FTE
<u><i>Administration</i></u>	
Principal	1
Assistant Principal	1
Clerical	2
<u><i>Main Program</i></u>	
Core Teachers	24
Elective Teachers	4
Instructional Coaches/Learning Strategist	3
EL teachers	
Tutors/Tier 2 interventionists	2
Librarian (now also Project-based Learning)	1
Gifted	.33
<u><i>Aides (3 kindergarten, 1 library, 1 health)</i></u>	5
<u><i>Pupil Support</i></u>	
<u><i>Licensed</i></u>	
Guidance Counselor	1
Nurse	.4
<u><i>Other</i></u>	
Campus Security Monitor	1
Theme Coordinator, School Communities Facilitator	2

Mackey is staffed by 24 core teachers and an additional four electives teachers (art, music, PE, and technology), as well as a .33 FTE Gifted and Talented Education (GATE) teacher. The librarian has transitioned into supporting project-based learning. There is a full-time reading coach, full-time math coach, and two certified temporary tutors (CTTs). To implement its magnet program, the school has a theme coordinator. Main office staff include the principal, assistant principal, an office manager, and a clerk.

Classroom teachers are identified as “student success advocates” for EL, but there are not specific EL teachers.

Leadership stresses that having funding sources for the additional staffing described above is critical to success.

School Schedule

As a magnet program, Mackey is extended by 19 minutes a day over the typical Clark County School District school day. The electives schedule is organized so teachers have common planning time by grade level multiple times a week. Tutoring is typically offered through a Saturday boot camp program.

Curriculum and Instructional Program

Staff at Mackey believe their “intervention and acceleration” block is the key to the success of their instructional program. All students receive Tier 2 intervention four days a week for 45 minutes a day. Students are assessed using the CorePhonics survey, and then are grouped based on grade level and ability, ranging from intensive intervention groups to accelerated groups. Within groups, teachers unpackage the Common Core standards to focus on specific standards or skills using a variety of methods of instruction, including small teacher-led groups, student-led groups, or center-based learning, with integrated hands-on learning and use of technology. On grade level and above group sizes are around 25 students, and more intensive groups are much smaller, generally 6-8 students. Teacher had data meetings every six weeks, and at the end of a nine-week period, students are re-grouped. By the end of fifth grade there are not any students in a lower group than on grade level.

The school does not have a set math curriculum; most teachers are doing Common Core-aligned instruction and the Clark County Math Framework using their own resources. The school does provide teachers with some common strategies that they can choose to use. Discourse around math is also a schoolwide focus, with teachers emphasizing how to talk about numbers and having students verbalize how they are solving problems instead of just plugging numbers into a formula. Staff say they are teaching students to think like mathematicians and provide real world applicability, so students see math as part of their daily lives and are confident in taking on any problem. The teachers see this as a way to support students in becoming productive citizens — a key tenant of the school’s magnet program.

Overall, teachers are given license to teach as they wish, as long as they are meeting goals and standards.

Assessments and Data

Mackey uses regular progress monitoring and benchmark assessments in all grades, including MAP, AIMSweb, and the Core Phonics Survey. Students set goals as classes or individuals and hold each other accountable for meeting them. Students are also assigned accountability partners to discuss how they are going to reach goals and have regular check ins about progress and time for reflection.

Data teams meet every six weeks to review student data and determine placement for intervention block or any additional intervention needed.

Extra Help Strategies for Struggling Students

In addition to the intervention block described above, students who need additional support receive Tier 3 interventions via the school’s two CTTs and two other staff members for 30 mins a day, four times a

week. This is possible due to Read by 3 funding. Finally, students who are recommended by their teachers also receive additional tutoring on Saturdays.

At Mackey, ELs do not receive separate instruction; instead, they are supported through the emphasis on student discourse and language development in the regular classroom. Schoolwide, teachers provide explicit vocabulary instruction with significant focus on academic language so all students are comfortable using this vocabulary. This includes providing context clue and word strategies. Students are also given many opportunities to speak, including at assemblies. If a student does not know English well, they are paired with a buddy, so that as a pair they can work on both conversational and academic language. The reading coach also pushes into classrooms for additional support. Finally, eight or nine teachers have their Teachers of English to Speakers of Other Languages (TESOL) certification.

Professional Development

The first part of every Friday is dedicated to professional development (PD) in addition to common grade-level planning time. Vertical collaboration occurs during the site-based collaboration time (district initiative). Staff stressed how helpful it is to have consistent hour-long weekly meetings for PD instead of sporadic full days. They have found it quickly gives them the information they need, which they can apply and further reflect on through regular peer dialogue. This year, PD has focused on EL populations.

School Culture and Leadership

Staff and leadership feel they have an exceptional school and community that they describe as a family. The first two weeks of the year are focused on building a community within the classroom through character development and team building. Students feel loved and known by their teachers and teachers demonstrate to families that they care. Teachers feel respected and valued by their peers and school administration. Staff report that everyone works hard and is deeply invested in the success of their students; they find it deeply rewarding to see their students grow and thrive.

There is a clear commitment to excellence at Mackey. The magnet focus on leadership and global communication means that ensuring students are good citizens and connected to the community — within and outside of the school — is the foundation of the school's program. Further, the school has clear expectations, as well as a common vision and language, with staff and students working to exemplify good leadership and citizenship. It sets the same high expectations for everyone at the school and provides a system of accountability.

As a magnet school, it also means that staff, students, and families all have real buy-in to the school because they have all chosen to be there. This buy-in provides a high level of consistency and stability.

Pahrnagat Valley Elementary School

Introduction

Pahrnagat Valley Elementary School is a small elementary school of about 130 students located in the Lincoln County School District. Described as a hard-working, blue collar community of low to middle income families, key employers include a nearby test site, the school district, agriculture, and ranching. Some people also commute nearly two hours to the Las Vegas area for work.

The average class size at Pahrnagat Valley is 22 students. There is low student mobility and teacher turnover is essentially at zero. Staff stress the importance of their small community and the close bonds shared by staff and students.

The school is 90 percent white, 8 percent Latino, and 2 percent other. Thirty-seven percent of the school's students qualify for free and reduced-price eligible, and zero are English learners.

School Staffing

Staffing classrooms with high-quality teachers is an important strategy for Pahrnagat Valley. When asked how the school produced its student performance results, the first thing the principal noted was his staff and their willingness to "do everything." The principal is firm in his belief that the people are what make the school, and that the school could not achieve the same level of success without its staffing. The school has very low teacher turnover, and when vacancies do occur, the principal works hard to ensure prospective teachers are a good fit for the school. The principal and teachers also pointed to the school's four paraprofessionals as a key component of the school's success.

With only one classroom per grade level, teachers at Pahrnagat Valley do not have the benefit of grade-level teaming and collaboration. However, PVES teachers practice vertical integration, and collaborate across grade levels throughout the school year. The four paraprofessionals are utilized across the school, serving both special education and non-identified students in targeted small group or individual instruction, as directed by the classroom teachers.

Table 1: Staffing in Pahrnagat Valley Elementary School

Category	FTE
<u>Administration</u>	
Principal	1.0
Assistant Principal	
Clerical	1.0
<u>Main Program</u>	
Core Teachers	7.0
Elective Teachers	
Instructional Coaches	
EL teachers	
Tutors/Tier 2 interventionists	0.5
Librarian	

Gifted	
<i>Aides</i>	4.0
<i>Pupil Support</i>	
<i>Licensed</i>	
Guidance Counselor	0.25
Nurse	

The staffing configuration of the school shows Pahrnagat Valley’s reliance on effective core teachers with support from paraprofessionals. Core teachers are the grade-level teachers who teach reading, math, science, and social studies. The school also benefits from the Read by Grade Three specialist, who works in the school two days each week, providing additional support to students. The school does not have any instructional coaches. The principal and special education teacher serve as instructional coaches to the teachers, and occasionally a district-provided coach will come to the school.

The school is not able to employ dedicated “elective” or “specials” teachers to provide instruction in art, music, physical education or technology. Music and library are regularly offered, but are staffed by the school’s paraprofessionals, rather than by specials teachers. Other specials, such as art and technology, are integrated into the curriculum by the core teachers. A typical staffing standard, and the EB model formula, for the number of specials teachers needed is to have 20 percent specials/elective teachers above the total number of core teachers would equal 1.4 positions for this school (0.2×7).

School Schedule

Pahrnagat Valley Elementary School operates on a four-day week, Monday through Thursday, and the instructional day runs from 7:30 a.m. to 2:55 p.m. (a seven-hour, 25-minute school day). The school also operates a part-day universal prekindergarten program for the community’s three- and four- year-olds. The school does not have a cafeteria, so each day the students are bussed a short distance to the local high school for lunch, and then are bussed back to school.

Teachers have great latitude in their use of time during the school day. Core instruction takes place from 7:30 a.m. to 11:00 a.m. each day. This block is used for math and English language arts core instruction. Next, students are transported to the high school for lunch. On their return from lunch, core instruction may continue, and students rotate through specials (music, library, and physical education — art was dropped as a separate special due to staff availability but is integrated into the core classroom) and spend time on science and history. Brain breaks are highly encouraged, and students have two recess breaks during the school day. The timing of those recess breaks is at the discretion of the classroom teacher.

Curriculum and Instructional Program

The school currently uses GO Math! in all grades except kindergarten, as the school is in the first year of a five-year phase in of *Eureka Math*, beginning with kindergarten this year. The school places a strong emphasis on phonics. Lexia is used with all students but is seen as particularly effective for struggling

students because it can be differentiated to a student's level and has a strong phonics component. There is a high fidelity with using Lexia across all grade levels in the school. Accelerated reader and math programs are also utilized in the school. The principal found the curriculums teachers are using to be successful. Teachers supplement with additional materials as they see fit.

The school is proud of its 40 Book Challenge, where students in every grade level are challenged to read 40 books during the school year at their appropriate reading level. Students and teachers monitor progress throughout the school year, and there is a reward for every student that completes the challenge. The principal and teachers alike cited the challenge as a key way the school helps all students improve their literacy skills.

The school has adopted 1:1 technology, where every student has access to a Chromebook during the school day. The school highly values the benefits of integrating technology into the classroom, and noted it is particularly useful for Lexia and other web-based individualized platforms in which students can access content and assignments tailored at their individual levels without having to schedule time in a lab. As a result of the 1:1 integration, the school's former computer lab is being converted into a Response to Intervention (RTI) space.

Assessments and Data

The school administers MAP three times a year in order to allow for data-driven instruction and targeted interventions. As previously noted, the school utilizes Lexia and other web-based programming, which provide regular performance data on each student. Teachers utilize this data to help modify instruction and identify students who would benefit from additional intervention supports.

Extra Help Strategies for Struggling Students

Students who are struggling greatly benefit from the small class sizes and small school setting. Teachers also regularly group by ability based on data. Students who are struggling also receive push-in/pull-out support provided by paraprofessionals and support from the Read by Grade Three interventionist. Paraprofessionals are able to work one-on-one with students for 15-20 minutes at a time and can quickly address any skills gaps.

Preschool for all students was also highlighted as being helpful for student success.

Professional Development

Because Pahrnagat Valley has a four-day school week, most professional development occurs on Fridays. The district also requires professional development one Friday each month. Additionally, some trainings occur on Monday afternoons. The school doesn't have much funding for professional development, so it leans on the Nevada Regional Professional Development Program and district-provided professional development. The principal works with teachers to identify the areas they want to focus on for professional development. As with other aspects of the school, there is a strong belief in flexibility and the principal trusts his teachers to identify areas of professional development that will contribute to student growth and development. The most intensive professional development occurs when new programs or curricula are adopted.

The monthly staff meetings also include professional development on specific issues and topics. These issues and topics are usually identified by teachers. Usually one or two teachers will participate in a professional development activity, then present on it at the staff meeting. Several teachers attend MegaConference, which tends to have a heavy special education focus, and is seen as particularly valuable by the principal and teachers alike.

School Culture and Leadership

Pahranagat Valley is a small, deeply connected community. By virtue of being a small town, everyone knows each other and there are positive relationships both within the school and outside of the school. Teachers report working collegially together and feeling well supported by school administration. Further, parents place a lot of trust in the school because of how well they know the staff and from often being former students themselves.

Staff members strive to create a welcoming and supportive environment for students that allows them to flourish. One staff member put it simply, “happy cows give good milk.” If school is both a fun and engaging place to be, and students feel loved and valued, then learning comes naturally.

Pleasant Valley Elementary School

Introduction

Pleasant Valley Elementary School is located in the most southern portion of Washoe County and extends south to Carson City. The majority of the homes in the neighborhood are single-family homes on an acre of land. People in the community work for or own family-run businesses. In fall 2017, Pleasant Valley enrolled 466 students in kindergarten through fifth grade. Pleasant Valley was selected based on its success with students eligible for free and reduced-price meals.

Overall, Pleasant Valley is a highly collaborative school, with a skilled and effective faculty. It is also a data-driven school. Nearly everyone interviewed said they use student performance data to develop lesson plans, provide differentiated instruction, and evaluate results.

Class sizes averaged 23 students (Table 1 shows the average class size by grade level).

Table 1: Pleasant Valley Elementary School Class Sizes

Grade Level	Class Size
Kindergarten (3 classes)	25
First (4 classes)	20
Second (4 classes)	20
Third (3 classes)	25
Fourth (3 classes)	25
Fifth (3 classes)	25

There were three sections of kindergarten, four sections of first and second grades, and three sections in third through fifth grades.

The school is 81 percent White, 12 percent Latino, and five percent other. Twenty-one percent of students in the school are free and reduced-price lunch eligible and zero are English learners.

The case study report has nine sections: 1) school staffing, 2) scheduling, 3) curriculum and instructional program, 4) assessments and data, 5) extra help strategies for struggling students, 6) professional development, and 7) school culture and leadership.

School Staffing and Scheduling

Pleasant Valley strives to maintain a well-qualified and collaborative staff. The principal mentioned there were only three reasons for teacher turnover at the school: death, retirement, or moving. Last year the school received 57 transfer applications from within the Washoe district for two openings. Teachers enjoy the school culture and feel as though leadership gives them the autonomy to do what is most successful for the students.

Teachers work closely together in grad-level teams to develop curriculum and share lesson ideas. Additionally, they work between grades to discuss the material that needs to be taught for students to be successful when entering the next grade. Each grade-level team meets with the lower and higher grade-level teams to create new classes for the upcoming year. For example, the third grade team would give the fourth grade team a recommendation of how they believe the students should be grouped. The fourth grade team would then review and reach out to the third grade team with any questions or changes they would like to see. The principal will then review and approve; he said he rarely makes changes. The staff has been very stable, which has led to effective instruction.

Table 2: Staffing in Pleasant Valley Elementary School

Category	FTE
<u>Administration</u>	
Principal	1.0
Assistant Principal	
Clerical	1.6
<u>Main Program</u>	
Core Teachers	20.0
Elective Teachers: 1.0 Music, .4 Art, .4 PE, and .5 Computer	2.3
Instructional Coaches	
Special Education Self-Contained (Severe and Profound)	
Special Education (Mild and Moderate)	0.5
EL teachers	0.1
Tutors/Tier 2 interventionists	0.5
Librarian	0.8
Gifted	0.2
<u>Aides</u>	
Special Education Aide	3.0
<u>Pupil Support</u>	
<u>Licensed</u>	
Guidance Counselor	1.0
Clinical Aide	0.7
Nurse	0.2
Psychologist	0.2
Speech	

The school's staffing configuration of the school shows the importance of Pleasant Valley's reliance on effective core teachers. Table 2 shows that the school has 20.0 core teacher positions for 466 students in kindergarten through grade five. Core teachers are the grade-level teachers who teach reading, math, science, and social studies. For kindergarten through grade five, this staffing equates to an average class

size of approximately 23 students. However, as noted above, average grade-level class sizes vary from 25 in kindergarten and in third through fifth grades to 20 students in second and third grades.

The school also employs “elective” or “specials” teachers to provide instruction in art, music, physical education, library, and technology. Music is the only elective that is funded by the district, the rest has to come from additional funding. Two FTEs provide this instruction, including the librarian who teaches some of the specials class sections. A typical staffing standard, and the EB model formula, for the number of specials teachers needed to have 20 percent specials/elective teachers above the total number of core teachers would equal 4.0 positions for this school (0.2×20).

When asked about instructional coaches, the principal said that they were able to have one teacher tutor who is a former teacher. The funding for the position is picked up through school fundraising. She is able to work with students in second through fourth grades. The interventionist is very focused on making sure kids are able to meet the Read by Grade Three Act. The principal has the teachers send out a group of kids to meet with the interventionist in order to work on reading skills. The school has additional pupil support staff, including one guidance counselor, 0.2 nurse, a 0.7 clinical aid, and .33 psychologist.

Note that these case studies were focused on identifying resources and supports for at-risk and EL students, so special education resources were not specifically identified.

School Schedule

The instructional day runs from 8:55 a.m. to 3:00 p.m. (a six-hour, five-minute school day). Accounting for the 45-minute student and staff lunch and recess period and a 15-minute morning recess, Pleasant Valley provides five hours of instruction for students.

Teachers provide instruction for five of these six hours. All teachers have 60 minutes of pupil-free time at least twice a week. Once a week, all teachers at each grade level have the same pupil-free time period. Currently, there is no time during the regular school day for grade-level teams to meet and collaborate on a daily or weekly basis. These meetings had occurred in the past and the teachers are expressed a desire to hold them again.

During the pupil-free time for grade-level teachers, students rotate among art, music, physical education, computers, and, some library instruction. Students’ day consist of 1.5 hours of reading, 1.5 hours of math, 1.5 hours combined a day of science and social studies.

Curriculum and Instructional Program

The school uses Houghton Mifflin Harcourt for ELA curriculum, which is supplemented with Core Knowledge and Engage New York. Accel Math had been used as the math curriculum until last year; they have started using Bridges Math for kindergarten and first grade and Envisions for second through fifth grades. The principal found the curriculums they are using to be successful. The teachers can supplement the material with additional resources. One fifth grade teacher uses various news articles to supplement some of the ELA curriculum.

Assessments and Data

Pleasant Valley makes use of multiple assessments, including MAP three times a year, DRA, and STARR. Teachers can use any additional tests besides MAP that the teachers identify. Many of the grade-level teachers also create assessments on the information they have been teaching to check for understanding.

MAP is a benchmark assessment administered online in September, January, and June. The teachers use the MAP data to see the progress of their students and to make decisions on the type of interventions they may need to provide for particular students or may need to stop providing for other students. All of the teachers are aware of the scores of their students on all of the assessments. Each teacher we talked to had a data sheet of all the different test scores of their students and they were highlighted based on their performance. The teachers used this data to create work groups and to decide if there were lessons that needed to be retaught.

Extra Help Strategies for Struggling Students

Discussions with Pleasant Valley staff did not identify many additional supports beyond the .5 interventionist described above.

Professional Development

According to the principal and to most teachers, professional development in Pleasant Valley is ongoing. It emanates first from the principal's willingness to give the teachers autonomy to create and develop their own lesson plans. Wednesdays are early release days that are used to review information from either the principal, counselor, or teacher leader. The principal goes over any changes with district policy or school policy that the staff needs to know. The counselor works on the whole child curriculum with the teachers and how they can better implement it in their classrooms. The teacher leader works with teachers on curriculum training. Additionally, teachers have personal planning time every day from 8:30 a.m. to 9:00 a.m. and from 3:00 p.m. to 3:30 p.m. The teachers have an additional three professional days at the beginning of the year: one is a teacher's day, another is the principal's day, and there is also a district day. On the most recent principal's day, the staff learned information provided by the district on topics such as new curriculum requirements and testing practices. The team then worked on team building and spent time at an escape room.

School Culture and Leadership

The staff works to hold the students accountable for their learning and their behavior. Students are also encouraged to enjoy school. The principal holds assemblies where he dresses up and does crazy things like shaving his head. The school has not shortened the student lunches but rather has increased the number of recesses.

The culture between the staff is one of constant collaboration and support. The teachers feel free to create the types of lesson plans they want and create the type of grade-level teams that are the best for each grade. For example, in the fifth grade, students rotate between three teachers. Each teacher specializes in a specific subject. This gives the students a feel for what middle school will be like. The teachers all work together to create classes for the upcoming year to make sure they are balanced and

students can feel the safe and excited to learn. The principal is very supportive of the teacher's ideas and encourages new ideas as well as consistent communication. Additionally, the principal has added some mental health days in the calendar for the teachers to leave early and do something that will assist with their mental and physical health.

Pleasant Valley Elementary creates a positive relationship with the community and parents. Every year they host a carnival for the people in the community, including the students and parents. Community members look forward to the carnival every year. It is something that binds past and current families with the school.

Vegas Verdes Elementary School

Introduction

Vegas Verdes Elementary School is a school of about 580 students (anticipated to increase to about 700 students next year) in Clark County School District in Las Vegas. The school is a franchise school, meaning that the principal leads more than one school in order to replicate the successful approach seen in the principal's original school. As a franchise, the school has extra administration staffing. The school also receives additional funding through Victory funding, which leadership has described as a powerful and a crucial element that allows them to have the staffing and supports needed for their students to be successful. Teachers and school administrators believe strongly in the school and its approach to learning.

The school is very high need — 100 percent of students are eligible for free and reduced-priced lunch and 42 percent of students are English learners (ELs). The school also has high mobility. Eighty-seven percent of students are Latino, three percent are white, and the remaining 10 percent of students are black.

Average class sizes in kindergarten and first grade are about 20 students, increasing up to 24 students in second and third grades, then no more than 28-30 students in fourth and fifth grades.

This case study summary has seven sections: 1) school staffing, 2) scheduling, 3) curriculum and instructional program, 4) assessments and data, 5) extra help strategies for struggling students, 6) professional development, and 7) school culture and leadership.

School Staffing

When asked how the school produced its student performance results, the first thing the Vegas Verdes principal highlighted was the systems approach – flipped classrooms with paired teachers, individual goals and a contract for each student, and additional financial incentives for teachers. With the flipped model, elementary teachers are asked to focus on a couple of content areas, rather than every content area, and the paired teachers will “flip” into the other's classroom to teach certain content areas. The principal and assistant principals agreed that in order for the flipped model to work, you need to have the right type of teacher, who enjoys collaborative planning and shared instructional goals and strategies. The principal and assistant principals believe the flipped model is a draw for a lot of teachers, who enjoy sharing responsibilities and working collaboratively with another teacher. By definition, the paired teaching, flipped classroom requires teachers to work closely together.

The school is also very data-driven, and the school's growth analyst serves a vital role, putting together monthly data sheets for every student, meeting weekly with the teachers, and analyzing data to determine which students should be pulled into small groups for additional intervention.

The principal believes you need “superstar” teachers, those willing to go above and beyond to meet student need, and these are the teachers he recruits. He has developed a relationship with the University of Nevada, Las Vegas to help build the next generation of superstar teachers for his schools.

The school also accepts two Teach for America teachers each year. The principal does a lot of hiring through word-of-mouth referrals, rather than the traditional recruitment process.

Table 2: Staffing in Vegas Verdes Elementary School

Category	FTE
<u>Administration</u>	
Principal	0.33
Assistant Principal	2
Clerical	3
<u>Main Program</u>	
Core Teachers	26
Elective Teachers	5
Instructional Coaches	5
EL teachers	
Tutors/Tier 2 interventionists	1.5
Librarian	
Gifted	
<u>Aides (number includes 1 PE and .5 Library Aide)</u>	1.5
<u>Pupil Support</u>	
<u>Licensed</u>	
Guidance Counselor	
Nurse	0.33
Psychologist	0.33
FASA (First Aid Safety Assistant)	1.0

The staffing configuration of the school shows that the school has 26.0 core teacher positions for 428 students in prekindergarten through fifth grade. Core teachers are the grade-level teachers who teach reading, math, science, and social studies. The principal reported that social studies is integrated into English/language arts instruction.

The school also employs “elective” or “specials” teachers to provide instruction in art, music, physical education, and technology. Five FTEs provide this instruction, which is in line with the school having teachers instruct for five of six daily hours of student instruction. A typical staffing standard, and the EB model formula, for the number of specials teachers needed to have 20 percent specials/elective teachers above the total number of core teachers, would equal 5.2 positions for this school (0.2×26).

The principal feels strongly that when Response to Intervention (RTI), a multi-tier approach to the early identification and support of students with learning and behavior needs, is properly funded, it is very effective, but that classroom teachers can’t do everything themselves. Vegas Verdes has been able to fund and staff the program appropriately, so the school’s RTI specialist monitors data on all students, and a Tier 3 Interventionist provides Tier 3 instruction to students who need it. The school has additional

pupil support staff, including a 0.33 FTE nurse (a full time nurse that is shared among the three franchise school sites), a first aide safety assistant (FASA), and .33 FTE psychologist.

Note that these case studies were focused on identifying resources and supports for at-risk and EL students, so special education resources were not specifically identified.

School Schedule

The instructional day runs from 8:15 a.m. to 2:26 p.m. (a six-hour, nine-minute school day). During the pupil-free time for grade-level teachers, students rotate among art, music, physical education, and technology instruction.

As noted previously, Vegas Verdes implements a flipped classroom model, with students moving between two teachers that specialize in certain subjects. For example, one teacher focuses on English and social studies, and the other focuses on math and science. In the past, Vegas Verdes has also implemented a blended model that added a certified teacher tutor to work specifically with each teaching pair, so the students' core instruction was delivered in three parts, with a computer lab session between core blocks to receive individualized interventions via software programs and small group support. This model allowed the school to keep class sizes small, but did mean the overall caseload of students was higher for each teacher. As such, it is a demanding model that requires the right teachers. Vegas Verdes does not currently have any blended model classrooms but may in the future.

Curriculum and Instructional Program

The school uses Reading A-Z, Kagan, and Explicit Phonics for reading/language arts. For the school's EL students, leveled readers with picture support and thinking maps are utilized. Fast Forward Language and Reading Intervention is an online program used to support each student at their own level. ST Math is the math curriculum for all grades. ST Math is a visual math program, which the principal believes is a better fit for the EL students, since it's not as dependent on language acquisition for math understanding. There is a heavy focus on reading and math at Vegas Verdes — social studies content is integrated into the reading program. Some science is integrated into math classes, but the school also utilizes the Full Option Science System (FOSS) science kits for the dedicated science curriculum.

Assessments and Data

Regular assessment and progress monitoring are an integral part of Vegas Verdes program design. The school has a growth analyst that holds weekly meetings with teachers to review data and collaboratively decide which students need interventions. In addition to MAP, the school uses Evaluate, a specific benchmark assessment system, to help students see their progress and take ownership of learning. Teachers set goals (academic growth, attendance, and behavior) with students that become part of contracts that are signed by teachers, students, and parents. By setting these goals collaboratively, students believe the expectations are fair and have additional buy-in to meet them. Having common assessments and clear goals also allows the staff to work together collaboratively and make data-driven decisions.

Extra Help Strategies for Struggling Students

Vegas Verdes has a strong RTI process in place, which the school principal credits to the extra staffing. There is an RTI site leader, who meets once a week with each grade level for problem solving. These meetings also include a representative from the grades above and below and a counselor.

The school has a nine-week cycle where students are identified through regular assessment as needing additional support. The classroom teachers provide Tier 1 and Tier 2 interventions in the classroom, with additional support for Tier 2 students via the growth analyst who works with small groups of students (four to five students at a time). Teachers and the growth analyst monitor student progress, and if students in Tier 2 are not improving, they move to Tier 3 to receive additional pull-out intervention (up to 60 minutes). If students then demonstrate growth they move back to Tier 2. The school principal described this as a dynamic process, a “revolving door” of support based on each student’s changing needs throughout the year.

For EL students, the school believes that language acquisition support is just part of good Tier 1 instruction, and that the Kagan structures and the mixed instructional approach they employ in the classroom — where students are regularly talking to peers and receive less “sit and get” — is the best way to serve EL students. For newcomer students (WIDA L1s and L2s), the school also provides pull-out or push-in intervention, particularly to support vocabulary, with a certified teacher tutor using technology (iReady, Reading Eggs) for 30 minutes a day, as well as additional materials. The school also has some tutoring after school for ELs, as well as Saturday boot camps for testing. Furthermore, most Vegas Verdes teachers are Teachers of English to Speakers of Other Languages (TESOL) certified.

In addition to instructional resources, the school also provides social–emotional support through counselors and character education.

Professional Development

As with all Clark County schools, most professional development days have been replaced with weekly site-based collaboration time. This time is separate from each teacher’s daily planning/prep period. As such, professional development is an ongoing and teacher-driven process. At Vegas Verdes, professional development starts with the school’s strategists meeting with teachers to identify topics of interest for teachers. The school also conducts a survey of teachers where they can tell what professional development they need.

The key to Vegas Verdes’ approach to professional development is that professional development is differentiated by need and is flexible as teachers’ needs change throughout the year. Vegas Verdes participates in the district’s mandated EL training, which most administrators and faculty feel is not an effective use of their time.

School Culture and Leadership

Vegas Verdes has a strong school culture, led by a confident school leader with a clear vision. Deep and meaningful engagement is apparent at all levels, from leadership, to staff, to students and to families. The principal says it all starts with having the right teachers who want to be there and then trusting them and empowering them as professionals. Teachers reported feeling highly valued and autonomous,

which in turn, appears to promote engagement and staff longevity. Students are engaged as active participants in their learning and growth, and the school has built a caring and safe environment that is welcoming to students. High attendance levels are indicative of student engagement. Families are engaged both through the goal setting process previously described, and also through regular events. Vegas Verdes typically tries to hold regular events that include a fun activity paired with sharing data or resources, such as a breakfast or afternoon with books, math and reading nights, and harvest festivals to help bring out community social supports.

Appendix K: 2018 Successful Schools

School Code	District	School Name
2193	Clark	Batterman ES
2157	Clark	Bonner ES
2081	Clark	Bozarth ES
2246	Clark	Bracken ES
2179	Clark	Brookman ES
2225	Clark	Cahlan ES
2184	Clark	Connors ES
2094	Clark	Dickens ES
2263	Clark	Diskin ES
2080	Clark	Fine ES
2268	Clark	French ES
2272	Clark	Frias ES
2181	Clark	Gehring ES
2120	Clark	Gibson ES
2186	Clark	Goolsby ES
2209	Clark	Herron ES
2187	Clark	Hummel ES
2135	Clark	Jydstrup ES
2169	Clark	Kesterson ES
2132	Clark	May ES
2249	Clark	McCaw ES
2298	Clark	McDoniel ES
2083	Clark	ORoarke ES
2145	Clark	Piggot ES
2160	Clark	Rhodes ES
2221	Clark	Rowe ES
2189	Clark	Simmons ES
2264	Clark	Smith Helen ES
2286	Clark	Staton ES
2098	Clark	Steele ES
2241	Clark	Sunrise Acres ES
2230	Clark	Taylor Glen ES

School Code	District	School Name
2192	Clark	Thiriot ES
2176	Clark	Twitchell ES
2154	Clark	Vanderburg ES
2077	Clark	Wallin ES
2287	Clark	Wolff Elise ES
4209	Elko	Mountain View ES
16207	Washoe	Beck ES
16261	Washoe	Caughlin Ranch ES
16206	Washoe	Hunter Lake ES
16210	Washoe	Melton ES
2612	Clark	Coronado HS
2418	Clark	Las Vegas Acad HS
2620	Clark	NW Career & Tech HS
2425	Clark	Palo Verde HS
2435	Clark	West C&T HS
3501	Douglas	Douglas HS
16509	Washoe	Galena HS
16502	Washoe	Reno HS
2348	Clark	Cadwallader MS
2349	Clark	Canarelli MS
2347	Clark	Fertitta MS
2317	Clark	Guinn MS
2323	Clark	Johnson MS
2329	Clark	Lyon MS
2353	Clark	Mannion MS
2338	Clark	Miller Robert MS
2339	Clark	Rogich MS
2360	Clark	Tarkanian MS

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Utah Education Funding Study

PHASE 1 REPORT

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Executive Summary

Utah is a changing state — it currently ranks as the youngest (Johnson, 2017) and one of the fastest growing (U.S. Census Bureau, 2019) in the country, with major shifts in its economic and demographic profile. Moreover, the student body of Utah is becoming more diverse and presents a wider set of needs and assets within the public education system. The number of English Learner (EL) students is increasing, the number of students from non-White families is increasing, and enrollment trends are shifting as well, with more students being homeschooled and a greater proportion of students served by the charter sector. In order to serve the educational and economic demands of the next generations of Utahns, the state's education system must adjust to provide the appropriate supports for students and families.





This report is the first of two components of a broader study examining the funding system for the K–12 education system in Utah. This first report will examine in particular the alignment between Utah's vision for students and the Minimum School Program (MSP) as defined by statute. Realizing the state's vision of success requires alignment with the process by which education funding is distributed, including with respect to specific programs within the MSP. This also includes the state's vision of equitable access to education, and thus an analysis of the extent to which the current MSP is equitable. Finally, this report includes an analysis of the role and balance of state and local contributions to education funding, assessment of the incentives created by and alternatives to enrollment-based funding, and the impact of year-round schooling on student achievement and spending. Through its analyses, this report provides a baseline assessment of the distance between Utah's expectations of a minimum program and the current state and sets up a deeper evaluation for the second phase of this study in 2020 by identifying potential areas of exploration.

Methods

Organizational Framework

There are four central terms utilized in this report to support evaluation of the current system: core components, input, outputs/outcomes, and measures of success. In short, each term describes an aspect of the system examined by the study team and described in this report.

Exhibit 1. Understanding Key System Terms: Core Components, Inputs, Outputs, and Measures of Success

Core Components	Inputs	Outcomes	Measures of Success
 Categories of Inputs Linked to Outputs	 Programs, Policies, Practices	 Results	 Success Indicators

WestEd researchers employed a mix of quantitative and qualitative methods to address the study research objectives. This included a document review process, engagement with stakeholders, and quantitative data analysis.

Exhibit 2. Data collection methods with research objectives

Task	Document Review	Stakeholder Input	Data Analysis
Part 1: What are the current expectations in Utah for a Minimum School Program?			
Research Objective 1a: Identification of core components of minimum school program.	X	X	X
Part 2: How does the current system align with these expectations?			
Research Objective 1b: Evaluation of current distribution formulas	X	X	
Research Objective 1c: Analysis of role and balance of the state and local contribution	X		X
Part 3: What do other pathways offer?			
Research Objectives 3b/3c: Examination of the behaviors the current enrollment-based funding model incentivizes and alternative proxies	X	X	X
Research Objective 3d: Analysis of the impact of year-round schooling models	X	X	

The details of these methods are described in the main body of this report.

Key Findings

The findings generated by Phase 1 of the study are organized under three parts which are included below along with the key findings from each part.

Part 1. What are the current expectations in Utah for an MSP?

- ▶ Identification of the core components of a minimum school program
 - » Utah stakeholders reported that the vision set by the USBE strategic plan aligns to their own vision for Utah's schools.
 - » Stakeholders emphasized the importance of early learning, safe and healthy schools, and a focus on the teacher shortage.
 - » Stakeholders expressed confidence in the core standards and the related scope and sequence, noting them as the right path.
 - » However, stakeholders noted that there is one significant exception with respect to social-emotional learning and emphasized the need for integrating this within a holistic academic program.

Part 2: How does the current system align with these expectations?

- ▶ Evaluation of current distribution formulas
 - » There is general alignment between the expectations of the minimum school program, the target outcomes based on the PoG, and the assignment of funding based on statute in the MSP and related categorical programs.
 - » Stakeholders noted the burden of pursuing grant funding under the MSP as an area for additional exploration.
- ▶ Equitable Access to the Minimum School Program
 - » Per-student resources, revenues or expenditures, increase across the quintiles along with wealth per pupil. This may suggest that a relationship exists between local wealth and the educational resources available per ADM, and that Utah's school funding system is not as equitable as it could be.
 - » With respect to horizontal equity — comparing resources across school districts — using a standard metric in the research literature, in both years examined (2013–14 and 2017–18), only average teacher salary meets the equity standard.
 - » In regard to vertical equity, using the method of comparing resources with weighting for the need of students, for both years examined, there is little difference in the standard metric indicating that the funding formula is not providing sufficient additional resources for students with greater needs, such as economically disadvantaged students, English Learners, and students with disabilities.

- » In regard to fiscal neutrality examining the relationship between the wealth of a district and the resources it has for educating its students, many of the fiscal neutrality measures exceeded the standard, indicating that to some degree, district resource levels are related to district wealth.
- ▶ Alignment with Evidence-Based Practice
 - » A growing body of rigorous research nationally provides evidence to inform future policy discussions in Utah, including directing resources to high need students, targeting investments, and building effective decision-making practices.
- ▶ Analysis of the role and balance of the state and local contribution
 - » This analysis finds that Utah is generally more reliant on state funds than the national average, but finds no evidence that the division of funding by source bears any relationship to overall equity.
 - » Based on the review of the balance of state and local contributions, the study team recommends that Utah continue to both set a required local contribution amount, while still being cognizant of the equity issues that may arise without limits or equalization of the local revenues raised above the minimum program.

Part 3: What do other pathways offer?

- ▶ Examination of the behaviors the current enrollment-based funding model incentivizes and alternative proxies
 - » A key takeaway from the review of methods by which states count students for the purpose of education funding is that most state still utilize more traditional methods of counting students for state funding purposes, even in states that are pursuing competency-based systems.
 - » Given that no state has implemented a broad-scale state funding mechanism for competency-based education statewide, any change to how states count students for funding purposes should be modeled to demonstrate the potential impact of that change on a variety of student, school and district scenarios.
 - » Consensus from stakeholders investigating a competency-based funding systems and its interaction with funding shows that current funding laws might allow for necessary flexibilities. The work group engaged on this topic agreed to continue its investigation in the subsequent calendar year.
- ▶ Analysis of the impact of year-round schooling models
 - » While there is some suggestive evidence in Utah and other states regarding the impact of year-round schooling on costs and student outcomes, the findings are mixed and limited. This suggests that any consideration of year-round schooling as a policy matter might benefit from pilot testing or other approaches to assessing the effectiveness of the policy in meeting the intended goals within the specific implementation context in Utah.



Introduction

Utah is a changing state — it currently ranks as the youngest (Johnson, 2017) and one of the fastest growing (U.S. Census Bureau, 2019) in the country, with major shifts in its economic and demographic profile. In order to serve the educational and economic demands of the next generations of Utahns, the state's education system must adjust to provide the appropriate supports for students and families.

This report is the first of two components of a broader study examining the funding system for the K–12 education system in Utah. This first report will examine in particular the alignment between Utah's vision for students and the Minimum School Program (MSP) as defined by statute. Realizing the state's vision of success requires alignment with the process by which education funding is distributed, including with respect to specific programs within the MSP. This also includes the state's vision of equitable access to education, and thus an analysis of the extent to which the current MSP is equitable. Finally, this report includes an analysis of the role and balance of state and local contributions to education funding, assessment of the incentives created by and alternatives to enrollment-based funding, and the impact of year-round schooling on student achievement and spending. Through its analyses, this report provides a baseline assessment of the distance between Utah's expectations of a minimum program and the current state and sets up a deeper evaluation for the second phase of this study in 2020 by identifying potential areas of exploration.

Throughout this report, the term “minimum school program” is used to refer to two distinct, yet interconnected aspects of the public education system in Utah. The first is the current statutory program which governs the distribution of the majority of state education funds (see Utah Code § 53F-2). The second use refers to the expectations of policymakers and practitioners with respect to the minimum output of the system as a result of inputs such as programs and policies. These are also described as “core components” of the system.

The choice to use the same term for these two distinct aspects of the system was intended to extend the statutory and financial term to more programmatic elements such as curriculum, the state's vision, and target outcomes. As a concept, the minimum program is not restricted to only the financial inputs into the system, and this usage is meant to reflect this concept.

To help ensure the meaning of this term is clear, when the statutory program is referred to, it will be capitalized, as in “Minimum School Program” or “MSP.” Whereas, when the system expectations or core components are referred to, it will be lower case, as in “minimum school program.”

The State Strategic Vision

In its strategic plan, the Utah State Board of Education (USBE) articulates the following vision:

“Upon completion, all Utah students are prepared to succeed and lead by having the knowledge and skills to learn, engage civically, and lead meaningful lives.”

Moreover, the plan sets specific targets for 2022, including with respect to educational attainment and graduation. The plan sets the goal of a statewide graduation rate of 90.1% by 2022 (USBE, 2019).

In 2018, the state reports a graduation rate of 87.0% and is targeting increases of just under a percentage point each year to reach the goal.

In addition to this vision, the USBE lays out ambitious goals with associated strategies for K–12 schools in pursuit of this vision:

- **Early Learning:** Each student starts strong through early grades with a foundation in literacy and numeracy
- **Personalized Teaching & Learning:** Each student and educator has access to personalized teaching and learning experiences
- **Safe & Healthy Schools:** Each student learns in a safe and healthy school environment
- **Effective Educators & Leaders:** Each student is taught by effective educators who are supported by effective school leaders

A companion piece to the strategic plan is the Portrait of a Graduate (PoG). The PoG is a detailed description of the complementary skills and dispositions embodied by the ideal graduate who is able to reach his or her full potential upon graduation from the public education system.

Realizing these visions of success requires alignment with the process by which education funding is distributed. The statute establishing Utah’s Minimum School Program (MSP), which directs approximately 85% of state appropriations for public education, outlines three objectives:¹

1. *Equity* — All children are entitled to reasonably equal educational opportunities, regardless of their place of residence or the economic situation of their school district or other agencies.
2. *Local Participation* — Establishment of an educational system is primarily a state function, but school districts should be required to pay a portion of the cost of a minimum program.
3. *Local Control & Determination* — Local boards should be empowered to provide educational facilities and opportunities beyond the minimum program and that latitude of action is permitted and encouraged.

In fact, based on the frameworks and documents examined for this report, equity has been a consistent focus in Utah. In addition to being an objective of the MSP, equity is central to the USBE’s mission of “creating equitable conditions for student success” (Utah State Board of Education, 2019). Moreover, the current USBE strategic plan defines equity as:

¹ Utah Code § 53F-2-103

“Equity is the equitable distribution of resources based upon each individual student’s needs. Equitable resources include funding, programs, policies, initiatives and supports that target each student’s unique background and school context to guarantee that all students have access to a high-quality education.”

Finally, the Governor’s *Education Excellence Commission*, led by Governor Gary Herbert, focused on “providing support to students at risk of academic failure” and suggested that the state “consider additional state funding ... based on student risk factors” (Governor’s Education Excellence Commission, 2017). Moreover, the Governor’s recent strategic plan, *The Education Roadmap*, names equity as one of four priority policy areas and identifies eight specific strategies to ensure access and equity in the state education system.

Despite this emphasis on equity, in the last decade, achievement gaps between student groups have remained persistent.

Recent Trends

As the state seeks to close these gaps, some have noted a decrease in available resources to address them. According to the recent Utah Foundation report, *Getting by with Less*, over the past twenty years, the state’s K–12 education funding effort — or the amount spent per \$1,000 in personal income — has decreased from 7th highest in the nation to 37th as of 2014. The decline is due to a nearly 29% decrease in tax revenue, which equates to a \$1.2 billion reduction of funds — or a reduction of nearly \$2,000 in per pupil funding (Utah Foundation, 2016). And according to a more recent Utah Foundation report, as of 2017, Utah was last with respect to per pupil spending. However, it should be noted that this report concluded overall student performance was better than performance in the higher-spending states with respect to a variety of measures. The authors also point out that, despite these comparisons, Utah’s low spending raises the question of whether Utah is meeting its full potential (Utah Foundation, 2019).

In addition, the state has become more diverse and the needs of students have evolved in recent years. This includes a 33% increase in the number of English Learners (ELs), growing from 34,394 students in the 2013–14 school year to 49,374 in the 2018–19 school year, with several districts seeing increases of EL students of 40% or more (Utah State Board of Education, 2019). While rates of poverty and students with a disability in Utah have remained relatively consistent in recent years, student race and ethnicity trend data show an increase in the percentage of students of color, growing steadily though modestly from 23% in 2013–14 to 26% in 2018–19 (Utah State Board of Education, 2018).

Enrollment trends are also shifting in Utah. State data from the 2009–10 to the 2015–16 school year show a 97% increase in the number of students who are homeschooled (Utah State Board of Education, 2016). Using Census population data, this represents an increase from 1.3% of the school age population to 2.4% over the same time period (U.S. Census Bureau, Population Division, 2019).²

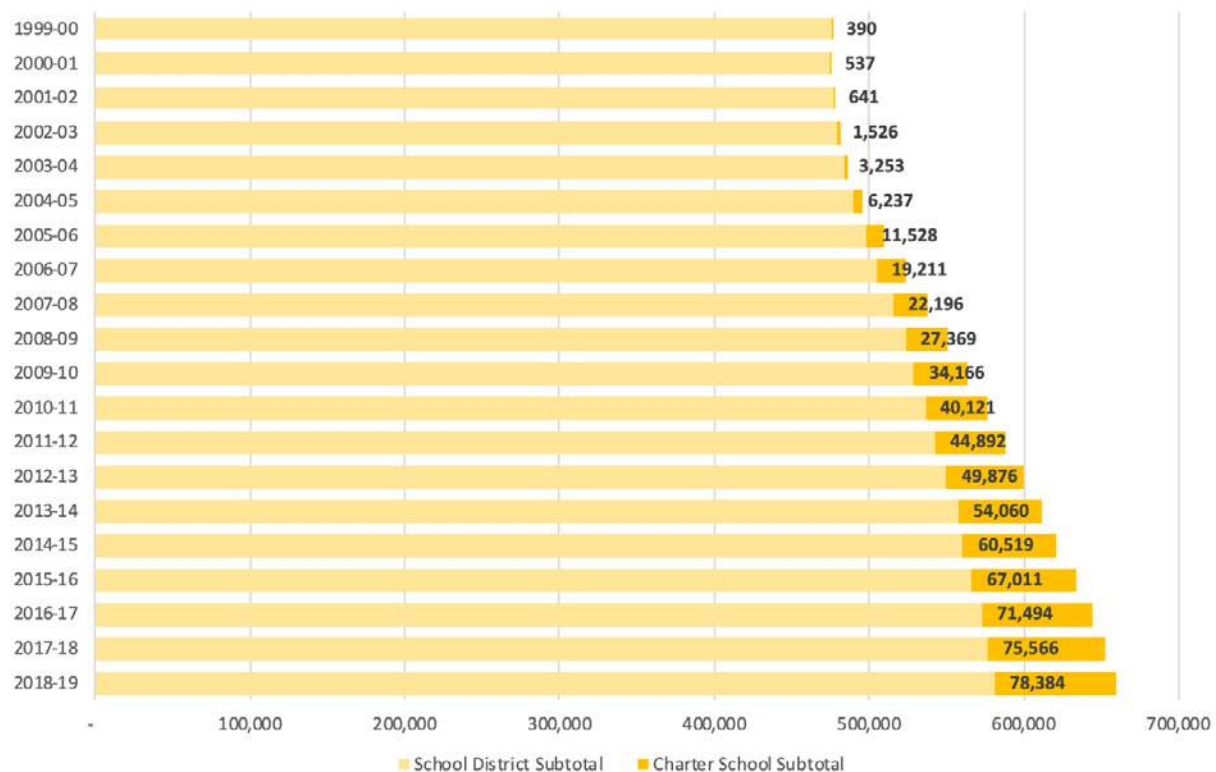
2 This is a larger increase than seen nationally, though the overall proportion of students is lower. Nationally, 1.52 million students ages 5 to 17 (3.0%) were homeschooled in 2007 compared to 1.69 million (3.3%) in 2016. These national data are reported by the U.S. Department of Education, National Center for Education Statistics, Parent Survey and Parent and Family Involvement in Education Survey of the National Household Education Surveys Program (Parent-NHES:1999 and PFI-NHES:2003, 2007, 2012, and 2016). (This table was prepared February 2018.). Retrieved from https://nces.ed.gov/programs/digest/d17/tables/dt17_206.10.asp.

In contrast, enrollment of ungraded and K–12 students at Utah’s private schools also saw a slight decrease overall but has been generally flat over time. In the 2007–08 school year, 18,675 of Utah’s students were enrolled in 134 private schools and dropped slightly to 17,747 in 123 private schools in the 2017–18 school year.³

The establishment of charter schools also brought a shift in enrollment patterns, with charters expanding their enrollment numbers over time. Based on historical enrollment data from the USBE, in the last 20 years, enrollment at charter schools has steadily increased from 0.1% of the public school enrollment total in 1999–00 to 11.9% in 2018–19.

The exhibits below illustrate these changes in enrollment by type of school setting.⁴

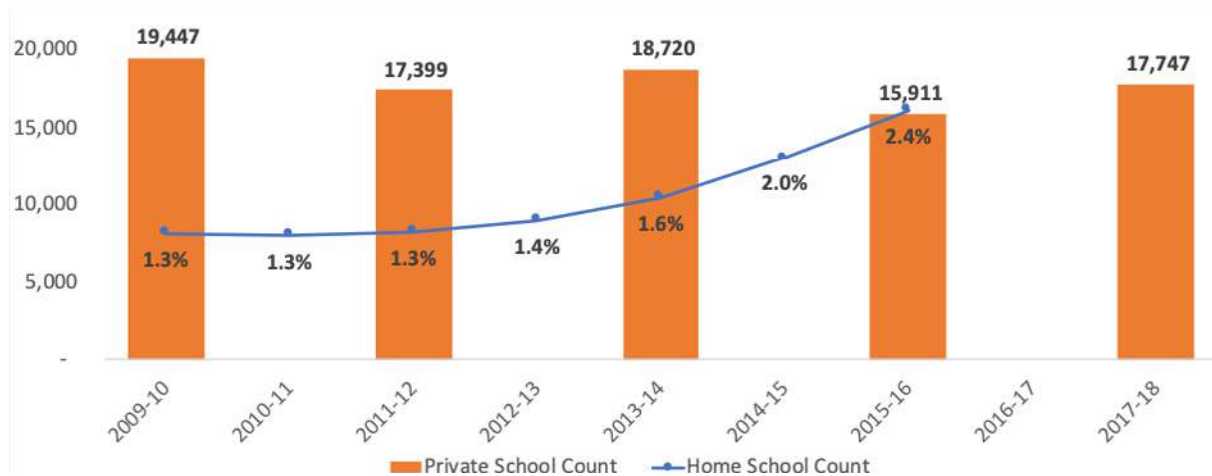
Exhibit 3. Charter School Enrollment Over Time — 1999–00 through 2018–19



³ For additional information, see U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Private School Universe Survey (PSS)”, 2017–18 ; “Public Elementary/Secondary School Universe Survey”, 2017–18 v.1a; “State Nonfiscal Public Elementary/Secondary Education Survey”, 2017–18 v.1a. Retrieved here: <https://nces.ed.gov/ccd/elsi/expressTables.aspx>.

⁴ A complete listing of the underlying data is presented in Exhibit F-1 in Appendix F.

Exhibit 4. Count of Students Served in Non-Public Settings — 2002–03 through 2017–18



Overall, the demographic analysis for this report match what stakeholders report about Utah’s schools — that the student body of Utah is becoming more diverse and presents a wider set of needs and assets within the public education system. The number of English Learner (EL) students is increasing, the number of students from non-White families is increasing, and enrollment trends across charter, public, and home school are shifting as well.

In this context of ambitious goals, and shifting conditions and needs, it is valuable to determine the extent to which Utah’s school funding system meets its intended purposes and provides equitable access to education for each and every student in the state.

The Present Study

To this end, WestEd was engaged by the Utah State Board of Education (USBE) to conduct a comprehensive review of the state’s school funding system aimed at providing the state with findings and recommendations with respect to equity in the current system and to inform consideration of changes to improve system equity. This is the third review of Utah’s school funding formula, the first being the original “Utah School Finance Study” in 1972, which established the Minimum School Program, and the second being a comprehensive assessment of Utah’s public school finance system, including the MSP.

In 1972, the Utah State Legislature commissioned a study to recommend alternative cost measures and allocation strategies for schools across the state, with the ultimate goal of building an objective formula that considered student need in its construction. The result was 16 recommendations, which became the foundation of the Minimum School Program. Key tenants of this original investigation’s recommendations include the introduction of the Weighted Pupil Unit, guaranteed funding for school operation and salary increases, and the first formulas for Necessarily Existent Small Schools, Special Education, and Career & Technical Education (Leishman & Young, 2011).

In 1990, the Utah State Legislature commissioned a second study, this time to review the existent system and its iterative progress over the past eighteen years. The study itself was an equity analysis, measuring horizontal, vertical and tax equity. Ultimately, researchers found Utah’s public school finance formulas to be equitable, but recommended that changes to enhance equity should be made and that districts should be granted more autonomy (Leishman & Young, 2011).

Drawing from these historical analyses as a guide, the present report is the culmination of activities within Phase 1 of the study, which focused primarily on providing the state with a picture of the current state of school funding in Utah. Specifically, the report focuses on how Utahns define the minimum school program and to what extent this definition matches implementation at the state and local levels.

The report also includes findings from an equity analysis that looked at several commonly used metrics in assessing the distribution of resources along measures of equity. In Phase 2, to be completed in the fall of 2020, a subsequent report will include findings from an examination of costs and resource allocation through a variety of methods, taking a deeper look at some of the topics investigated in Phase 1. Phase 2 findings will also include recommendations on how the existing system could be improved in three categories: strategic funding allocations and distribution, best practices for effective spending, and actionable policy implications. Neither report will assess or produce an estimated adequate amount of resources needed for the Utah public education system.

How to Read This Report

After a brief section dedicated to methodology, the findings generated by Phase 1 of the study are organized under three anchor probes. Specific objectives within each probe reference the research objectives in the project scope using the reference labels provided by the USBE (e.g., 1a, 2a, etc.):

Part 1: What are the current expectations in Utah for a minimum school program?

- ▶ Research Objective 1a: Identification of the core components of a minimum school program

Part 2: How does the current system align with these expectations?

- ▶ Research Objective 1b: Evaluation of the extent to which the distribution formulas of the MSP, as outlined in U.C.A. Title 53F, Chapter 2, State Funding — Minimum School Program, are:
 - » fulfilling their statutory purpose (if provided);
 - » providing each student in the state equitable access to a sound, basic education;
 - » aligned with state goals as outlined in the USBE's strategic plan; and
 - » aligned with evidence-based best practices.
- ▶ Research Objective 1c: Analysis of the role and balance of the state and local contribution over time in Utah and compared to other states
 - » Provide proposed definitions of statutory language requiring school districts to participate on a partnership basis in the payment of a reasonable portion of the cost of a minimum school program.

Part 3: What do other pathways offer?

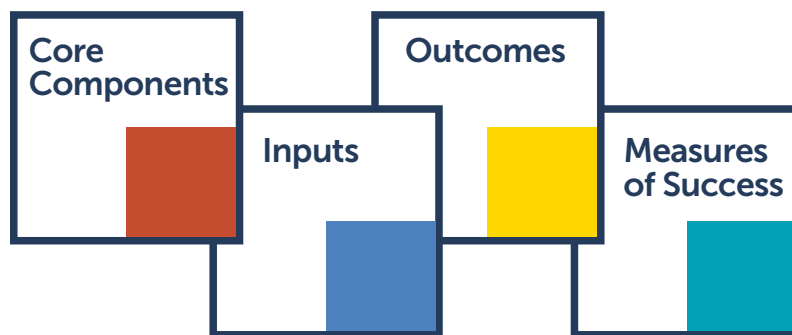
- ▶ Research Objective 3b/3c: Examination of the behaviors the current enrollment-based funding model incentivizes (e.g., counting students using average daily membership) and alternative proxies for counting students
- ▶ Research Objective 3d: Analysis of the impact of year-round schooling models in Utah in reducing costs and improving student outcomes

Organizational Framework

For the purposes of this study, we employ the target outcomes or outputs of Utah’s public education system defined by the PoG. The Minimum School Program and other relevant state statutes consist of the inputs under implementation by Local Education Agencies (LEAs) to meet the target outputs/outcomes. By examining the alignment or lack thereof between the target system outcomes and the current inputs, we identify considerations for system adjustments.

There are four central terms utilized in this report to support evaluation of the current system: core components, input, outputs/outcomes, and measures of success.

Exhibit 5. Understanding Key System Terms: Core Components, Inputs, Outputs, and Measures of Success



Inputs

Inputs refer to the conditions, programs, practices, and individuals working in the classroom, school, and district setting to directly support students. Example inputs could be teachers, facilities, or access to high-quality curriculum.



Outcomes

An outcome is a measurable result from implementation of collected inputs. Academic mastery for a student is the outcome of a series of inputs related to academic and social supports provided in the school.



Measures of Success

Measures of success are results from assessments or trends in data related to an output. The output may be an individual graduate’s demonstrated mastery through graduation, but the measures of that graduate’s performance refer to the assessment results or other data collected.

Core Components

Core components refer to categories of inputs that link to specific output measures. Core components organize inputs based on their intended output. For example, academic programs supporting literacy would be a core component. Given the universal nature of these components, in some cases the same language is used in existing policy. Any overlap is incidental, and the terms are intended to be distinct.

These terms are used in the report as a organizational framework to evaluate how Utah defines the minimum school program across collected state-produced sources, stakeholder input, and available data, and then compares this definition to the funding of the system. The purpose of this task is to identify potential areas for exploration in Phase 2 of the study, not to draw conclusions about the system's effectiveness.

Analysis Methods

WestEd researchers employed a mix of quantitative and qualitative methods to address the study research objectives. This included a document review process, engagement with stakeholders, and quantitative data analysis.

Exhibit 6. Data collection methods with research objectives

Task	Document Review	Stakeholder Input	Data Analysis
Part 1: What are the current expectations in Utah for a minimum school program?			
Research Objective 1a: Identification of core components of minimum school program.	X	X	X
Part 2: How does the current system align with these expectations?			
Research Objective 1b: Evaluation of current distribution formulas	X	X	
Research Objective 1c: Analysis of role and balance of the state and local contribution	X		X
Part 3: What do other pathways offer?			
Research Objectives 3b/3c: Examination of the behaviors the current enrollment-based funding model incentivizes and alternative proxies	X	X	X
Research Objective 3d: Analysis of the impact of year-round schooling models	X	X	

Document Review Process

A literature review provided historical background and context for the study. Peer-reviewed journal articles and federal and state-run websites were the priority resources for topics regarding policy, legislation, and legislative practices. Additionally, a small number of newspaper sources were used to elaborate on Utah-specific content and to give some insight on the public's perspective on year-round schooling, including local accounts and reactions. The databases searched for peer-reviewed journal articles include:

- Education Resource Information Center (ERIC)
- Iowa State University Library — Dissertations and Theses portal
- U.S. National Library of Medicine — National Institutes of Health
- California Educational Research Cooperative
- Journal of Inquiry & Action in Education

Information on legislative policy and practices was collected using various state, legislative, and board of education webpages. An essential resource for researching the Minimum School Program was the **Compendium of Budget Information (COBI)**. This site details the state's \$17 billion budget and related financial authorizations and background information. The Utah State Legislature, the Utah Office of Administrative Rules, the Utah State Board of Education, and the National Center on Safe Supportive Learning Environments websites were utilized to supplement information on policy.

The document review process included an examination of articles and policies from 1989–2019 to develop a thorough background on the evolution of education policies. Information extracted from the Utah Administrative policies and current federal and state standards and policies were from 2016–2019.

Two Utah-based newspapers, the *Deseret News/Associated Press* and *Salt Lake Tribune*, were included in the literature review of this study. Common search terms for the review included: “Utah Minimum School Program,” “Utah Year Round Schooling,” “Educational Policy Background,” and “Utah School Funding.” Search terms varied based on the content topic, and sources were intended to be substantive and objective so as to minimize bias.

Findings from the document review are embedded throughout the report as relevant to the section topic and are not organized into a stand-alone section.

Stakeholder Engagement Process and Input Analysis

To contextualize the findings from the document review and initial data analysis, the team held multiple input sessions and interviews with Utahn stakeholders. The objective of the stakeholder engagement was to gather the perspectives of participants on the current education system, programs, policies, and practices in Utah. This input will be utilized (in combination with other sessions) to support future case studies planned in 2020 and to inform the examination of the minimum school program for Phase 1 of the study.

“Minimum school program” Input Sessions

Members of the WestEd team led focus groups with superintendents from around the state, from districts representing the full spectrum of sizes, geography, demographics, and socio-economic levels. The groups averaged six members each and utilized consistent prompts to anchor the dialogue:

- What would you say are the components of a minimum school program?
- What would you say are the outcomes of a minimum school program?
- What are the necessary inputs to create a minimum school program?
- Using the group’s definition of a minimum school program, what data sources could be useful to assess or monitor the components and their inputs?

An additional input session was held to discuss enrollment counts during a meeting of the Student Count Advisory group. The group includes school board members, budget officers, stakeholders, and state policy staff. Priorities for the initial meeting were to understand the concerns districts have with the current student count policies in relation to competency-based funding and to begin to identify possible paths for identifying a solution.

WestEd also led an input session for business administrators focused on providing a general overview of the report and gathering information on local approaches to the decision-making processes necessary for budget allocations. This session included approximately 35 business administrators from around the state. WestEd split the business administrators into small groups of three or four with facilitators gathering written comments on post-it notes and charting discussion responses. Engagement with this group will be ongoing as the research team begins analyses in Phase 2 of this study. Major take-aways from this session included the groups’ discussion of the wide variety of methods used to make allocation decisions. Some large districts have a set process to manage the input of multiple parties (department heads, principals, superintendent, etc.), while small districts develop their budgets based on school board priorities and deliberation with the superintendent.

WestEd also led an input session with charter school directors focused on gathering reactions to the state’s vision for public education, and the role the charter sector plays in realizing this vision. This session included seven charter school directors.

Lastly, the WestEd team held 14 phone interviews with superintendents and other stakeholders. These interviews focused on the following open-ended interview prompts, with significant leeway given to respondents and interviewers to guide the conversation based on interests and local contexts:

- What do you believe are the top three things state policymakers could do to improve support for public education in Utah?
- From your perspective, which aspects of the way funds are distributed to your school district work well?
- In your view, is Utah’s school finance system equitable?
- What are the advantages and constraints of the three different funding sources — local, state, and federal — in terms of the flexibility and support they provide?

A summary of the stakeholder input is included in Appendix A and embedded throughout the report as relevant.

Equity Study Methods

The equity study was designed to examine the vertical, horizontal, and fiscal equity⁵ of Utah's system utilizing data provided by USBE, including:

- **State and Local Revenues.** Includes all state and local revenues except capital local and debt service levies (revenue codes 1124-1129, 1174, 1178), tuition from other LEAs within the state (1320), transportation fees (1410-1440), food service receipts (1610-1690), miscellaneous revenue from other school districts (1950), tax increment fund (26), related to basic programs (3200), and capital outlay programs (3700).
- **Total Revenues.** Consists of the state and local revenues listed above with the addition of federal funds, excluding child nutrition programs (4560-4574) and federal USDA commodities (4970).
- **Total Expenditures.** Consists of district expenditures from the general fund (10), special revenue funds (20), and student activity fund (21) except for the following functions: student transportation (2700), food service (3100), facilities acquisition and construction services (4000s), and debt service (5000s).
- **Instructional Expenditures.** Consists of expenditures in the instruction function (1000) from the general fund (10), special revenue funds (20), and student activity fund (21).

To examine equity in the allocation of resources, the study team examined the resources available to students based on average daily membership (ADM) and also on a factor generated for each district referred to as Weighted ADM (WADM). WADM is a district's ADM count adjusted by the weights described in the Equitable Access section to account for the number of students with special needs in the district.

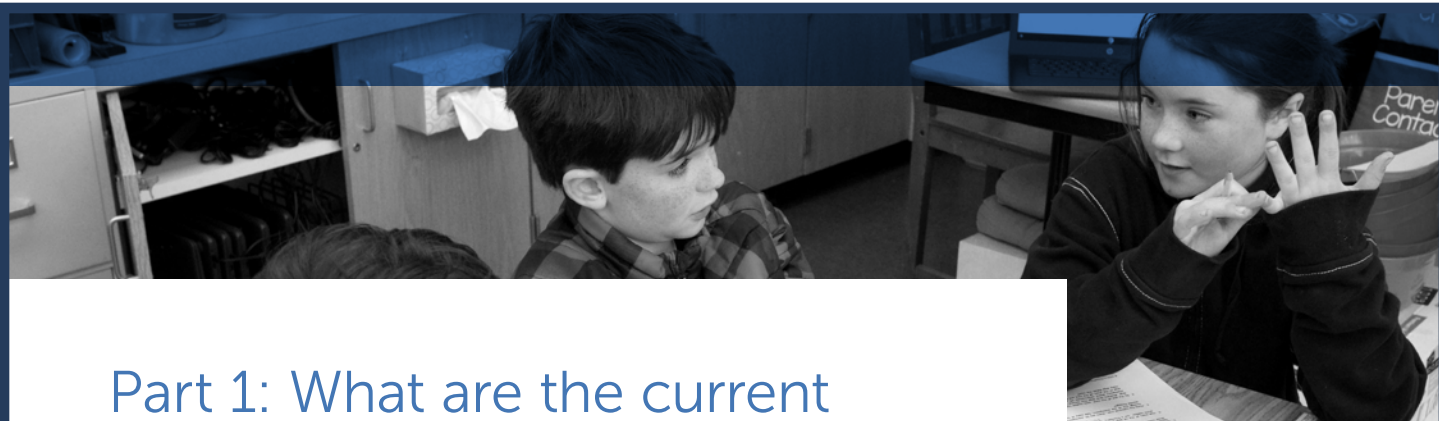
The study team also utilized standard measures of equity including the range, coefficient of variation, McLoone Index, Verstegen Index, and correlation coefficient. These terms are defined in the section Equitable Access to the Minimum School Program. The methodology used in these equity analyses are consistent with the definition of expenditures used in the assessment of other states and prior analyses.

5 As described in later sections, these terms are defined as follows:

Horizontal Equity: Concerned with how equally resources are allocated to districts or students in similar situations. It is sometimes said that horizontal equity addresses the "equal treatment of equals." Under a school finance system with high horizontal equity, students with no special needs are funded roughly equally, regardless of which school district they attend.

Vertical Equity: Measures how well school finance systems take into account varying student and district needs. A system with high vertical equity will provide more resources for students with greater educational needs or districts with characteristics that impact costs such as very small size or geographical isolation.

Fiscal Neutrality: Assesses the link between local wealth and the amount of revenue available to support a school district. A school finance system with high fiscal neutrality minimizes the relationship between local wealth, or capacity, and district spending.



Part 1: What are the current expectations in Utah for a minimum school program?

Research Objective 1a: Identification of the core components of a minimum school program

In this section, we examine the minimum school program from multiple angles: stakeholder definition, statute definition, and reflection in state-endorsed documents and guidance. We then analyze the alignment across those areas in order to identify topics for further exploration in Phase 2 of this study.

To approximate a shared view of the minimum school program for Utahns, this study applies a conceptual framework of mapping outputs to inputs⁶ represented in state documents and by Utahn stakeholders to identify further areas of consideration for funding alignment. As reflected in the table below, the study compiles and analyzes descriptions of the inputs (programs, policies, and practices), target outcomes (results), and their related measures (success indicators) of the Utah system via stakeholders, the Portrait of a Graduate (PoG), USBE's 2022 targets, state-adopted standards, accountability measures, and relevant portions of statute. By examining where different system sources reinforce a common definition and where they diverge, the study spotlights potential areas for USBE's calibration between inputs and target outcomes. In order to identify the inputs associated with a specific outcome, we first explore the state's vision for the outcome of the public education system.

Each of these elements are described in the following section for the purpose of identifying the core components of the minimum school program.

⁶ See Exhibit 5 on page 11 for a description of the organizational framework.

The State's Vision for the Outcome of the Public Education System



USBE's vision (*Upon completion, all Utah students are prepared to succeed and lead by having the knowledge and skills to learn, engage civically, and lead meaningful lives*) is used as the anchor for USBE's PoG, which "identifies the ideal characteristics of a Utah graduate after going through the K–12 system."

It should be noted that the PoG is offered in Utah as an optional model and that LEAs are encouraged to develop their own local versions to ensure the target outcomes reflect local context and values. Stakeholders involved in the input sessions for this study unanimously approved of the version of the PoG provided by the USBE.

Due to USBE's use of the PoG and the strong stakeholder recommendation, this study uses the PoG as the target outcome of the system for measuring the minimum school program. As detailed in the next section, the PoG describes the outcomes at an individual level.

Portrait of a Graduate

The PoG is an illustration of the targeted characteristics possessed by a student completing the K–12 course of study in Utah. A series of focus groups representing Utahn stakeholders informed the development of the PoG. The characteristics are organized into three main categories or "keys": Mastery, Autonomy, and Purpose. Mastery is the ability to demonstrate depth of knowledge and skill proficiency. Autonomy is having the self-confidence and motivation to think and act independently. Purpose guides life decisions, influences behavior, shapes goals, offers a sense of direction, and creates meaning.

The PoG is intended to provide a "holistic view" of development. Not all of its elements align to a specific measure or assessment, but all can be developed in the course of the K–12 experience, as well as in the home and in the wider community.

Each key is broken down further into specific components captured in the table below.

Exhibit 7. Portrait of a Graduate Keys by Components

Mastery	Autonomy	Purpose
<p>Academic Mastery: Demonstrate a depth of knowledge in multiple subject areas to make informed decisions.</p> <p>Wellness: Maintain healthy lifestyles that provide balance in life and improve physical, mental, social, and emotional well-being.</p> <p>Civic, Financial, and Economic Literacy: Understand various governmental and economic systems and develop practical financial skills.</p> <p>Digital Literacy: Adapt, create, consume, and connect in productive, responsible ways to utilize technology in social, academic, and professional settings.</p>	<p>Communication: Communicate effectively through reading, writing, speaking, and listening to understand information in a variety of contexts, media, and languages.</p> <p>Critical Thinking and Problem Solving: Access, evaluate, and analyze information to make informed decisions, recognize bias, and find solutions.</p> <p>Creativity and Innovation: Imagine, visualize, and demonstrate creative practices, innovative solutions, and artistic expression.</p> <p>Collaboration and Teamwork: Contribute ideas, perspectives, and experiences to cultivate a community of shared accountability and leadership.</p>	<p>Honesty, Integrity and Responsibility: Are trustworthy, ethical, reliable, and accountable for the results they produce.</p> <p>Hard Work and Resilience: Set personal goals, apply best efforts to achieve them, and persevere when faced with challenges and setbacks.</p> <p>Lifelong Learning and Personal Growth: Continue to seek knowledge and develop skills in all settings.</p> <p>Service: Seek opportunities to help when assistance is needed and act without expecting compensation or recognition.</p> <p>Respect: Acknowledge differences by looking for the good in everyone, including oneself, and show due regard for feelings, rights, cultures, and traditions.</p>

Reaching these outcomes requires layers of inputs provided directly in the classroom, school, and community, and supported or facilitated by the family, community, district, and state.

Holding the PoG as the standard to be attained through the public education system, we now turn to a discussion of the state’s accountability measures or success indicators identified to track progress toward this outcome.

Measures of Progress and Assessments in Utah

Measures of Success

Success Indicators and/or accountability measures

- Education Elevated 2022 targets
- State-adopted assessments
- Graduation rates

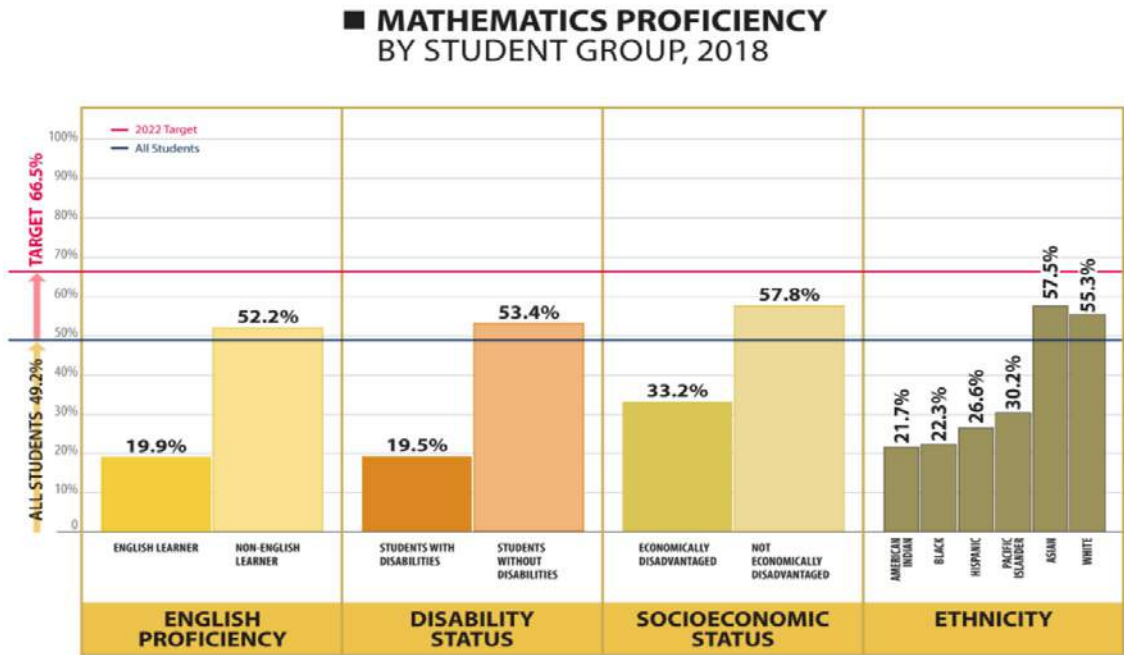
USBE's strategic plan includes a set of measures to track the state's progress toward its vision. The following measures are indicators of the general academic progress of the student body, but do not encompass the full list of assessments and data collected on student performance in Utah.

These measures include:

- College Readiness Coursework
- Scoring greater than or equal to 18 on the ACT
- High School Graduation
- Science Proficiency
- Mathematics Proficiency
- English Language Arts Proficiency
- Third Grade Literacy Proficiency

The measured targets in USBE's strategic plan focus on addressing equity gaps as measured by the academic performance of student groups identified as having greater needs. These student groups include English Learners, students with disabilities, students from families of lower socioeconomic status, and students who identify belonging to an ethnic minority group. Exhibit 8 below illustrates the math targets and achievement gaps from USBE's plan.

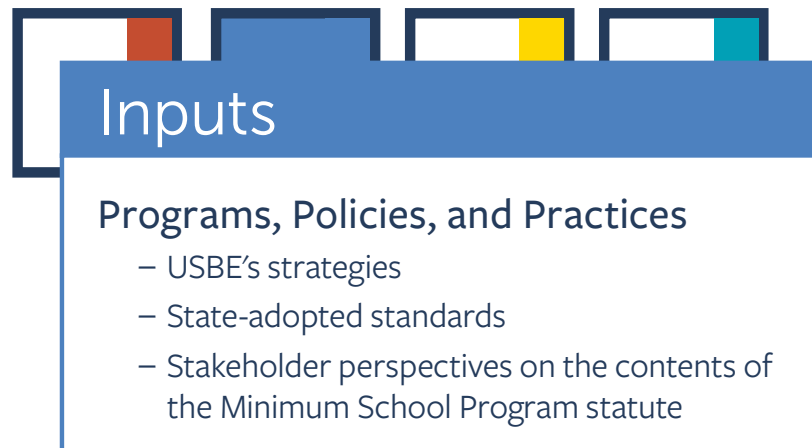
Exhibit 8. Mathematics Proficiency by Student Group, 2018



Note: This graphic is displayed here as published in the USBE Strategic Plan document entitled “Utah Achievement Gaps,” retrieved here: <https://www.schools.utah.gov/file/9489b372-76d2-4f04-bc5e-c6a7eab9ef9e>

When the system is meeting its intended design, its measures should map to the identified inputs in place to reach the vision set by the state. The next section examines the minimum school program inputs currently in place.

The State's Vision for the "minimum school program"



USBE's Goals and Strategies

USBE's strategic plan provides the vision for statewide system-level inputs, and pursues this vision through four goals and associated strategies to meet those goals.⁷

The first goal, **Early Learning**, focuses on increased access to high-quality programs, increased family engagement, and high-quality instruction. An emphasis on instruction is evident in the second goal as well, **Effective Educators and Leaders**. This goal includes supporting schools and districts to mentor beginning teachers, personalize professional learning, improve preparation programs, and change the perception of teaching as a profession. The third goal, **Safe and Healthy Schools**, emphasizes safe and healthy learning environments, evidence-based health/wellness practices, and building educator capacity to meet students' mental, emotional, and social needs. The final goal, **Personalized Teaching and Learning**, seeks to empower practitioners and families to access safeguarded student data, provide personalized learning plans for students, increase student access to educators trained in personalized learning, and promote new school models in this area. **Stakeholders reported that the vision set by the strategic plan aligns to their own vision for Utah's schools. In particular, stakeholders reported the importance of early learning investments, safe and healthy schools through an increase of social-emotional learning supports, and a focus on the teacher shortage as critical to Utah's student success.**

The USBE goals and strategies are generally aligned with the strategic plan prepared by Governor Herbert's Education Excellence Commission, *The Education Roadmap*. This plan identifies four policy priorities and strategies associated with each: (1) Ensure Early Learning, (2) Strengthen and Support Educators, (3) Ensure Access and Equity, and (4) Complete Certificates and Degrees. Similar to the USBE's plan, it elevates early learning and educator effectiveness. While the USBE plan does not include a specific priority related to equity, the plan vision clearly prioritizes equity across all goals, illustrating further alignment with the Commission's plan.

State-Adopted Standards

Standards are an essential input for any public education system due to their impact on curriculum choices and the consistency of programming across a state. A state's adopted core standards, and associated scope and sequence, guide programming for a wide range of disciplines.

⁷ See Appendix B for a full list of strategies.

In establishing the core standards for Utah public schools, the board “identif[ies] the basic knowledge, skills, and competencies each student is expected to acquire or master as the student advances through the public education system,” making an analysis of the standards a reasonable source for understanding Utah’s view of a minimum school program. Per state statute (53E-4-202, Section 1, a), the purpose of enacting standards is to enable students to: communicate effectively, both verbally and through written communication; apply mathematics; and access, analyze, and apply information. The statute clarifies that local control provides LEAs the freedom to choose their own curriculum or instructional materials in service of implementation of the standards.

In fulfillment of the duties outlined in this statute, the USBE has established the following core standards for K–12 education:

- English Language Arts
- Mathematics
- Science
- Social Studies
- Fine Arts
- Physical Education and Health
- Early childhood Education (Pre-K)

Other adopted standards with grade band variation include:

- World Languages (1–12)
- Library Media (K–12)
- Driver Education
- Financial Literacy (11–12)
- Career and Technical (subject and grade level varies)

These inputs align with Utah’s target outcome as defined by the PoG through the Mastery component. Stakeholders expressed confidence in the core standards and the related scope and sequence, with one focus group stating: “We have an excellent set of standards that assure a Utahn parent that their child can change schools mid-year and third grade will be third grade.” Stakeholders further noted that subjects currently identified as the core program are the right ones, the one significant exception being social-emotional learning. Participants consistently reported a greater need for standardization around social-emotional learning for schools when integrated within a holistic academic program.

Stakeholder Input on the “minimum school program”

In September 2019, WestEd interviewed 12 district superintendents and held two, two-hour-long input sessions in Salt Lake City. No individual is quoted directly in this summary, and every concept, theme, or perspective summarized here was captured in the notes as a group statement.

Participating superintendents unanimously agreed that the PoG is the expected standard all schools are aiming to reach as the output or outcome of the system.

The primary inputs for this target output cited by superintendents include academic subjects supported by core state standards and high-quality curriculum (Mathematics, ELA, science, and social studies), high-quality educators, strong school and district leadership, and close community ties between students, teachers,

schools, and families. Superintendents also listed integrated social-emotional learning, mental health supports, and access to a variety of non-academic subjects as necessary to fulfill the standard set by the PoG.

Generally, participants reported the funding mechanisms in place now to be equitable in their function, but reported that the funding amounts are insufficient for districts to provide the inputs required to reach the outputs described in the PoG (please see the list in Exhibit 7. Portrait of a Graduate Keys by Components for details).

Specifically, participants identified the following list of necessary inputs to support target outcomes based on their perceptions of best practice, and not based on current state law or programs in place:

- Participant-Generated Inputs List:
 - ▶ Access to a Core Academic Program: Social Studies, English/Language Arts, Mathematics, Science
 - ▶ Early Learning and Preschool
 - ▶ Access to an Expanded Curriculum Program: World Languages (1–12), Library Media (K–12), Fine Arts (K–12), Physical Education, Health, Financial Literacy
 - ▶ Social-Emotional Learning (integrated throughout the academic program)
 - ▶ Career & Technical Education
 - ▶ Digital Literacy/Computer Science
 - ▶ Athletics (after-school teams)
 - ▶ Nutrition
 - ▶ Access to Qualified Teachers
 - ▶ Access to Safe Facilities
 - ▶ Access to Qualified Leadership
 - ▶ Access to Mental and Physical Health Supports (i.e., nurses and counselors)

This participant-generated list generally aligns with the existing set of adopted standards and priorities for Utah. Participant interviews emphasized the importance of investing in the inputs related to **Autonomy** and **Purpose** as part of the minimum school program given their prominence in the expected outcomes for graduates.

Participants also discussed struggles related to the recruitment and retention of teachers to meet the demands of the academic program.

Finally, as noted elsewhere in the section, superintendents asserted the necessity of greater support for student social-emotional learning and mental health needs.

In addition to the engagement with district superintendents, on December 9th, 2019, the study team engaged charter school leaders virtually to gather their input on the state’s vision for the public education system. The schools represented a mix of elementary, middle, and high school grade bands, and included classroom-based, online, and blended learning models.

Generally, the group agreed that the PoG was an appropriate goal to describe the outputs of the Utah education system. However, some participants expressed concerns about the role of the state in implementing the PoG, specifically warning against the state determining measurement of outcomes related to the Autonomy or Purpose goals. Referring to the PoG goals, one participant stated that “if LEAs are measured and accountable for all of those things, they are not prepared to provide [them].”

Furthermore, responding to a prompt about the role of the charter sector in achieving this vision, charter school leaders emphasized the sector’s unique ability to be responsive to a very specific population of students and focus on a very specific set of aims within a small scale context. In other words, as one participant put it, charter schools “do not have to be all things to all people.”

Finding: Stakeholder expectations and state-endorsed documents reflect a generally common definition of the minimum school program. Social-emotional learning and mental health supports are the exceptions, with stakeholders strongly supporting expanded integration of Utah’s existing standards into the core academic program.

The study team completed a crosswalk comparing the Utah Core Standards, the strategic plan, and stakeholder feedback on what constitutes a minimum school program to assess consistency across the sources. The resulting list reflects the priority inputs state leaders believe are necessary to reach the outcomes defined by the PoG. Instances in which stakeholders reported that a given standard did not exist or was underutilized represented a challenge in this review. In this case, we have marked the topic as “partial,” rather than a full yes, to acknowledge this tension. If a topic, program, policy, or practice was represented across all of the sources, it is considered part of the minimum school program for the purposes of this phase of the study. It should be noted that stakeholders referred to “Mental and Physical Health Supports” as a need for expanded access to nurses and counselors on school sites, which is distinct from direct instruction for students about their mental and physical health (currently included under the existing health standards). Areas of misalignment have been noted for exploration in Phase 2.

Exhibit 9. Comparison of Stakeholder Expectations to Other Examined Sources

Stakeholder Expectations of the “minimum school program”*	Reflected in Adopted Standards?	Assessment Measure?	Reflected in Strategic Plan?
K–12 Academic Program: Social Studies, English/Language Arts, Mathematics, Science	Yes	Yes (see Appendix C for list)	Yes: College Readiness Coursework Scoring greater than or equal to 18 on the ACT High School Graduation Science Proficiency Mathematics Proficiency English Language Arts Proficiency Third Grade Literacy Proficiency
Early Learning and Preschool**	Yes (Preschool)	Yes	Yes: Early Learning Goals and strategies

Stakeholder Expectations of the “minimum school program”*	Reflected in Adopted Standards?	Assessment Measure?	Reflected in Strategic Plan?
K–12 Expanded Curriculum Program: World Languages (1–12), Library Media (K–12), Fine Arts (K–12), Physical Education, Driver Education, Health, Financial Literacy	Yes	Partially (see Appendix C for list)	Partially: Implied within the personalized learning strategies and PoG.
Integrated Social-Emotional Learning	Partially: Health Education Standards°	No	Yes: Safe and Healthy Schools strategies, PoG
Career & Technical Education	Yes	No	Yes: Personalized Learning
Digital Literacy°°	Partially	No	No
Nutrition	Partially: Health Education Standards	No	Yes: Safe and Healthy Schools strategies, PoG (wellness)
Athletics	No	No	No
Qualified Teachers	Yes	Yes (Evaluation System)	Yes: Effective educators and leaders
Safe Facilities	No	No	Yes: Safe and Healthy Schools strategies
Leadership	Yes	Yes (Evaluation System)	Yes: Effective educators and leaders
Mental and Physical Health Supports (i.e., nurses and counselors)	No	No	Yes: Safe and Healthy Schools

* This list is compiled based on identified inputs for reaching the PoG, results from stakeholder input, standards, assessments, and the strategic plan.

** Definitions of age groups for these categories vary and overlap. Early Learning encompasses birth to five, and preschool commonly supports ages 3–5, but can also be expanded to include school grades K–3 (ages 5–7).

° These standards may be underutilized based on stakeholder feedback and perception of their absence.

°° Computer Science K–12 Framework in place: <https://www.schools.utah.gov/file/46d4ca37-9d23-414e-91fd-6640b6be9df6>.

Core Components

Categories of Inputs linked to Outputs

- Identified as part of this report’s analysis

Based on the analysis presented in Exhibit 9, the following list of core components was generated and organized using identified levels of support across the sources. Please note, in some cases similar terminology is used in Utah’s existing statute and state standards. References here are distinct from existing policy and denote core components only (refer to page 12 for the definition of core component):

Exhibit 10. Minimum school program core components and subcomponents

Core Components	Subcomponents (if any)
Core Academic Program	Social Studies, English/Language Arts, Mathematics, Science Early Learning and Preschool
Expanded Curriculum Program	World Languages (1–12), Library Media (K–12), Fine Arts (K–12), Physical Education, Health, Financial Literacy
Social-Emotional Learning (integrated throughout the Core Academic Program and the Expanded Curriculum Program)	
Career & Technical Education	
Digital Literacy/Computer Science	
Qualified Educators	Qualified Teachers Qualified Leadership
Safe Facilities	
Mental and Physical Health Supports	

Based on input from stakeholders, and our analysis of state-endorsed documents, the academic program is clearly and consistently defined. The definition, role, purpose, and scope of social-emotional learning (SEL) are clearly present in the PoG and the strategic plan, and SEL is reported as in significant need of expansion by stakeholders. It is not, however, consistently present across all sources or defined consistently across the sources examined for this analysis.

This interest expressed by stakeholders in expanding SEL through deeper integration into academics reflects a national trend, with the Aspen Institute National Commission on Social, Emotional, and Academic Development reporting SEL as a top demand for expansion by teachers and parents. Additionally, a research review cited by the Commission “found students’ skills, behaviors, attitudes, and academic performance improved significantly while their emotional distress and behavior problems decreased” with integrated SEL programming (Aspen Institute National Commission on Social, Emotional, and Academic Development, 2019; p. 19). The stakeholder request for expanded SEL programming is aligned with the research, but the details of which programs and definitions to adopt would require further exploration on the part of the state. The Collaborative for Academic, Social, and Emotional Learning (CASEL), a recognized leader in the field, defines SEL as “the processes through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (Bridgeland, Bruce, & Hariharan, 2013; p. 16). This definition, while expansive, is not completely clear on the boundaries between social-emotional learning and traditionally defined mental and physical health supports. This is an area of debate in the field and Utah may determine where that line is drawn in future explorations that determine state policy.

For example, currently in Utah, elements and themes related to SEL are included within the Health standards for K–12. Yet, stakeholders did not reference these standards when discussing the need for SEL integration into the regular academic program and highlighted the need for expanded mental health support for their communities.

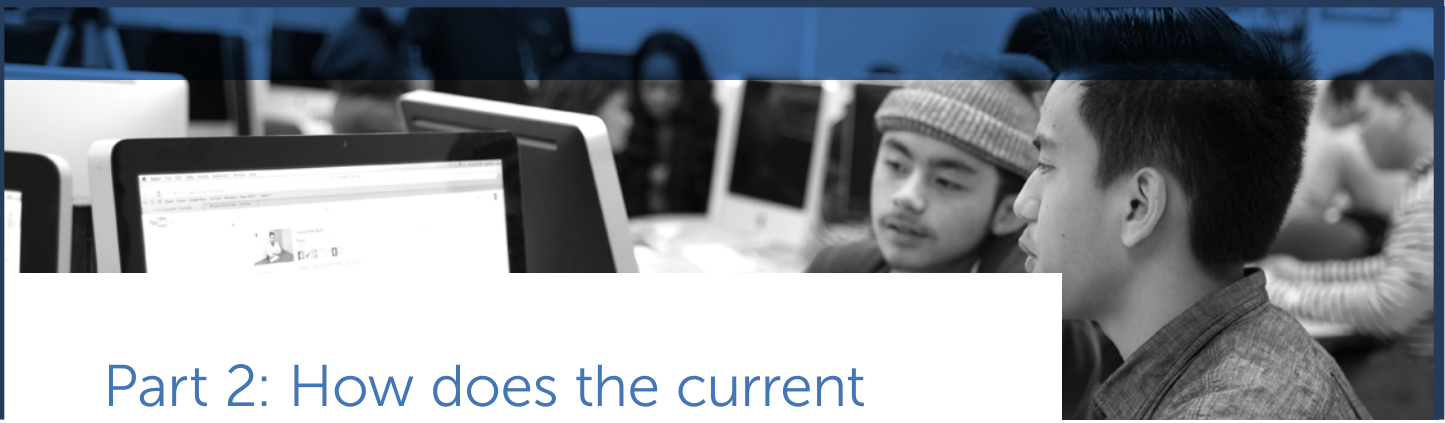
Similarly, stakeholders included nutrition and athletics as critical features of a minimum school program, but these were not consistently defined or reflected across resources and were therefore not included in the final list. Nutrition, for example, is included in Health standards to educate students about healthy eating habits. In their description of a minimum school program, stakeholders referred to the importance of supplying students with healthy food, which is a program and not an educational standard. Nutrition as a program has separate funding and refers to the direct food provision at schools, but this funding stream is not within the MSP. Athletics links to physical education (which has a set of standards), but this usage of the term was focused on afterschool and community sports. This set of distinctions does not mean that they are not implicit within the other sources (e.g., safe and healthy schools) or that these are not important to the positive experiences and development of students. This could be an area of further examination for alignment.

The definition of minimum school program in Utah currently focuses on academic programs, with stakeholders and the USBE demonstrating a strong value and need for a wider definition of academic programs that includes social-emotional learning, the arts, and physical education. While generally aligned, this point of difference is examined further in the next section, which will examine how this definition of the minimum school program aligns to the funding infrastructure of the same name (MSP).

"The demands of schooling have changed in the 21st century, and autonomy and purpose are just as important as mastery. We need a greater focus on what it takes in the classroom to build autonomy and purpose through integrated social-emotional learning supports."

– Superintendent Input Session Participants⁸

⁸ This quote is an amalgamation of multiple participants with the removal of district details to ensure anonymity.



Part 2: How does the current funding system align with these expectations?

Research Objective 1b: Evaluation of current distribution formulas

In this section, we compare the definition of the “minimum school program” from Part 1, which identifies several core components, to how the Minimum School Program (MSP) is defined in the statute, and how it is funded based on that statute. Examining this alignment identifies potential areas of exploration for Phase 2 of the study in 2020.

Description of the MSP According to Statute

The Utah education code states that the purpose of the MSP is “to provide a minimum school program for the state in accordance with the constitutional mandate. It recognizes that all children of the state are entitled to reasonably equal educational opportunities regardless of their place of residence in the state and of the economic situation of their respective school districts or other agencies” (Utah Code § 53F-2-103).

Elsewhere, the code describes the MSP as “the state-supported public school programs for kindergarten, elementary, and secondary schools as described.”

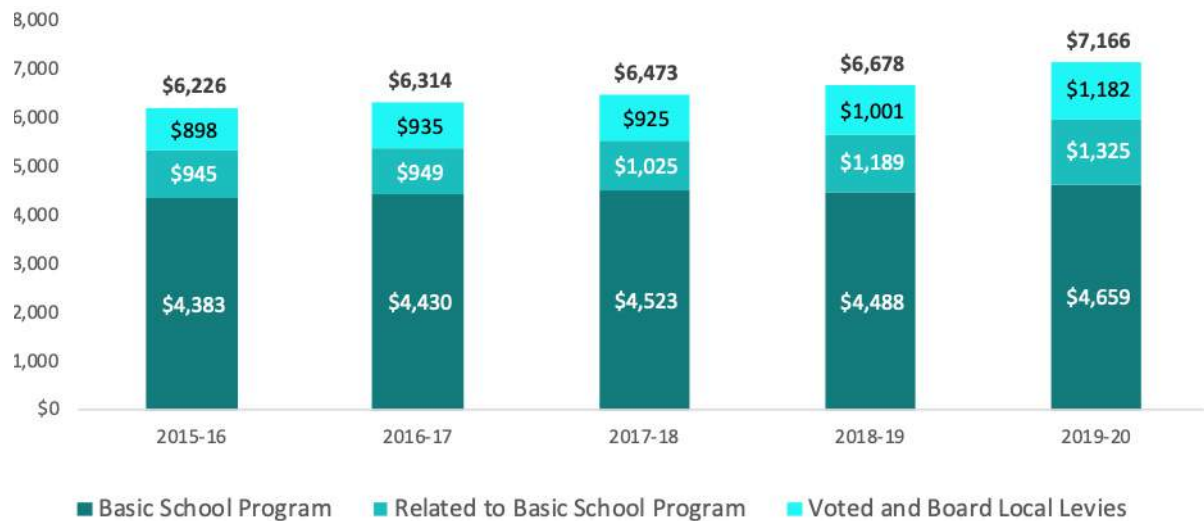
MSP funding categories include programs that are outside of the direct definition of inputs identified in Part 1 of this report. While not named as critical inputs explicitly, some of these could be examined for improved alignment. For example, resources to bring foreign exchange students into the public education system is not directly addressed in the minimum school program core components, even though there is a specific funding program within the MSP. Its absence from the minimum school program core components is not meant to suggest this is not a part of the program, rather that it is not on its own a core component.

Exhibit 11. Minimum School Program

Minimum School Program \$4,773,657,200					
Basic School Program \$3,103,563,000		Related to Basic School Program \$882,889,700			Voted & Board Levies \$787,204,500
Regular Program	Restricted Program	Related to Basic	Focus Populations	Educator Supports	Voted Local Levy \$520,950,100
Kindergarten	SpEd Add-on	Pupil Transportation – To & From	Enhancement for At-Risk Students	Educator Salary Adjustments	Board Local Levy \$251,254,400
\$96,342,400	\$297,463,000	\$98,461,900	\$44,836,000	\$177,945,500	Board Local Levy – Early Literacy Program \$15,000,000
Grades 1-12	SpEd Self Contained	Pupil Transportation – Rural Schools	Youth in Custody	Teacher Salary Supplement	
\$2,119,030,500	\$48,695,700	\$500,000	\$25,222,500	\$18,928,600	
Foreign Exchange	SpEd Preschool	Rural School Transportation Grants	Adult Education	Teacher Supplies and Materials	
\$1,158,500	\$39,484,200	\$1,000,000	\$14,175,400	\$5,500,000	
Necessarily Existent Small Schools	SpEd Extended Year	Flexible Allocation	Enhancement for Accelerated Students	Effective Teachers in High Poverty	
\$34,366,300	\$1,596,500	\$7,788,000	\$5,483,300	\$250,000	
Professional Staff	SpEd Impact Aid	Charter School Local Replacement	Centennial Scholarship Program	Elementary School Counselors	
\$197,505,900	\$7,191,200	\$195,042,300	\$269,300	\$2,100,000	
Administrative Costs	SpEd Intensive Services	Charter School Administrative Costs	Concurrent Enrollment	Teacher and Student Success Program	
\$5,262,700	\$2,776,200	\$8,112,200	\$11,750,900	\$98,950,000	
	SpEd Ext. Year for Educators	Statewide Initiatives	Title I – Paraeducators	Student Health and Counseling Support Program	
	\$3,210,600		\$300,000	\$16,000,000	
	Career & Technical Education	School LAND Trust	Early Literacy Program	Grants for Educators in High-need Schools	
	\$101,583,900	\$82,663,100	\$14,550,000	\$500,000	
	Class Size Reduction	School Library Books & Electronic Resources	Early Intervention	National Board Certified Teacher Program	
	\$147,895,400	\$850,000	\$7,500,000	\$246,300	
		Matching Fund for School Nurses			
		\$1,002,000			
		Dual Immersion			
		\$5,030,000			
		Year-Round Math & Science (USTAR)			
		\$6,200,000			
		Beverley Taylor Sorenson Elem. Arts			
		\$11,880,000			
		Digital Teaching & Learning			
		\$19,852,400			

As illustrated in Exhibit 11, the MSP is composed of three parts totaling \$4.77 billion in 2020 appropriations. There are categorical subprograms divided among the three major programs: the **Basic School Program**, the **Related to Basic School Program**, and the **Voted and Board Local Levy Program**. Exhibit 12 below displays per pupil revenue for each of these programs from 2015–16 to 2019–20.

Exhibit 12. Per-pupil revenue by MSP program, FY2016 through FY2020



Source: USBE Fall Enrollment, 2016–2020; Compendium of Budget Information (COBI), FY16–FY20.

Note: Figures are adjusted for inflation to July 2019 dollars except FY20 figures which are unadjusted. FY20 enrollment based on USBE projections.

According to background information included in the COBI, the principles of the MSP are to:

- Maintain system equity;
- Consider different LEA cost structures;
- Address individual student characteristics or educational requirements;
- Meet a statewide educational goal; and
- Support local control.

Basic School Program (BSP) (FY20: \$3,103,563,000 / \$4,659 per student)

In Utah’s education code, “basic state-supported school program,” “basic program,” or “basic school program” mean “public education programs for kindergarten, elementary, and secondary school students that are operated and maintained for the amount derived by multiplying the number of weighted pupil units for each school district or charter school by the value established each year in the enacted public education budget, except as otherwise provided [in code].”⁹ The BSP includes the funding streams that provide for the day-to-day curricular needs for students as aligned to the state standards under the subcategories Kindergarten and Grades 1–12.

⁹ WPU for Kindergarten students, special education students, and students served by charter schools are weighted differently than a regular education student.

More specifically, the BSP contains 15 categorical programs used to distribute \$2.949 billion to support all public kindergarten, elementary, and secondary students in Utah. Most of these programs rely on the Weighted Pupil Unit (WPU), with some variation.¹⁰

There are two consistent funding buckets: Unrestricted/Regular and Restricted. Unrestricted or regular program funds are the central streams of funding for public and charter schools with some exceptions.¹¹ These monies can be spent on educator compensation, textbooks, supplies, materials, support personnel, and the many other functions, people, and programs that support the basic education programs in these grades.¹²

Restricted program funding must be used according to specific guidelines. Special education funding, organized into seven sub-categories, falls under the restricted bucket and each sub-category comes with unique budget elements. For example, under Special Education Self-Contained (\$48.7 million), the students do not generate a WPU calculation. These students are counted differently through a “primary count” of qualifying students. Qualifying students are also counted under a “secondary (or add-on) count” through the Special Education Add-On program.¹³ In addition to special education funding, restricted program funding also includes Career and Technical Education-Add-On, and Class Size Reduction.

Each school district is required to contribute a portion of their basic school funding amount through a common tax levy known as the “Basic Property Tax Levy.” The revenue generated by this levy is put toward covering the prescribed amount, and state funds make up the difference. As charter schools cannot levy property taxes, their full basic school program costs are covered by the state.

Exhibit 13. Basic School Program Summary

Unrestricted/Regular Programs	Restricted Programs
Kindergarten, Grades 1–12, Foreign Exchange,* Professional Staff, Administrative Costs, and Necessarily Existent Small Schools. These programs provide the core funding for operating the public schools.	Special Education (seven subprograms), Career and Technical Education, and Class Size Reduction.

* Formerly part of the Grades 1–12 program, shifted to standalone in 2017.

Related to Basic School Program (FY20: \$882,889,700 / \$1,325 per student)

Categorical programs within the Related to Basic School Program total \$780.7 million and are split across four subcategories: *Related to Basic*, *Statewide Initiatives*, *Focus Populations*, and *Educator Supports*.

These funds complement the education program provided through the BSP and target funding to a specific educational need, content topics areas, student population sub-group, or teacher sub-group. Funding mechanisms for each of the subprograms varies, with some anchored on the WPU and others based on taxes, or set by the USBE directly.

10 See CTE funding.
11 Note: Charters do not have access to all of the funding categories, such as the NESS funding. The distribution formulas for charters are often different.
12 COBI: <https://le.utah.gov/lfa/cobi/cobi.html?cobiID=1597&tab=overviewTab&year=2019>
13 COBI <https://le.utah.gov/lfa/cobi/cobi.html?cobiID=1603&tab=overviewTab&year=2019>

Exhibit 14. Related to Basic School Program Summary

Related to Basic	Statewide Initiatives	Focus Populations	Educator Supports
There are six subprograms supporting transportation (three subprograms), charter school administration (two subprograms), and a fund for “flexible allocations.” While transportation needs dominate the subcategory, an area of interest here is the flexible allocations fund. This fund has a complex background after the negotiated redistribution of funds and collapse of other categories in the BSP. It is intended to support district and school needs that fall outside a specific category. This is generated based on WPU’s under the distribution formula. Notably, in the 2019 General Session, the majority of flexible allocation funding was removed and used to support the Teacher and Student Success Act Program (Office of the Legislative Fiscal Analyst, 2019).	There are seven subprograms included under statewide initiatives that support holistic elements of the school day. This category includes funding for school nurses, the arts, digital literacy, and school libraries. It also includes a trust fund based on state lands. This money is allocated directly to schools and intended for use to develop and implement school improvement plans and family engagement.	There are ten subprograms serving specific needs within the Utah public education system: youth in custody, adult education, students at risk, accelerated students, early intervention, and others.	This subcategory and these subprograms are dedicated to educator compensation through support for supplies, elementary school counselors, and teacher salary supplements and adjustments.

Voted and Local Board (FY20: \$787,204,500 / \$1,182 per student)

This category’s levies total \$670.4 million, split across three subprograms: Voted Local Levy, Board Local Levy, and Board Local Levy — Early Literacy.

This category describes property tax guarantee programs that are state-supported and intended to balance out shortfalls between the state-guaranteed revenue per WPU and the actual property tax revenue levied by the community. The state provides allocations for the difference between the revenue generated per WPU

and the state-guaranteed amount per WPU. School districts must levy a tax on property within the school district in order to qualify for this funding, and the tax levied is in increments specified in statute (Utah Code § 53F-2-301).¹⁴

Stakeholders reported concerns about this requirement to levy local funds in order to qualify for the state contribution. Specifically, they noted that this ties funding to the local political will to raise funds in the community in which a student happens to reside. Therefore, students in communities that, for whatever reason, are not willing or able to levy these funds cannot realize the benefits of these state dollars.

Exhibit 15. Voted and Board Local Levy Summary

Voted Local Levy	Board Local Levy	Board Local Levy — Early Literacy
Property tax levy authorized to cover a portion of the costs of operation and maintenance of the state-supported MSP in a school district based on the majority vote of the electorate.	Property tax rate levied by local school board to support the district’s General Fund. The tax rate a school district may levy to is 0.0025 per dollar of taxable value.	Aligns and combines with funding in the Related to Basic Program K–3 Reading Improvement Program. This uses a local property tax component to provide a local match to state funding.

Finding: The structure of the MSP fulfills the statutory purpose by delineating the channels for funding.

In this Phase 1 analysis, we find there is general alignment between the expectations of the minimum school program, the target outcomes based on the PoG, and the assignment of funding based on statute in the MSP and related categorical programs as illustrated in the exhibit below. The most significant area of misalignment is through support for social-emotional learning, which is strongly represented as a priority for Utah in the PoG, the strategic plan, and in stakeholder input, but is not perceived to be sufficiently formally supported in the current system.

There are a number of specific set-asides for funding within the MSP that were not directly reflected in stakeholder sessions, the strategic plan, the PoG, or the state standards. This does not imply that funding not directly reflected is not deemed necessary within the MSP by the stakeholders, or that the lack of direct mention in the other sources makes them irrelevant. These categorical programs may indirectly support or reinforce the expectations of the minimum school program as described in Part 1. However, these are potential examples of funding set-asides that could be examined as part of Phase 2.

It should be emphasized that this analysis focuses on alignment only and not the levels of funding or the efficacy of that funding. Stakeholders consistently reported that outside of social-emotional learning and mental health, they believed funding streams are correctly identified as part of the MSP but not funded in sufficient amounts to meet the demands of meeting the target outcomes for the system. Stakeholders also noted the burden of pursuing grant funding under the MSP and pointed the WestEd team to look into this as an area for exploration.

14 Note that charter schools do not participate directly in the Voted & Board Local Levy Programs because they cannot levy property taxes.

Exhibit 16. Evaluation of Current Formulas and Equity Analysis

Expectations of the minimum school program*	Reflected in PoG?	Reflected in Minimum School Program funding by statute?
Academic Program: Social Studies, English/Language Arts, Mathematics, Science, Preschool	Yes: Mastery	Yes: Kindergarten, Grade 1–12, Board Local Levy Early Literacy, Early Literacy Program, Concurrent Enrollment
Expanded Curriculum Program: World Languages (1–12), Library Media (K–12), Fine Arts (K–12), Physical Education, Driver Education, Health, Financial Literacy	Yes: Mastery	Yes: Kindergarten, Grade 1–12, School Library Books and Electronic Resources, Beverley Taylor Sorenson Elementary Arts Learning, Dual Immersion, Board Local Levy Early Literacy
Social-Emotional Learning	Yes: Autonomy, Purpose	No: No specific funding program to support social-emotional learning.
Career & Technical Education	Yes: Mastery, Autonomy, Purpose	Yes: Career & Technical Education
Digital Literacy/Computer Science**	Yes: Mastery/Digital Literacy	Yes: Digital Teaching and Learning Program (Related to Basic, Statewide Initiative)
Qualified Educators: Qualified Teachers, Qualified Leaders	Not Included	Yes: Professional Staff, Administrative Costs, Beverley Taylor Sorenson Elementary Arts Learning, TSSA, Educator Supports Category
Safe Facilities	Not Included	No: Funded under School Building Program (not MSP)
Mental and Physical Health Supports	Mastery-Wellness	Yes: Matching Funding available for nurses, grants for elementary counselors and the Student Health and Counseling Support Program provides funding for a range of mental health professionals.

* This list is compiled based on identified inputs for reaching the PoG, results from stakeholder input, standards, assessments, and the Strategic Plan.

** Note: Computer Science K–12 Framework in place: <https://www.schools.utah.gov/file/46d4ca37-9d23-414e-91fd-6640b6be9df6>.

Equitable Access to the Minimum School Program

As part of Phase 1, the study team conducted an equity analysis of Utah’s school finance system. As a school finance term, “equity” is concerned with how resources are allocated across school districts and, ultimately, across schools and students. While the most common notion of equity assumes that a school finance system that distributes resources *equally* is equitable, school systems vary in a variety of ways that have implications on their ability to provide *equal opportunity*. Ultimately, a strong finance system that is truly equitable will accommodate for differences between districts in terms of (1) student resource needs, (2) district revenue-raising abilities, and (3) district characteristics.

This includes variation with respect to student needs, for students with higher needs (e.g., economically disadvantaged students, English Learner (EL) students, and special education students) require higher investment of resources to support equitable achievement of outcomes. In fact, research supports regularly reevaluating resource allocation in response to changes in student needs, such as those recently taking place in Utah.¹⁵

In addition to differences in the needs of students served in each school district, school districts differ in their abilities to raise revenues locally. Disparities in local property and income wealth mean that some school districts may be able to raise significantly higher local revenues than other districts, with a lower level of tax effort.

Finally, some districts also face factors beyond their control that can lead to higher operating costs, such as small student enrollments, low population density, or geographic isolation.

Defining Key Terms Used in This Report

Several terms and measures of district revenues and expenditures are relevant to this analysis. Brief definitions of these are provided below, and more details are included in Appendix D.

Exhibit 17. Key Term Definitions

Key Term	Definition
Need Factor	A measure used to compare the level of student need across districts. Districts with high need factors serve higher concentrations of students with additional needs than districts with low need factors.
Weighted ADM (WADM)	Weighted ADM is a district’s ADM count adjusted by pupil weights to account for the number of students with greater needs in the district. For this study, specific weights were applied to estimate a district’s level of student need. Specifically, economically disadvantaged students were assigned a weight of 0.35, EL students a weight of 0.5, and special education students a weight of 1.1. These weights were established based upon the prevailing evidence and research literature.
State and Local Revenues	Includes all state and local revenues except capital local and debt service levies, transportation fees, food service receipts, tuition and miscellaneous revenues from other LEAs, related to basic programs, and capital outlay programs.
Total Revenues	Consists of the state and local revenues listed above, with the addition of federal funds excluding child nutrition programs and federal USDA commodities.

¹⁵ For additional information on this topic, see Appendix D.

Key Term	Definition
Total Expenditures	Consists of district expenditures from the general fund, special revenue funds, and student activity fund, except for the following functions: student transportation, food service, facilities acquisition and construction services, debt service, and other debt service.
Instructional Expenditures	Consists of expenditures in the instruction function from the general fund, special revenue funds, and student activity fund.

For this study, specific weights for student need were applied to account for the additional costs of serving economically disadvantaged, EL or special education students. Specifically, economically disadvantaged students were assigned a weight of 0.35, EL students a weight of 0.5, and special education students a weight of 1.1. These weights were established by the study team based upon the team's years of experience in estimating these additional costs.

To create a WADM, the average daily membership (ADM) count for each of these greater need categories in each district was multiplied by the appropriate weight. This WADM count is then divided by the actual ADM to calculate the need factor.

For example, if District A has 2,000 total students, 2,000 special education students, 800 at-risk students, and 60 EL students, then its need factor calculation is: $(2,000 \text{ total students} + (2,000 \text{ special education students} \times 1.1) + (800 \text{ at-risk students} \times 0.35) + (60 \text{ EL students} \times 0.5)) / 2,000 \text{ total students} = 1.27 \text{ need factor}$.

Defining Equity

School finance equity has been discussed and analyzed both in terms of (1) the focus on whom or what is being treated equitably and (2) the particular type of equity of interest. Most often, equity studies focus on the distribution of resources to school districts, since nearly every state calculates its state school finance formula at the district level. While equity at the school level is also worthy of analysis, because Utah's funding system focuses primarily on funding school districts rather than individual schools (with the exception of charter schools), this study addresses how equitably resources are allocated to school districts.

The most common equity concepts addressed in school finance equity analyses are horizontal equity, vertical equity, and fiscal neutrality (Berne & Stiefel, 1984). These are described below.

Exhibit 18. Common Equity Analysis Concepts

Equity Analysis Concept	Description
Horizontal Equity	Concerned with how equally resources are allocated to districts or students in similar situations. It is sometimes said that horizontal equity addresses the "equal treatment of equals." Under a school finance system with high horizontal equity, students with no additional needs are funded roughly equally, regardless of which school district they attend.
Vertical Equity	Measures how well school finance systems take into account varying student and district needs. A system with high vertical equity will provide more resources for students with greater educational needs or districts with characteristics that impact costs, such as very small size or geographical isolation.

Equity Analysis Concept	Description
Fiscal Neutrality	Assesses the link between local wealth and the amount of revenue available to support a school district. A school finance system with high fiscal neutrality minimizes the relationship between local wealth, or capacity, and district spending.

These three dimensions of school finance are the focus of this equity analysis.

School District Characteristics

The State of Utah has a small number of school districts compared to other states. Only Hawaii (which has one statewide district), Nevada (18), Delaware (19), Maryland (24), and Rhode Island (32) have fewer than Utah's 41 school districts (Snyder, de Brey, & Dillow, 2016).

The districts vary considerably in terms of enrollment size, measured here by the average daily attendance, or ADM, count. In 2017–18, six of the state's districts served fewer than 1,000 ADM, while eight districts served more than 25,000 ADM.

Exhibit D-1 (provided in Appendix D) presents summary information on a number of key district and school finance characteristics for fiscal year 2017–18. This information provides a descriptive overview of the school districts that were included in this analysis.

ADM and Weighted ADM

District ADM ranges from 165.9 to 78,279.5, with an average of 13,935. When district student counts are adjusted for need using the weights described above, WADM ranges from 201.9 to 93,541.3, with an average of 17,970.7. This shows that all districts have some level of need and that the largest system in the state has more pronounced needs than the smallest school system.

District Need Factor

District-level student need, as measured by the need factor described above, varies from 1.17 to 1.65, with a state average of 1.29. The three districts with the lowest need factor are Morgan School District (1.17), Alpine School District (1.19), and Park City School District (1.19). The two districts with the highest need factors are Ogden City School District (1.51) and San Juan School District (1.65).

State and Local Revenue

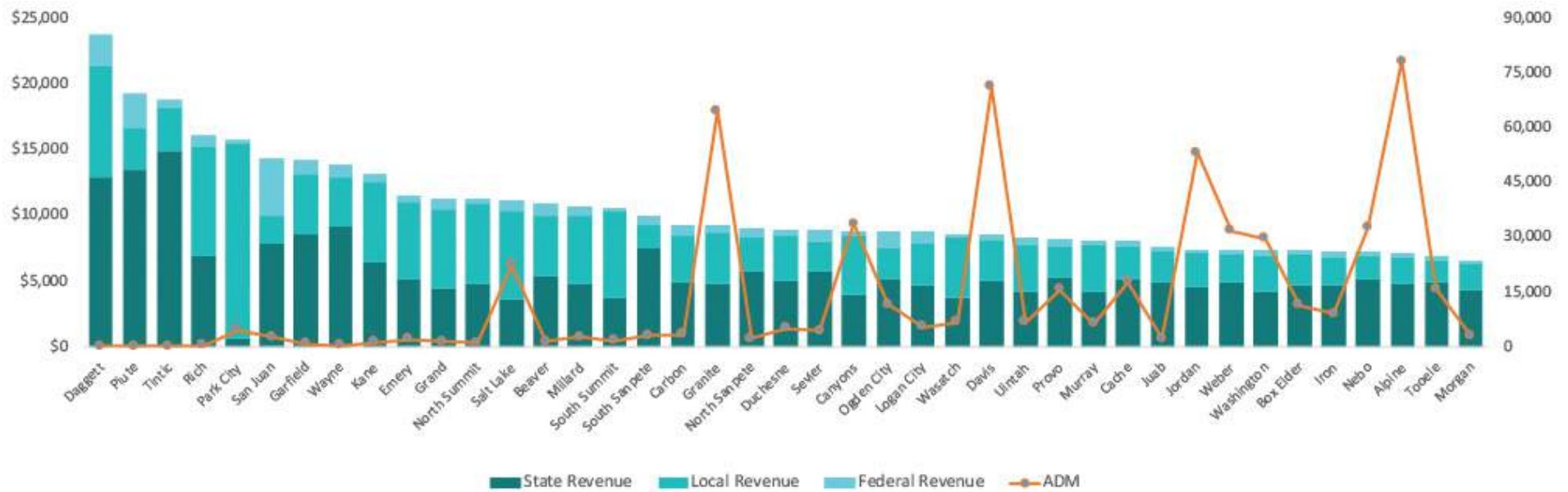
Total state and local revenues per ADM ranged from \$6,327 in the Morgan School District to \$21,425 in the Daggett School District, which is the state's smallest district, with only 165.9 ADM. The statewide average state and local revenue amount was \$7,833. Total district revenues per ADM, which include federal funds, ranged from \$6,537, also in the Morgan School District, to \$23,768 in the Daggett School District. On average, district revenues consisted of 36.8% local revenues, 57.1% state revenues, and 6.1% federal revenues. However, these percentages also varied widely based on local wealth and student need. The San Juan School District had the lowest share of local revenues, 15.0%, and also the highest share of federal revenues, totaling 30.2%. At 94.0%, Park City School District had the highest share of local revenues along with the lowest share of state revenues (4.4%) and federal revenues (1.6%). The Tintic School District had the highest share of state revenues, with 79.3% of its revenues coming from state sources.

Per-ADM Expenditures

Per-ADM expenditures also varied widely across districts, with the variation driven primarily by enrollment size and local wealth as measured by assessed value per pupil. Following on their per-ADM revenue rankings, total expenditures per ADM ranged from \$5,805 in the Morgan School District to \$21,872 in Daggett. The state average was \$7,328 per ADM. Similarly, these two districts also had the lowest and highest instructional expenditures per ADM, with Morgan spending \$4,275 per ADM and Daggett \$12,323. The state average was \$5,044 per ADM.

Exhibit 19 below displays per pupil revenue for all 41 districts by source. District ADM is also displayed.

Exhibit 19. Per-Pupil Revenue by Source and District ADM



Assessed Value Per Pupil

Total assessed value per pupil — the most commonly used measure of local school district fiscal capacity or wealth — ranges from \$194,662 in South Sanpete School District to more than \$3.0 million in Park City School District. Eight other districts have assessed values per pupil exceeding \$1.0 million. The average assessed value per pupil for the state is \$436,893.

Other Equity Measures

In addition to local assessed value per pupil, there are several other measures available in the data that may be used to provide some indication of the equity in program quality across districts. These include:

- **Average teacher salaries**, an indication of a district's ability to attract qualified teachers;
- **The number of teachers per 1,000 ADM**, a measure of the number of teachers available to serve students in the district;
- **The number of all certified staff per 1,000 ADM**, a measure of the number of professional staff including teachers, administrators, and certified support staff, available to support students and administer the district; and
- **The student-teacher ratio**, which is not the same as class size because the teacher count used includes non-regular classroom teachers such as tutors, ELL teachers, Title I teachers, etc.

There is a large range among districts for all of these measures. Average teacher salaries range from \$41,997 to \$65,227, while the number of teachers per 1,000 ADM ranges from 39.1 to 101.1. Similarly, certified staff per 1,000 ADM range from 47.4 to 128.0. The student-teacher ratio ranges from 9.4 to 25.21.

For most of the measures discussed here, the wide range in values is explained in large part by the existence of very small districts and schools in the state and the way in which the funding formula adjusts resources to compensate for these small sizes. Daggett, the state's smallest school district, had the highest number of teachers and certified staff per 1,000 ADM (101.1 and 128.0 respectively) and the lowest student-teacher ratio (9.4). Salt Lake School District, one of the state's largest districts, had the highest average teacher salary (\$65,227) compared to Nebo School District's \$41,997. Nebo is also a large district with more than 30,000 students, but it is among the lowest property wealth districts.

In addition to a summary of fiscal measures for all 41 school districts, policymakers and analysts are interested in examining whether there are differences among groupings of districts. The most common approach to grouping districts in an equity analysis is by wealth per pupil. These analyses may group districts by percentiles, quintiles, or quartiles. Because there are relatively few districts in Utah, this analysis uses quintiles to organize districts into groups.

Exhibit D-2 (provided in Appendix D) presents key fiscal information by each wealth quintile. Quintile 1, the quintile with the lowest assessed value per pupil, includes 8 districts with an average assessed value per pupil of \$279,923. The average assessed values per pupil for the remaining three quintiles are \$337,100 in quintile 2, \$448,534 in quintile 3, \$762,288 in quintile 4, and \$1,895,990 in quintile 5. These compare to the state average of \$436,893.

The summary data in Exhibit D-2 show that per student resources, whether revenues or expenditures, increase across the quintiles along with wealth per pupil. This may suggest that a relationship exists between local wealth and the educational resources available per ADM, and that Utah's school funding system is not as equitable as it could be. This conclusion is also borne out of the equity statistics discussed later in this section.

Generally, resource indicators shown in Exhibit D-2, including per ADM revenues and expenditures, teachers and certified staff per 1,000 students, teachers' salaries, and student-teacher ratios, improve as assessed value

per pupil increases. This suggests that the state’s funding system falls short on ensuring fiscal neutrality, which is discussed further below.¹⁶

Horizontal Equity, Vertical Equity, and Fiscal Neutrality

This equity analysis examines horizontal equity, vertical equity, and fiscal neutrality, as described in an earlier section. While there are a number of generally accepted statistical approaches to analyzing equity (Berne & Stiefel, 1984; Odden & Picus, 2014), the study team has identified several statistical measures that they have found are most useful for policymakers trying to understand the equity of a school finance system. These are described below in brief and covered in more detail in Appendix D.

Exhibit 20. Key Statistical Measures

Key Statistical Measure	Description
Range	Range describes the difference between the smallest and largest values of any given variable, like per student spending. The greater the range within a system, the less likely it is that a system is equitable.
Coefficient of Variation (CV)	The CV measures how much a given measure varies around the average. The value of the CV ranges from zero and higher and can be presented as a percentage (30%) or as a decimal (0.30). A lower number (closer to zero) indicates less variation and a higher number indicates more variation. A CV value over 0.010 suggests a higher amount of variation than is typically desirable in a school finance system (Odden & Picus, 2014).
McLoone Index and Verstegen Index	<p>The McLoone and Verstegen Indices are lesser known but nonetheless valuable measures of equity. Used together, they can help to pinpoint where — in terms of the per student revenue or expenditure distribution of school districts — a state is most equitable or inequitable.</p> <p>The McLoone Index measures the bottom half of the distribution of revenues or expenditures per student to indicate the degree of equity of those school districts below the median, and ranges from zero to 1.0, with 1.0 representing perfect equity. An index of at least 0.95 is considered desirable (Odden & Picus, 2014).</p> <p>Conversely, the Verstegen Index provides the same information for the top half of the per student revenue or expenditure distribution — those districts above the median. The ideal value of the Verstegen Index is 1.0 and the standard is no more than 1.05 (Odden & Picus, 2014).</p>
Correlation Coefficient	The correlation coefficient is the most common statistic used for measuring fiscal neutrality, or the relationship between per student property wealth and per student revenues or spending. A high-quality school finance system will exhibit little relationship between the two, since local property wealth should not determine how much money a school system has available to spend. The correlation coefficient ranges from -1.0 to 1.0, where -1.0 represents a perfect negative relationship and 1.0 represents a perfect positive relationship. A correlation of zero means there is no relationship between two items. The typical standard for an acceptable level of equity is equal to or less than 0.50 (Odden & Picus, 2014).

16 There are exceptions to this finding, including that there are slightly higher instructional expenditures per ADM and average teacher salary, and a lower student teacher ratio in the lowest quintile than in quintile 2.

The range and CV may be used for measuring both horizontal and vertical equity. However, measures of vertical equity use weighted student counts while horizontal equity uses non-weighted student counts. By using weighted student counts, which provide a measure of student need, the study team is able to assess how spending varies with student need. The study team's expectation is that higher spending will be associated with higher levels of student need.

Horizontal Equity

Horizontal equity is a measure of how equally similarly situated students are funded across school districts. A state school finance system that is horizontally equitable should meet or exceed the standards of all of the equity statistical measures described above.

The variation in revenues or spending that exists among districts should be largely explained by differences in student need.

Exhibit 21. Horizontal Equity Summary Statistics

Horizontal Equity Measures	2013–14	2017–18
Coefficient of Variation (Standard of ≤ 0.10)		
State and Local Revenue Per ADM	0.414	0.351
Total Revenue Per ADM	0.403	0.360
Total Expenditures Per ADM	0.326	0.354
Instructional Expenditures Per ADM	0.275	0.311
Average Teacher Salary	0.081	0.092
Teachers Per 1,000 ADM	0.235	0.244
Certified Staff Per 1,000 ADM	0.237	0.248
Student/Teacher Ratio	0.153	0.188
McLoone Index — State and Local Revenues/ADM (Standard of ≥ 0.95)	0.88	0.87
Verstegen Index — State and Local Revenues/ADM (Standard of ≤ 1.05)	1.26	1.14

Exhibit 21 shows the equity statistics for the two fiscal years 2013–14 and 2017–18. Two years worth of data were examined to assess at two points in time the equity characteristics of Utah's school finance system. The top portion of Exhibit 21 shows the CV for a number of different types of resources, including per ADM revenues and expenditures and key district characteristics.

Using the standard of the CV being equal to or less than 0.10, these results show that in both years, only one variable, average teacher salary, meets the equity standard. Another, student-teacher ratio, is relatively close to the standard, but still exceeds it. One potential reason for less variation in average teacher salaries across districts is the ongoing shortage of qualified teachers in a number of subject areas, which may lead districts to raise salaries to compete in the teacher labor market.

The other variables all exceed the standard by a factor of two to four. The McCloone and Verstegen indices also show that inequity in the system exists across the entire distribution of districts, whether below or above the median state and local revenues per ADM, since each falls short of meeting the standard.

It is unclear whether the system has become more equitable between 2013–14 and 2017–18, since some statistics improved over that time period and others worsened. The two measures of per ADM revenues improved while the measures for expenditures and district characteristics moved somewhat further from the standard. While there was little change in the McCloone Index, the Verstegen Index improved significantly, indicating that equity in the upper half of the revenue per ADM distribution improved, although it still fails to meet the standard.

It is likely that some of the apparent inequity indicated by the equity statistics may be due to the number of smaller districts in the state. The top two quintiles, which have the highest per pupil assessed value and per ADM revenues and expenditures, are also, on average, smaller than the average district in the first through third quintiles. The average district size in the fifth quintile is only 1,533 ADM. The average district size in the fourth quintile is 9,531 ADM. This is compared to average district sizes in the first three quintiles of 19,169, 25,383, and 14,048, respectively. As a result, some of the variation displayed in the data may be due to the state's policy of providing more resources per ADM to small schools to compensate for their lack of economies of scale. The issue of how equity may vary by district characteristics such as enrollment size and locale (rural, suburban or urban) is an issue that should be explored further in Phase 2 of the study.

Vertical Equity

The results for vertical equity are similar to the horizontal equity results. Vertical equity assumes that a greater amount of resources are needed to effectively educate students with greater need. This vertical equity analysis used WADM counts in the CV calculation, thereby taking into account, or controlling for, the variations in spending between districts with different numbers of students with greater need. If the school funding formula is providing enough additional resources for serving students with greater needs, the CVs should improve compared to the horizontal equity analysis using unweighted ADMs. As Exhibit 22 shows, the CV for all measures exceeded the standard of 0.10 in both 2013–14 and 2017–18.

Exhibit 22. Vertical Equity Summary Statistics

Vertical Equity Measures	2013–14	2017–18
Coefficient of Variation (Standard of ≤ 0.10)		
State and Local Revenue Per Weighted ADM	0.416	0.368
Total Revenue Per Weighted ADM	0.399	0.369
Total Expenditures Per Weighted ADM	0.319	0.366
Instructional Expenditures Per Weighted ADM	0.267	0.315
Teachers Per 1,000 Weighted ADM	0.222	0.249
Certified Staff Per 1,000 Weighted ADM	0.224	0.254

Comparing Exhibit 21 (horizontal equity) to Exhibit 22 (vertical equity) shows that for both years, there is little difference in the CVs whether using ADM or WADM. In fact, most of the CVs are somewhat larger in Exhibit 22. This result indicates the funding system may not be providing sufficient additional resources for students with greater needs, such as the economically disadvantaged students, English Learners, and students with disabilities.

This finding is supported by several correlations between the need factor and other resource measures. The correlation between the need factor and state and local revenues per WADM is -0.169, indicating a very weak — and negative — relationship between need and per WADM state and local revenues. The relationship between need and total expenditures per WADM is similar, with a very weak correlation coefficient of -0.075. Both of these correlations show that there is little relationship between the concentration of students with greater needs and additional funding for districts.

Fiscal Neutrality

Fiscal neutrality examines the relationship between the wealth of a district and the resources it has for educating its students. The statistical measure used here for measuring fiscal neutrality is the correlation coefficient, which assesses the strength and direction of two variables related to fiscal neutrality, namely per pupil assessed value and per ADM revenues or expenditures. In an equitable school finance system, there should be little or no relationship between local wealth and resource levels.

The results presented in Exhibit 23 show that many of the fiscal neutrality measures exceed the standard of a correlation coefficient less than or equal to 0.50, indicating that to some degree, district resource levels are related to district wealth.

This analysis presents the correlation between per pupil assessed value and a number of different resource variables, including state and local revenues per ADM and WADM revenues, total revenue per ADM and WADM, per ADM and WADM instructional and total expenditures, and teacher salaries, teachers per 1,000 ADM, certified staff per 1,000 ADM, and the student-teacher ratio.

Exhibit 23. Fiscal Neutrality Summary Statistics

Fiscal Neutrality Measures	2013–14	2017–18
Correlation Coefficient (Standard of ≤ 0.50)		
Assessed Value/Pupil and State and Local Revenues/ADM	0.415	0.608
Assessed Value/Pupil and Total Revenue/ADM	0.386	0.547
Assessed Value/Pupil and State and Local Revenues/Weighted ADM	0.436	0.649
Assessed Value/Pupil and Total Revenue/Weighted ADM	0.413	0.607
Total Expenditures Per ADM	0.555	0.569
Instructional Expenditures Per ADM	0.562	0.491
Total Expenditures Per Weighted ADM	0.607	0.624
Instructional Expenditures Per Weighted ADM	0.622	0.559
Assessed Value/Pupil and Average Teacher Salary	0.628	0.482
Assessed Value/Pupil and Teachers Per 1,000 ADM	0.399	0.449
Assessed Value/Pupil and Certified Staff Per 1,000 ADM	0.435	0.457
Assessed Value/Pupil and Student-Teacher Ratio	-0.498	-0.513

As Exhibit 23 shows, the 2017–18 correlations with per ADM and WADM revenues and expenditures (with the exception of instructional expenditures) all exceed the 0.50 standard, although not by a very large amount.

The 2017–18 correlations between local wealth and per ADM state and local revenues, per WADM state and local revenues, and total expenditures per WADM all exceed 0.60.

The correlations between local wealth and the other resource factors such as average teacher salary (in 2017–18 only), teachers per 1,000 ADM, and certified staff per 1,000 ADM all fall below the standard in both years.

The correlation between wealth and student-teacher ratio is just above the standard in 2017–18 and is negative, an indication that there is a slightly higher than desired relationship between local wealth and smaller class sizes.

Of some concern is the fact that all of the correlations with revenues became larger between 2013–14 and 2017–18, indicating the relationship between local wealth and revenues has become stronger over time. This change over time occurred despite two recent legislative actions designed to improve equity across districts.¹⁷ The study team will take a closer look at why these equity measures worsened over time during Phase 2 of the study. Conversely, the relationship between local wealth and expenditures and local wealth and the other resource variables became somewhat smaller over that same period of time.

¹⁷ See Senate Bill 97 passed during the 2015 General Session and House Bill 293 passed during the 2018 General Session.

Findings Summary: Equity Study

This analysis raises some questions about Utah's school funding system with respect to horizontal and vertical equity and fiscal neutrality. The majority of variables examined in this analysis fell short of meeting generally accepted benchmarks for equity statistics, although in many cases, the margin was not substantial. The analysis showed that there was greater than desired variability in per ADM and per WADM revenues, expenditures, and other resource indicators such as average teacher salaries, teachers per 1,000 ADM, certified staff per 1,000 ADM, and student-teacher ratios.

Vertical equity in particular is an area of concern. The study team's analysis shows that taking concentrations of students with greater needs into account had little impact on equity statistics. These findings are likely related to the system's additional funding levels for students with greater needs.

The fiscal neutrality analysis also indicated a larger than desired relationship between local wealth and district resources. Correlation coefficients between assessed value per pupil and per ADM revenues and expenditures and other resource indicators generally exceeded the benchmark of less than or equal to 0.50. Our analysis of wealth quintiles also showed that per ADM resources increased in step with per pupil assessed valuation.

Additional analyses to assess the equity impact of revenue streams that are not directly related to instruction or student support, such as transportation, food services and student activities funding, should be considered for Phase 2 of this study.

Two recent reports present more positive assessments of the equity of Utah's school finance system. However, differences in the focus and data and analysis approaches make comparisons difficult, if not impossible. In the Education Law Center's *Is School Funding Fair? A National Report Card*, researchers used multiple federal datasets from 2015 to examine school finance in all 50 states. In its one finance equity measure, a measure of how much per pupil funding changes between districts with zero percent poverty and those with 30 percent poverty, Utah is ranked number one and given an "A" grade. However, this is a narrow measure of vertical equity, focused entirely on poverty-based changes in funding, that ignores other student needs (EL and special education) and the issues of fiscal neutrality and funding variation. *Education Week's* Quality Counts issue also grades the finance systems in the 50 states and District of Columbia. It includes three measures similar to those used in this analysis, including a correlation between assessed value per student and per student state and local revenues, the CV for per student expenditures, and the McLoone Index. All three of these measures are more favorable than what this analysis found.¹⁸ However, *Education Week's* analysis also uses federal datasets rather than state-provided data, adjusts student counts to account for student need using different weights than used here, and makes adjustments for differences in cost of living. *Education Week's* analysis also does not provide detail on which specific revenues and expenditures were included in its analyses. a deeper investigation

18 Baker, B. D., Sciarra, D. G., & Farrie, D. (2018). *Is School Funding Fair? A National Report Card* (7th ed.). Newark, N.J.: Education Law Center. https://edlawcenter.org/assets/files/pdfs/publications/Is_School_Funding_Fair_7th_Editi.pdf. Education Week, Quality Counts 2019. Grading the State. <https://www.edweek.org/ew/collections/quality-counts-2019-state-finance/index.html>. The Quality Counts analysis, using 2016 federal data, found a correlation of 0.221 between per student assessed value and per student state and local revenues. Its CV for per student expenditures was 0.175, and its McLoone Index was 0.96.

of equity and raise the possibility that there is room for improvement in providing an equitable school finance system.

The next section examines the system’s alignment with evidence-based best practices based on available research and documented practice.

Alignment with Evidence-Based Practice

Though rigorous research into general resource allocation strategies is limited, valuable lessons can be drawn from the evidence that is available to support policy discussions in Utah. Should Utah policymakers decide to change their investments in K–12 education, this section summarizes the most recent, rigorous evidence on effects of changes in school spending.

Impact Analysis of Funding Changes in Other States

Recent research links increased school spending to positive outcomes for students that include higher graduation rates, higher lifetime wages, and increased college attendance.

The question about whether or not “money matters” has been subject to intense debate. In the late 1980s and early 1990s, Eric Hanushek summarized a series of school finance studies and famously concluded that there is no relationship between spending and outcomes. However, about a third of the studies he cited (Hanushek, 1997) found significant improvement. Most of the research he summarized — with positive and negative findings — was also based on correlations between spending and achievement, and it could not clearly rule out the influence of other factors. In fact, in a more recent publication, Hanushek points out that while improvements resulting from resource policies are not “discernible,” this “does not mean that money and resources never matter (Hanushek, 2003; p. F89)”

In the last two decades, a new wave of studies, using more rigorous research methods and larger datasets, allow researchers and practitioners to make stronger causal inferences. More and more, economists are able to utilize “natural experiments” where real-world conditions (e.g. policy adoptions and discontinuations, group selection that is essentially random within small populations) allow for approximated randomized experiments. As a result, we can be more confident in the validity of these more recent findings.

A multitude of recent state school finance reforms allow for these types of studies. They exploit sudden changes in rules about how schools are funded. School spending regularly changes due to factors that are caused by policy, not factors under the control of families and schools. This allows researchers to determine what happens to student achievement and to safely rule out alternate explanations.

There are many recent and credible school spending studies that use these more rigorous methods with national data or multi-state datasets. Jackson, Johnson, and Persico (2016) study the effect of school finance reform–induced changes in public school spending on long-term adult outcomes. They link school spending and school finance reform data to detailed, nationally representative data on children born between 1955 and 1985 and followed through 2011. They find that a 10% increase in per pupil spending each year for all 12 years of public schooling leads to 0.31 more completed years of education, about 7% higher wages, and a 3.2 percentage point reduction in the annual incidence of adult poverty. Effects are much more pronounced for children from low-income families.

LaFortune, Rothstein, and Schanzenbach (2018) find that state-level school finance reforms markedly increased the progressivity of school spending. The reforms did not accomplish this by “leveling down” school funding, but rather by increasing spending across the board, with larger increases in low-income districts. Schools used these additional funds to increase instructional spending, to reduce class size, and for capital outlays. Using nationally representative data on student achievement, the authors find that these reforms were productive. School finance reform raised achievement in a district with log average income one point below the state mean, relative to a district at the mean, by 0.1 standard deviations after ten years.

Approximately 90% of studies that look across the entire nation find a positive and significant impact of total spending on student outcomes. This tells policymakers and school leaders that, on average, money absolutely matters. But it does not necessarily mean money matters in every context, in all settings, and in all school districts, as myriad “nonmonetary” factors are associated with student outcomes.

Namely, Epstein (1992, 1995) summarizes that a student’s academic outcomes are influenced by not just instruction, but by three larger overlapping environments: the overall school experience, their family life, and the community in which they live. Each of these contexts have their own factors that stimulate or impede a student’s academic, social and personal development.

Within the school, increases in school safety and higher academic expectations for students correspond to increases in student achievement (Kraft, Marinell & Yee, 2016), while exposure to violence is associated with lower self-esteem (Patton, Woolley, Hong, 2011), and teacher turnover is associated with lower academic performance (Kraft, Marinell & Yee, 2016).

Overall, though money within schools is the central subject of analysis in the present report and research finds positive associations with its compounding impact on learning outcomes, it is incomplete to suggest that other factors such as family or community experience does not impact them as well. In the second phase of this project, the study team will consider how factors, like those described above, may influence student success in Utah.

Single-state studies also support the broad finding that money matters. Relying on discontinuities inherent in the funding formulas in Massachusetts, Guryan (2001) finds that increased school spending improves test scores. Similarly, using a regression-discontinuity design, Lee and Polachek (2018) find that increased school spending led to increased high school graduation rates.

Hyman’s 2017 study of Michigan’s school finance reform finds that students exposed to \$1,000 (10%) more spending were 3 percentage points (7%) more likely to enroll in college and 2.3 percentage points (11%) more likely to earn a postsecondary degree. The effects were concentrated among districts that were urban and suburban, lower poverty, and higher achieving at baseline. Districts targeted the marginal dollar toward schools serving less poor populations within the district

In New York, a quirk in the state’s funding formula allowed some districts to receive extra funding even though they had falling enrollments. Gigliotti and Sorenson (2018) found that the extra dollars led to slightly higher scores on state exams. Similar research in Texas, but this time, of the state’s adjustment for small districts, finds a 1 percentage point decrease in dropout rates and a 6 percentage point increase in college enrollment for every additional 10% increase in expenditures (Kreisman & Steinberg, 2019).

After the overhaul of California’s school funding formula in 2012, Johnson and Tanner (2018) find that a \$1,000 increase in district per pupil revenue from the state experienced in grades 10–12 leads to a 5.3 percentage-point increase in high school graduation rates, on average, among all students. Those gains are just as large, or larger,

among students from high-poverty families. Additional research by Lee and Fuller (2017) found that Latino students benefited from extra grant funding in California districts with higher concentrations of poverty.

Clark (2003), a study of Kentucky, is a rare example of a single-state study of unrestricted funds that does not find positive and statistically significant effects. The author finds that the increased spending induced by the Kentucky Education Reform Act did not improve test scores overall, though African-American students did see a modest increase in achievement.

Kogan and colleagues (2017) use a regression-discontinuity design to examine the impact of passing a referendum to increase school spending in Ohio. They find that referendum failure (as opposed to passage) led to lower instructional spending and lower student achievement growth.

There is also research showing the negative effect of spending cuts. Studies in the wake of the Great Recession in 2008–09 showed that in some states, taxes fell rapidly, and states were forced to suddenly reduce per pupil spending. Children in schools during the recession where per pupil spending levels dropped, compared to students who were in those schools before the recession, saw a decline in test scores and high school graduation rates. Jackson and colleagues (2015) found that a 10% drop in school spending over the previous four years reduced high school graduation rates by 1.5 percentage points and reduced test scores by 6% of one standard deviation.

Common Approaches to Targeting Investments to Improve Student Achievement

Shifting from Horizontal to Vertical Equity

Over the past 30 years, some of the most impactful changes in state K–12 education finance reform have involved governments replacing traditional funding models to address “horizontal equity” with new models more focused on “vertical equity” (Berne & Stiefel, 1984; Lafortune, Rothstein, & Schanzenbach, 2018).

Research on the impact of shifting from horizontal equity to funding based on considerations of vertical equity through reform is limited, primarily because this is a recent trend in education finance. In nearly every study involving a shift to funding based on considerations of vertical equity, however, effective reform events are associated with sharp, immediate, and permanent increases in the progressivity of school finance, with absolute and relative increases in revenues in low-income school districts (Lafortune, Rothstein & Schanzenbach, 2018). The targeted increase in revenues in low-income school districts is a key differentiating component of this type of reform from others, and most research will find pronounced learning outcomes in these districts, as the marginal effect of extra funds is higher in low-income areas. The immediate influx of funding is an important element of reforms focused on vertical equity as well, as examples of funding increases that failed to produce positive outcomes for students tend to see gradual increases to supplements for high-need students phased in over many years (Hanushek & Lindseth, 2009; Neymotin, 2010).

It is important to note that the positive impact in school finance reforms focused on vertical equity is also attributable to the increase in funding all students experience when these models are implemented, as opposed to the ‘leveling down’ a state or district might implement under a model focused on horizontal equity (Lafortune, Rothstein & Schanzenbach, 2018). These results agree with the previous findings that increased school spending generally raises student achievement described in the above section.

Categorical Programs, Weighted Student Formulas, & Block Grants

There are three common approaches through which supplements to improve vertical equity are disbursed: categorical programs, block grants and weighted student formulas (Education Commission of the States, 2019). Each model offers advantages in its specific approach that can fulfill state and district needs in implementation.

Categorical Programs

Categorical programs, which distribute restricted dollars to districts to run designated programs, are the most fiscally constraining of the three funding models. This model can be advantageous for districts that are in need of structure to push towards vertical equity; Levin (1985) notes that targeting funds to specific populations and activities through categorical programs creates accountability and assures that dollars are being spent efficiently. On the other hand, practitioners have long encountered regulatory obstacles in practice. Kimbrough and Hill (1981) identified that when multiple categorical programs are being run at one school site, excessive administrative time is needed to establish compliance with statute. Furthermore, the lack of flexibility to cross-subsidize between programs creates impractical conflicts for staff who work in multiple program areas (Kimbrough & Hill, 1985). Nonetheless, there are several examples of categorical programs being used effectively.

In Utah, the MSP is made up of some 50 categorical programs. While each program has a stated purpose and fund allocation based on weighted pupil units (WPUs), these programs vary widely in their scope and regulatory nature, as approximately 75% of state funding is unrestricted, with the ultimate goal of enabling local school boards to allocate funds autonomously.¹⁹

In some cases, categorical programs define a particular model for improvement. For example, in Ohio, 62 low-performing schools with high concentrations of poverty saw standardized test score gains after the implementation of the federal School Improvement Grant (SIG) categorical program and its Turnaround Model. SIG is designed to provide schools with additional financial resources, contingent upon schools using those funds to make significant changes to many aspects of their educational delivery. Ohio's Turnaround Model involves replacing a school's principal, supplanting at least 50% of the staff, and implementing a number of instructional and operational reforms, coinciding with rapid increases of \$1,500 - \$3,000 in funding per student in award schools. Ohio schools that accepted funds and complied with this model saw gains up to 0.26 standard deviations in math and 0.27 standard deviations in reading for students in recipient schools within just two years of implementation. The restrictions on spending in this categorical program proved valuable, as struggling districts may have been prompted to undergo less rapid and comprehensive change within schools if given the autonomy, such as focusing funds on hiring additional staff without supplanting existing staff (Carlsen & Lavertu, 2018).

A similar example of a categorical program with a specific design model and evidence of effectiveness is a comprehensive school reform design, wherein a district receives supplemental funds to re-structure general program operations in low-performing schools according to a state model. In their book *Restoring Opportunity*, Greg Duncan and Richard Murnane draw several lessons from studies examining these types of programs. One is that large-scale improvement is possible. A second is that the tools, guidance, and training provided to teachers clearly improve students' reading skills, though these designs are much less effective when implemented in schools with high rates of teacher turnover (Duncan & Murnane, 2014). At the high school level, there are particular design models with evidence of effectiveness such as Talent Development, First Things First, Check and Connect (a mentoring and monitoring program) and Achievement for Latinos Through Academic Success. In an analysis prepared for Minnesota policymakers, Levin and Belfield (2007) find that all four of these designs

19 There are, however, some restricted categorical programs within Utah's Basic School program such as all Special Education programming, Career & Technical Education and Class Size Reduction.

generate benefits to the taxpayer which easily exceed the costs. When they calculate the benefits divided by the costs of the interventions, they find a ratio that varies from 2.9 to 6.7 for every dollar spent.²⁰

There are other examples of categorical programs specifying particular improvement models seeing success, such as the New Small Autonomous School District Policy in Oakland, CA (see Vasudeva, Darling-Hammond, Newton & Montgomery, 2009) or the Comprehensive School Reform (CSR) grants in Texas (see Booker, Gross, & Goldhaber, 2006).

Alternatively, categorical programs may specify a particular subject or grade which the investment is targeting, as opposed to a specific improvement model. One notable example of this is investment in early childhood programs, especially given research suggesting that such investments may be particularly cost-effective (e.g., Belfield, Nores, Barnett, & Schweinhart, 2006). Evaluations of prekindergarten programs in Boston and Tulsa find impacts that are larger than those found in evaluations of programs in other states. The size of the impact is sufficient to close more than half of the gap in academic skills between children from low-income families and more affluent ones at entry for kindergarten (Weiland & Yoshikawa, 2013; Phillips, Gormley, & Anderson, 2016). In addition, the mathematics, literacy, and language skills of children who participated in these programs were considerably more advanced than those of similarly-aged children who spent the year in other childcare settings.²¹

The impressive evidence from the Boston and Tulsa programs provides support for the notion that a carefully designed and implemented early learning program has the potential to improve long-term education outcomes for children from low-income families. In Tulsa in particular, when examined against middle school students who did not participate, students who participated in CAP Head Start produced significant positive effects on achievement test scores in math and on both grade retention and chronic absenteeism for middle school students as a whole, including positive effects for girls on grade retention and chronic absenteeism; for white students on math test scores; for Hispanic students on math test scores and chronic absenteeism, and for students eligible for free lunches on math test scores, grade retention, and chronic absenteeism (Phillips, Gormley, & Anderson, 2016).

Weighted Student Formulas

Weighted student formulas provide additional funds or weights to LEAs on a per pupil basis determined by mathematical equation. These funds act as a supplement to the allocation a district would receive based on its total students, using a formula to determine the extra dollars per qualifying student necessary to fund a specific program. Utah uses Weighted Pupil Units (WPU) in determining its “above-the-line” programs: State allocations are determined by a statutorily set rate of funds generated by each pupil within an LEA, with added WPU counts for districts with qualifying characteristics, such as rural areas that require busing over large distances for students to attend school. Utah’s systems has higher weights for career and technical education

20 One may ask, “What is the IMPACT of a graduate?” Compared to a high school dropout, an individual graduate gains \$475,900 in extra lifetime earnings. The economic benefits to state taxpayers are significant, with \$251,900 in increases in tax revenues and lower expenditures on health, crime, and welfare. In Minnesota, the state gains the equivalent of \$1,059,000 from the individual and taxpayer benefits, plus lower crime rates and faster economic growth (Levin & Belfield, 2007).

21 From a policy design perspective, it is important to note that the Boston and Tulsa programs are open to children from all backgrounds, regardless of family income. This approach increases costs, but also increases political support for the programs. The mix of children from different backgrounds may expose children from low-income families to children with larger vocabularies and other advantages. Each class has both a teacher and a full-time aide. The programs provide them with in-depth training and devotes resources to high-quality implementation of proven literacy and math curricula.

and students with disabilities, but not for other student groups. Additional WPU for most of Utah's programs are allocated through a prior-year average daily membership (ADM) plus growth formula, wherein the previous year's ADM is added to the total growth, then multiplied by a statutorily set factor. The product is the amount of WPU that will be allocated to run the program for that year.

Weights are usually derived from fractions of the base student population and are expressed as dollar amounts or as additional pupil counts (Hinojosa, 2018). An advantage of weights is that they can place an explicit dollar amount on the supplemental funding each student within a population qualifies for, which can create concrete benchmarks for spending in schools. Weighted student funds also have restrictions to serve their target student populations, but these funds are not usually bound to a single school program. Thus, they provide LEAs some of the structure of categorical programs while maintaining flexibility to meet greater programmatic needs.

However, for this reason, weighted student formulas have been criticized for failing to hold districts accountable for sufficiently targeting student funding to higher need populations in line with state plans. In 2015, a lawsuit was filed against the Los Angeles Unified School District (LAUSD) by the ACLU of Southern California for underfunding programs for pupils with identified high needs under the Local Control Funding Formula (LCFF), California's weighted student funding model (Superior Court of California, County of Los Angeles, 2015). The State of California ruled that LAUSD had been directing special education and low-income student funding to the general school program, underfunding schools by up to \$450 million annually since 2013. Ultimately, LAUSD was ordered to allocate \$150 million in supplemental funding for vulnerable student populations from the district general fund in the 2017–2018 budget (White, 2017).

Many states use weighted funding formulas to determine each LEA's supplemental funding allocation. Darling-Hammond (2010) found that New Jersey's weighted formula approach for high-need students, which ties research on quality and costs with funding allocations, has contributed to steep increases in overall performance and reductions in the achievement gap. The formula is based on free and reduced-priced lunch program participation and is allocated according to a sliding scale of weights depending on the percentages of identified populations of need housed in a given LEA, similar to Title I, part A of the Every Student Succeeds Act (ESSA) (Hinojosa, 2018).

In Massachusetts, Guryan (2001) found improved 4th grade standardized test scores as a result of an improved design of the Massachusetts state finance system to include weights that offered more funding to students with greater need. Under this formula, an LEA's total enrollment is calculated, creating a "foundation" budget allocation, then enrollment is multiplied by different factors of its student population, where each student population group is given a different per student weight depending upon assessed needs (Hinojosa, 2018).

Block Grants

Block grants refer to programs where a district submits a plan or application and receives funding in accordance with state assessed student population need, grade level or geographic characteristics. Entirely unrestricted once awarded, block grants offer autonomy to districts to set goals and create frameworks for programs without compliance as an incentive. As Brueckner (2000) points out, unrestricted funding through block grants promotes innovative programming that could save money in the long run while still meeting goals. However, the "innovative" programs under block grants may effectively operate as modified categorical programs. Levin (1985) asserts that it is difficult to compare fully unrestricted block grants to more restrictive programs like categorical or weighted student formulas, as it is unclear whether block grants could function if initiated without a pre-existing structure. Specifically, research contends that restricted programs provide the framework or

“fly-paper” for block grant spending, giving practitioners implicit guidance in how to generally run their autonomous programs. For example, if a categorical literacy program in state elementary schools produced strong results but was reported by educators to (1) have burdensome administrative work and (2) exclude populations that could benefit from the program due to its categorical requirements, a block grant may provide the autonomy needed to address these concerns. However, the overall design of the program would remain the same, or “stick,” as the categorical program structure was already sufficient to meet programmatic goals.

Block grants are also limited in their long-run economic efficiency. Almost always, block grants are fixed at a pre-set dollar amount to last through the life of a program and are therefore unable to adjust for student need as the economy matures over a grant cycle. Categorical or weighted student formulas do not fall victim to this limitation, as they are re-calculated annually using student demographic counts, and are often to the state’s general fund by proportionality statute. Both Brueckner (2000) and Powers (2000) noted that the rigidity of block grants caused limitations in U.S. welfare reform, which switched from a matching grant structure to block granting in 1996. Where matching grants saw larger federal contributions as benefits to recipients increased, fixed grant amounts, even with the aid of a maintenance of effort formula, could not appropriately control for increases in the cost of living or participant need, leading to overall lower spending on welfare programs.

In North Carolina, Henry, Fortner, and Thompson (2010) examined the impact of the Disadvantaged Student Supplemental Fund (DSSF) on “North Carolina EOC” standardized test scores. In this program, the 16 districts considered most disadvantaged by North Carolina’s index system were granted additional funds for two years if they submitted a budget but were not mandated to follow a set spending structure as would be the case under a categorical program. Expenditures included teacher salaries, materials, professional development and instructional support. Results found High School EOC test score gains in DSSF recipient schools amounted to .13 of a standard deviation higher than those of non-participant schools, about a 1.2% higher EOC score.

Utah currently administers many grant programs, including: Year-round Math & Science (USTAR), The Beverly Sorenson Elementary Arts program, and Digital Teaching and Learning. These grants are awarded on a competitive basis, but do contain some restrictions, making them different from traditional block grants.

Though categorical programs, weighted student formulas and block grants are all focused on vertical equity, they hold distinct characteristics. Categorical programs are restricted in nature, and do not allow for cross-subsidization across programs. Weighted student formulas have restrictions to serve their target student populations but are not usually bound to a single school program. Block grants are unrestricted entirely, offering districts autonomy to spend funds how they see fit. These differences offer unique advantages, along with key areas of limitation worth further analysis.

Ultimately, evidence shows that each model has important limitations that balance out its strengths. Still, there have been multiple examples of each model producing significant gains for large student populations, particularly among low-income and low-achieving pupils. The best model is then a matter of context and history for a state government. For example, if districts are exhausted with regulation and function well with serving high-need populations, a weighted student formula may be a useful supplement to existing structures. Alternatively, if a state is experiencing a general fund windfall and has strong systems in place to support new and innovative programming, block grants may be the best way to invigorate school systems. Finally, in a state with a high influx of inward migration, categorical programs can assist in establishing structures for new programming demanded by larger demographic representation of diverse student groups.

Effective Decision-Making

Decision making has become more important than ever in the era of funding models focused on vertical equity, particularly in state education offices. In the past, local property tax revenue determined the allocation and capability of a given district to provide services to its students without regard for equity or adequacy, while states provided mostly categorical aid. Today, state governments lead the way as policy initiators, allocating funds to LEAs to equalize revenues across districts based on need (Sykes, O'Day & Ford, 2009). Moreover, effective decision-making maximizes the impact of increases in education funding, especially those targeted to particular purposes and intended to support improvements in vertical equity. In addition to the evidence presented in this report, the study team will continue to examine decision-making at the local level in Utah specifically.

State and District Collaboration

Along with a state's expanded role in local school finance as a policy initiator comes responsibility as the primary determinant of efficiency in schools and their programs. Specifically, there are two forms of efficiency that a state education office must work towards: allocative efficiency, which refers to providing the proper amount of education for each student, and productive efficiency, providing that education at the lowest possible cost. States face challenges in determining these efficiencies, as budgets and their allocations can only be made using previous student outcomes and previous costs as data points. States simply do not have the capacity to measure the effort, input quality or student ability associated with the outcomes or costs they derive, because they cannot be in schools observing teachers on a daily basis to track such inputs. Thus, it is difficult to know when a school or program is overfunded/underfunded (inefficient) or properly funded (efficient) without actually observing it in practice (Hoxby, 1996).

If states are not independently able to determine efficiency, they must rely on LEAs and their schools as collaborative partners to establish this on their behalf. In this way, school districts exist in the unique position of being both policy initiators as well as interpreters, accountable for enacting programs that direct the work of their schools in alignment with collective bargaining, while simultaneously holding responsibility for implementing programs that originated at the federal and state levels (Sykes, O'Day & Ford, 2009). In order to ensure the efficiency of the programs they administer in alignment with state goals, district leaders should draw support from the state through existing systems and resources.

A strong example of how this symbiotic relationship can exist is found in a review of local administrator feedback after the implementation of California's Local Control Funding Formula. Plank, O'Day, and Cottingham (2018) found that, five years after the policy was enacted, local leaders self-reported implementation to be largely successful, and student achievement scores echoed this sentiment. Researchers noted several key relational differences between LEAs and the state office that made LCFF's implementation unique from past reforms: First, district leaders feel that when their LEAs are in need of support, they can seek help from a variety of sources, including state boards, state agencies, county offices and non-governmental entities. Second, the state support system is designed to help districts do more than simply comply with statute. Rather, the policy is focused on the state empowering districts to "analyze their own problems of practice, discover the underlying root causes, and create their own solutions...to work in partnership with districts to create the conditions in which local leaders learn how to work with teachers, parents, and other stakeholders to discern what works best for the students in their local context." Overall, the state acts as a cooperative support for districts, rather than a compliance entity, with agencies from outside of the government serving as thought

partners. Ultimately, it is collaboration with districts that allows states to understand the strengths and needs of its member schools, as districts offer deeper insight into the process of learning.

Even if state and district leaders collaborate regularly, the content of their collaboration is key to the change it produces. As Fullan (2001) posits, “collaborative cultures, which by definition have close relationships, are powerful, but unless they are focusing on the right things they may end up being powerfully wrong”. Central components of these “right things” include having a moral purpose, a focus on results, and a desire to understand the viewpoints of those who disagree. Groups of leaders from both the state and the district must be aligned in these areas if they hope to have success in their larger educational mission.

Supporting Schools

Once healthy collaboration is established, it is the districts that must ensure the mission of the state is carried out swiftly in their member schools, and thus their role in decision-making and efficiency cannot be understated. In a national review of school district improvement efforts and the factors of reform that produce the most positive outcomes for students, Honig, Copland, Rainey, Lorton, and Newton (2010) found that districts do not tend to see comprehensive improvements in teaching and achievement outcomes without substantial engagement by their central offices in helping all schools build the necessary capacity. In the same way that state governments support LEAs, by helping to provide and build capacity as partners, districts in turn can assist their schools.

However, as the sheer volume of schools that can reside within a school district makes for a widely diverse set of needs. In Sykes, O’Day, and Ford’s (2011) review of the school district role in instructional improvement, three management challenges are outlined for district leaders. First, leaders must manage the political dynamics of their community so they can build a coalition around improvement. Second, leaders must understand how to manage administrative tasks while also tending to the larger instructional agenda of their institution; maintaining this balance can most effectively be done by working as a team on core functions. Third, leaders must organize the activities and practices of teachers around the basic tenets of professionalism. Taken together, meeting these challenges is a strong factor in actualizing institutional progress, as it grants leaders the political, administrative, and professional capital to produce changes in the norms and practices of schools.

A key strategy for better understanding and accommodating the diverse needs of schools within a district is involving both school and community members in the district budgeting process. This allows for greater transparency and can produce stronger understanding as to the programmatic needs of schools and their surrounding neighborhoods. Participatory budgeting is an emerging method from city planning focused on integrating community members into the budget development cycle. This method designates a portion of the general fund budget to local control, such that residents can vote on the use of the funds as they see fit. This process begins with project ideas and spending plans created directly by residents, which are eventually voted on and funded to be part of the larger city or program budget. A key strength of this program found in early case studies is its ability to draw greater voter turnout than past elections in participant communities (Participatory Budgeting Project, 2016). Elements of the stakeholder engagement processes used in this method translate to the district setting with some modification by allowing stakeholders to wrestle with budget trade-offs collectively to reach targeted goals.

Finally, to further assist with the general challenge of aligning resources to student achievement goals at the district level, the Government Finance Officers Association (GFOA) has developed a series of best practices in school district budgeting. GFOA emphasizes that budgeting efficiently through the duration of a program maximizes its potential to be effective. The GFOA recommends the following five steps for the budgeting processes of a district to ensure strategic efficiency:

1. Plan and Prepare: This refers to establishing and developing key tenants of the program in conjunction with financial data.
2. Set Instructional Priorities: Ensuring that the grant program is aligned with the master plans of the district in regards to the students being served is a foundation for allocating funds to specific areas.
3. Pay for Priorities: The district should conduct a cost analysis to identify the most efficient use of resources, then prioritize how funds will be allocated.
4. Implementation: Before resources are allocated, to ensure optimal implementation, two plans should be developed and enacted:
 - ▶ Strategic financial plan: This offers a three to five year view of how the program will pursue its instructional priorities and how success will be measured.
 - ▶ Plan of action: A clear plan of roles and responsibilities within the program must be developed and followed.
5. Ensure sustainability: The budgeting process should be planned and replicated in the future to ensure districts have a uniform understanding of how to administer future programs (GFOA, 2015).

General Strategies for Effective Decision-Making

Overall, districts face the challenge of addressing the diverse needs of their member schools with limited resources, but research shows that many strategies have proven effective in advancing achievement and quality in districts on a comprehensive level. The power to affect how effectively and efficiently resources are used fundamentally rests with the decision-makers — i.e., local education leaders at the district and school level — who direct how available funds will be spent. Organizational behavior research suggests that while institutions may be tempted to try to hire individuals who possess an inherent “effective decision-making” capability, attempts to do so have limited success, as this skill is not strongly correlated with experience (Dalal & Bolunmez, 2016).

Indeed, intelligence can lead decision-makers to rely on cognitive shortcuts rather than engaging in a deeper analytical process (Stanovich, 2009), and experience can lead decision-makers to be overconfident and fail to weigh all possibilities (Russo & Schoemaker, 1992). Rather, research indicates that effective decision-making is a skill that can be developed and which strongly benefits from utilizing proven strategies.

Three such strategies include: (1) “consider the opposite,” (2) taking an outside view, and (3) constructing a linear decision model. Each of these can be routinized in an organization, helping build leaders’ decision-making capacities and limiting the likelihood that a decision-maker will default to common biases.

In the “consider the opposite” strategy, decision-makers are tasked with generating reasons why their initial decision may be the wrong choice (Larrick, 2004). This approach prompts decision-makers to consider information that they otherwise may not have thought about and prompts them to plan for a greater range of possible scenarios. Akin to this approach is what Klein (2007) calls a “pre-mortem”: take twenty minutes after project planning and imagine a decision has not worked out: what could have been the reason(s)?

Numerous studies have shown that the “consider the opposite” strategy increases decision-makers’ accuracy when estimating the probability of a given result occurring (Lord, Lepper, & Preston, 1984; Hoch, 1985; Soll & Klayman, 2004). When making decisions, the ability to make the best choice largely hinges upon the ability to accurately gauge the likelihood of various outcomes. By improving this gauge — specifically by reducing overconfidence and expanding the information base — this strategy can thus lead to better and more well-informed decision-making.

One possible limitation of the above strategy is if the decision-maker's biases hinder his or her ability to think of the true "opposite." For example, research has shown that when tasked with thinking of a worst-case scenario that could result from a decision, a decision-maker often thinks of only a mildly undesirable scenario, rather than the true worst case (Kahneman & Lovallo, 1993). Bringing in outside parties can help with this, such as in the "devil's advocate" form of this strategy, in which another person is enlisted to argue against the decision-maker's initial choice. However, a more effective way to combat this limitation may be through the addition of the next strategy: taking an outside view.

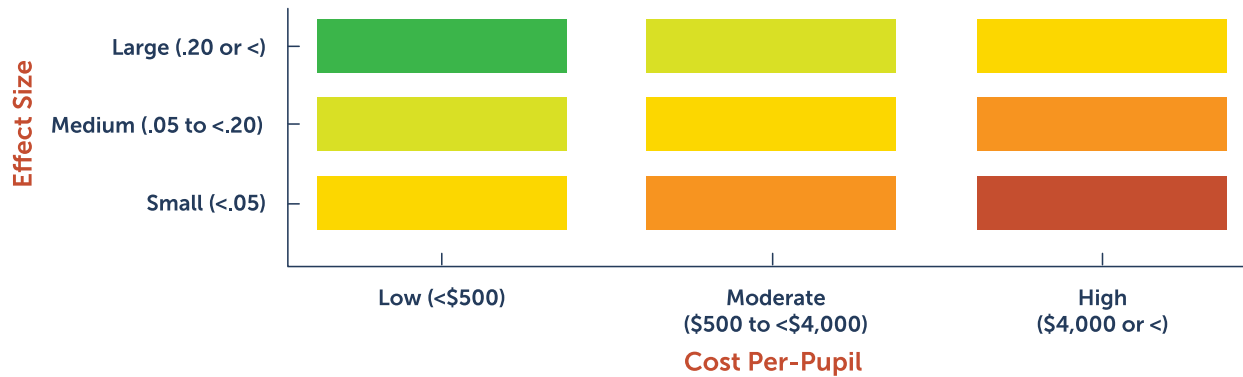
In the "outside view" strategy, a decision-maker must research several previous decisions, made by others, that share similarities with the current favored decision. The decision-maker can then examine these similar decisions through the lens of an outsider. Tetlock (2015), studying superforecasters in the Good Judgment Project, finds that the best decision-makers combine the inside and the outside views. With the inside view, individuals tend to rely on our own information and perception. No event is completely unique, and a great forecaster will always consider the outside view by looking at the base rate of similarly occurring events. While both are important in good judgment, psychologists have shown that individuals commonly rely too much on the inside view. Making individuals aware of the outside view can help reduce this bias.

In order to reduce an optimistic bias, these examples must include some similar decisions that could be seen as failures. Some researchers suggest that the decision-maker should seek out at least six similar decisions for comparison (Lovallo & Sibony, 2010). The decision-maker can then study the various properties of these previous decisions and use this data to inform the current one. For example, this might inform the decision-maker's estimates as to how likely the decision is to produce the desired outcome(s), how long it will take to implement the decision, and possible pitfalls.

As decision-makers begin to carefully examine data, this leads to the third — and more advanced — strategy: constructing a linear decision model. Also known as a "weighted additive" model or an "actuarial" model, this decision-making process requires the decision-maker to: (1) determine the available options, (2) determine the factors involved in each option, (3) assign importance ratings or "weights" to each factor, (4) rate each option on each factor, (5) use these cumulative ratings to calculate the overall "score" for each option, and (6) choose the option with the highest score. This model is frequently used, for example, when admissions committees consider various applicants. To reduce admissions committee members' biases and more accurately compare applicants on all of their respective assets, the committee might assign a weighted value to applicants' essays, test scores, etc. Once each of these factors is graded, the applicant can receive a total score, which can more easily be judged against other applicants' scores. Linear models have been shown to consistently improve decision-making in terms of both accuracy and transparency (Rolf, 2005).

This type of model can also be used more simply by including fewer factors in a given decision. For example, Kraft (2018) offers a two-factor framework for how any state or district might consider making more effective and efficient resource allocation decisions in the future. In Exhibit 24 below (recreated here based on the figure in Kraft (2018), p. 20), cost and impact are considered simultaneously. Across the top, one can classify the unit cost (or cost per student) of an intervention. Along the side, one can classify the impact, or effect size, as small, medium, or large. This approach is in line with a "weighted additive" model, but better suited to framing a discussion about cost in connection with expected outcomes. An intervention might be expensive per student, but if it has a large impact, it is ultimately "cheap." Similarly, an online tutoring program might only cost \$10 per student served. But if it has an effect size of .01, it is money that is not well spent.

Exhibit 24. Cost-Effectiveness Ratio (ES/Cost)



One of the major take-aways from the stakeholder session with business administrators was the groups' discussion of the wide variety of methods used to make allocation decisions. Some large districts have a set process to manage the input of multiple parties (department heads, principals, superintendent, etc.), while small districts develop their budgets based on school board priorities and deliberation with the superintendent. The research provided in this section may be helpful information for decision-makers in Utah as they consider different paths forward for the funding system. Within the Phase 2 report, additional research will be included that will focus more specifically on funding approaches for identified inputs in Utah's MSP in relation to the broader topics included in this section.

Research Objective 1c: Analysis of the role and balance of the state and local contribution

The Utah education code includes two sections particularly relevant to the balance of state and local contributions to education funding. The first (*Utah Code 53F, Chapter 2 § 103 (2)*) recognizes that “although the establishment of an educational system is primarily a state function, school districts should be required to participate on a partnership basis in the payment of a reasonable portion of the cost of a minimum program.” The second (*Utah Code 53F, Chapter 2 § 103 (3)*) describes “the manner in which the state and the school districts shall pay their respective share of the costs of a minimum program,” and “recognizes that each locality should be empowered to provide educational facilities and opportunities beyond the minimum program and accordingly provide a method whereby that latitude of action is permitted and encouraged.”

States fund K–12 education through a mix of federal, state, and local sources. Federal funding is generally provided to serve specific student populations or purposes, such as special education (IDEA funding), low-income students (Title I), and CTE (Perkins). State revenues include a state's share of its funding formula(s) for unrestricted operating revenues and often also include specific funding for special student populations, and any additional funding streams a state may have, such as categorical and grant funding to be used for specific educational purposes. Local revenues include the local contributions required by state level funding formulas and any additional funds raised by local LEAs or municipalities to support students.

Each state varies in the mix of state, local, and federal revenues included in the total amount of funding available for students. To examine these differences, the study team used Common Core of Data (CCD) information from the National Center for Education Statistics (NCES) for the 2015–16, 2010–11, and 2005–06 school years.

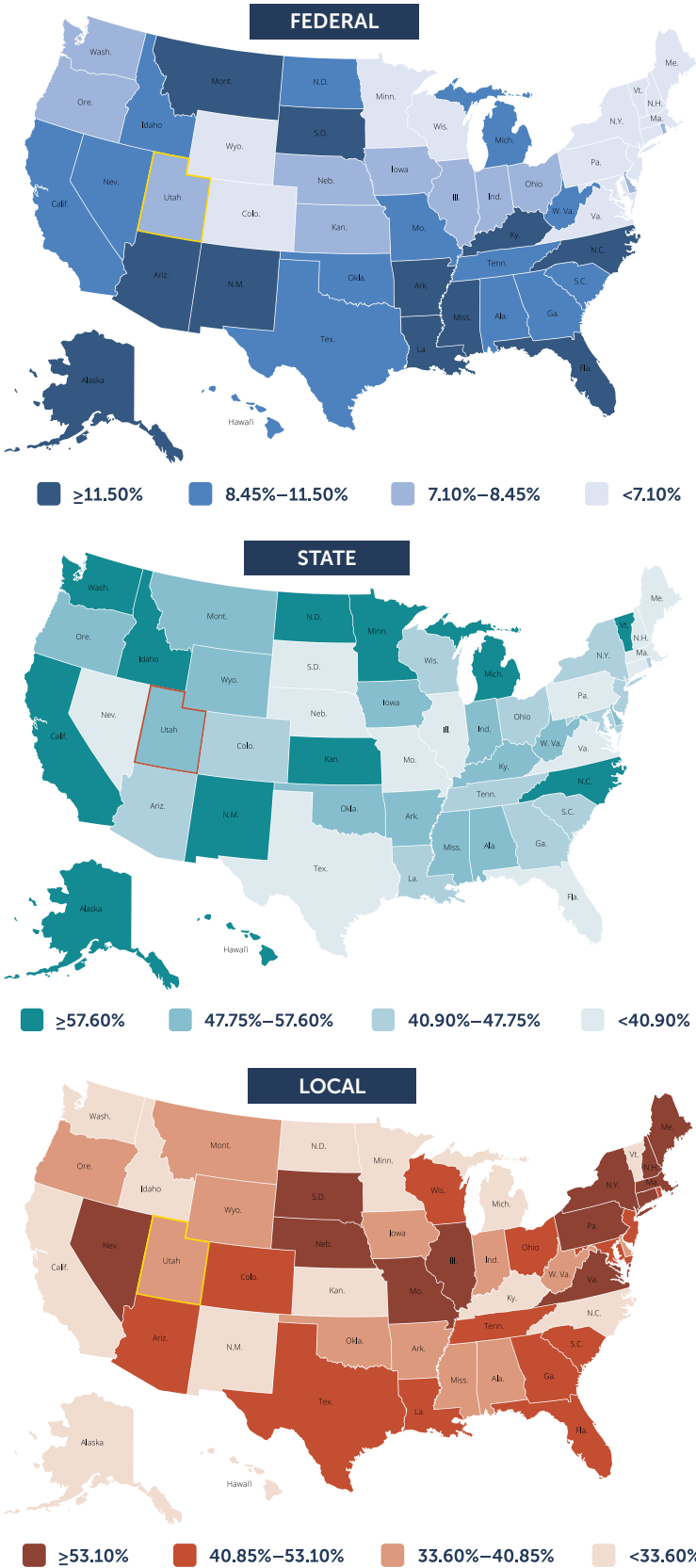
The 2015–16 school year is the most recent year for which fiscal data is available for all states and the two additional years allow for examination of how revenues have changed over time.

As shown in Exhibit 26, in 2015–16, Utah’s state share equaled 55% of total revenue, with local revenue at 37.0%, and federal revenues accounting for the remaining 8%. The national average of the 50 states is 50% state, 41% local, and 9% federal revenue. Utah has about a five percentage point higher reliance on state revenue compared to the national average and about a four percentage point lower reliance on local revenue, while receiving one percentage point less federal revenue than the national average (U.S. Department of Education, 2016).

While state revenue accounts for 50% of funding on average nationally, Illinois provides the lowest level of state support at 24%. Illinois’ local share is the highest in the country at 67%. Vermont provides the vast majority of total funding for its districts with 89% of revenues from the state and just 4% coming from locals. Vermont’s local share is only exceeded by Hawaii’s, which operates as a single statewide school district. Mississippi receives the highest share of federal funds at 15% of all revenues, with New Jersey having the lowest reliance on federal funding at just 4% of total funding.

Exhibit 25 displays by state the percent of total revenue in 2015-16 for each funding source; federal, state, and local.

Exhibit 25. Revenue by Source, 2015–16



Note: Only states are reported. Other jurisdictions, or entities, such as Washington, DC, are not included.

Exhibit 26 shows the national average and Utah figures for 2015–16, 2010–11 and 2005–06. In 2005–06, the national average split between state, local, and federal funding was very similar to 2015–16, with 49% of funding coming from the state, 41% from local, and 10% from the federal government. The 2010–11 numbers show the impact of the Great Recession nationally. State funding dropped to 47% of total revenue, while federal stimulus dollars, known as American Recovery and Reinvestment Act (ARRA) dollars, helped to increase federal share to 13%.

Utah saw a very similar pattern in funding over this 10-year period. The 2005–06 figures are consistent with the 2015–16 figures, with state share at 55%, local share slightly lower at 35%, and federal funding slightly higher at 10%. In 2010–11, state share dipped by 4 percentage points to 51%, while local share increased to 37% and federal share rose to 13%. Overall, Utah’s state share was higher than the national average in all years, while its local share was lower than the national average. Utah also had lower than average federal share in all years.

Exhibit 26. National Average and Utah Revenues by Source, 2005–06, 2010–11, and 2015–16

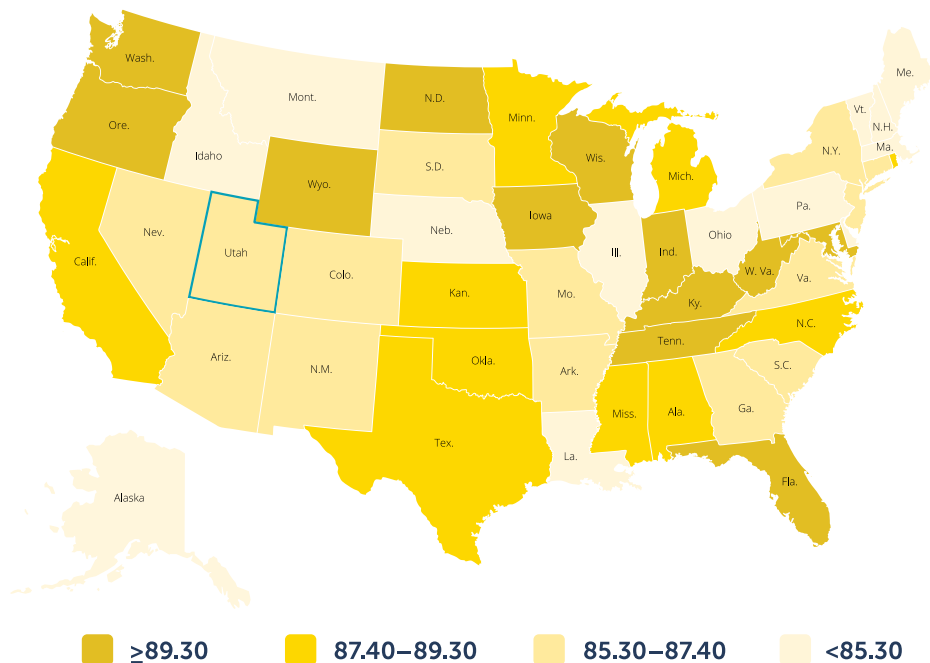
Year	State or National	State Share Percentage	Local Share Percentage	Federal Share Percentage
2015–16	Utah	54.6%	37.0%	8.3%
2015–16	National Average	49.9%	41.1%	9.0%
2010–11	Utah	50.9%	36.5%	12.6%
2010–11	National Average	46.7%	40.0%	13.3%
2005–06	Utah	55.1%	35.3%	9.6%
2005–06	National Average	49.1%	40.9%	9.9%

Examining the 50 states shows a wide variation in the distribution found across the three revenue sources. There is no specific research on the “best” distribution, and each state’s finance system and state policies and laws dictate its final distribution. This includes the required local match each state mandates and the ability for local districts to generate additional funding above that provided by the state funding system.

Several organizations measure the equity of funding systems, including Education Week, the Urban Institute, and the Education Law Center. These groups look at the progressiveness and regressiveness of each state’s funding system. In other words, they measure how well the funding systems provide additional funding for students with special needs, often measured by those students in poverty. Many of these groups provide a letter grade for each state, and Education Week also publishes an Equity Score.

Using Education Week’s Equity Score from their *Quality Counts 2019* publication, which examines 2015–16 revenue data, the study team examined the relationship between state and local share percentages and each state’s Equity Score. Exhibit 27 shows the equity score for each state. A complete table of state and local share, and equity scores is included in Appendix E. The study team examined the correlation between both the state and local share percentages and equity score for the states.

Exhibit 27. Equity Score by State



Note: Hawaii was removed from the analysis as it did not receive an equity score since it is a single statewide district. National average is calculated as the average percentage of each of the 50 states. Numbers do not add up to 100% due to rounding. Only states are reported. Other jurisdictions, or entities, such as Washington, DC, are not included.

When examining the correlation between two sets of data, a 1.00 figure represents a perfect correlation between two data sets. A 0.00 figure represents no correlation. The relationship between both state and local share and the Equity Score is effectively 0.00. This means that there is no clear relationship between how much states rely on state or local share for funding districts and the equity of the states' funding systems, as determined by Education Week's *Quality Counts 2019*.

This is also reflected in the variation in state and local shares of those states receiving an Equity Score of 90.0 or higher. Florida, which had an Equity Score of 92.6, the highest of all states, has a state share of 39.3% and local share of 49.2%. Wyoming, with an Equity Score of 90.0, has a state-local share mix of 57.6% and 36.4%.

State Policies on State and Local Share

The project scope calls for an examination of language that would ensure that school districts “participate on a partnership basis in the payment of a reasonable portion of the cost of a minimum program.” As shown in the state and local share data analysis, there is no correlation between state and local allocations and with equity. As such, there is no clear “right” contribution level or right approach. This section of the report examines the range of possible approaches for setting local share and highlights a number of specific examples.

The concept of a partnership between the state and local districts brings into question how to define the appropriate partnership. Most states require some level of local share for the minimum program, but how that local contribution is defined varies. States often measure local contribution as a level of local effort, similar to Utah.

Maryland offers an example of a state that goes beyond setting a local contribution and instead sets a distinct goal for the local and state split of funds. Since the implementation of its latest funding formula in the early 2000s, the state has targeted a 50/50 split for each of its four funding formulas. This includes its foundation, compensatory education, English Learner, and special education formulas. The state calculates the targeted funding within each formula, generates a 50/50 split based on districts' wealth and then provides a minimum level of state funding within each formula to ensure every district receives some state funding. Since local share is determined as percent of total funding, tax rates are not fixed and local effort may need to fluctuate to meet the full local share.

An alternative to setting a specific required percentage would be to continue to set a required local contribution, as Utah currently does, but to increase the required level to generate a higher local share to more evenly split the share of funding from state and local sources. Two examples of this are **Ohio** (44.90% state, 47.40% local) and **Wisconsin** (45.50% state, 47.30% local).

In either scenario, the state would also need to consider how to address local revenues in excess of what is required to fund the minimum program in order to address equity. Two examples illustrating the range of approaches include **Wyoming** and **Nevada**. Wyoming establishes a district's foundation program, then compares the amount of funding needed to provide that program against a district's available local revenue sources raised by the required local effort. If a district has less revenues than needed, the state provides additional funding. If a district has additional revenues, then these districts must rebate these funds back to the state through a recapture process; these funds are then redistributed to the other districts. This promotes taxpayer equity in the state, both setting the same level of tax burden in each district and ensuring that funding is not based upon the wealth of a community. Nevada takes a different approach. It sets a required tax rate, but then considers just one-third of the taxes collected as available local funds for the minimum program, with two-thirds of funds available to the local district. This has led to large differences in the level of funding in districts in the state.

Appendix E offers full statutory language for all example states.

The study team recommends that Utah continue to both set a required local contribution amount, while still being cognizant of the equity issues that may arise without limits or equalization of the local revenues raised above the minimum program.



Part 3: What do other pathways offer?

In Part 3, the study examines other possible pathways for funding equity in the system. The first section examines enrollment-based funding model incentives. To complete this portion, the study team engaged in a focus group with Utah stakeholders to discuss the possible fiscal impacts of changing student counts. Using the results of the literature review, examination of policies in other states, and data modeling, the study team identifies the advantages and disadvantages of the different methods.

Additionally, the policy of Year Round Schooling (YRS) is examined. Based on a review of existing literature and current policies, the study team summarizes available evidence of the impact of this alternative calendar both within Utah and across the country.

Research Objective 3b/3c: Examination of the behaviors the current enrollment-based funding model incentivizes and alternative proxies

Funding for schools is often the largest single funding item for state governments. The student count processes used across states determine the total level of funding allocated through state funding formulas.

For states, decisions can be related to the types of incentives a state wants to build into the funding policy, or the level of precision it attempts to build into the counting and budgeting processes. These state decisions can have significant funding implications for districts. This section examines the key policy decisions each state makes when designing its student count, the impact those decisions can have on the count, and the counts used across the states. It also includes a discussion of competency-based funding as an alternative approach to current student count practices.

The first policy decision that states make is whether student counts are based upon membership or attendance:

- Membership is the number of students that are enrolled on a given day or during a given period.
- Attendance is the number of students that are present on a given day or during a given period.

Defining enrollment as membership works to identify the total number of students served by a district, and often also the count used for accountability purposes. Membership counts tend to produce the highest student counts, as students do not need to be present to be counted. Attendance, on the other hand, would produce lower student counts as attendance tends to be at a lower rate than full membership. Attendance rates are also

commonly correlated with the need of a district, meaning a district with higher student need is more likely to have increased rates of absenteeism. As such, high-need districts can be negatively impacted by count policies that rely on attendance. Conversely, a criticism of the membership approach is that it does not incentivize districts to focus on maintaining high attendance to receive funding.

The second key policy decision is the specific count mechanism used. These various mechanisms can be considered broadly in four different categories.

Exhibit 28. Specific Count Mechanisms

Specific Mechanism	Description
Single count:	count of students on a specific day
Multiple counts:	count of students on more than one specific day
Average (short period):	the average count of students over a shorter set period of time, such as a 20-day window
Average (long period):	the average count of students over a longer set period of time, typically the majority or entirety of the school year

As with the issue of whether students are counted based upon membership or attendance, the method for counting students will also have both fiscal impacts and other incentives for districts.

Counting students on a single day, while straightforward, can have the unintended consequence of not providing funding for students that enroll in a district after the count day and further does not incentivize districts to ensure student attendance throughout the year. Using more than one count day can partially address these two issues, while using an average over an extended period of time further increases the likelihood that districts’ student counts accurately reflect the number of students they serve.

States also make decisions regarding how to address declining enrollment or growth, as well as how to address students enrolled less than full time.

Utah’s Current Student Count

Utah uses an ADM count that examines the average membership for each district over the course of the school year, measuring membership on each day of the school district’s year. As will be shown in the section below, 38 states use ADM as part of their student count, but the variation in how ADM is applied is wide and few states measure ADM in exactly the same way. One important consideration is that Utah utilizes the 180/990 rule, requiring both a minimum number of school days (180) and a minimum number of hours (990). These minimums can have impacts on students counts for districts looking to provide alternative instructional programming such as Competency-Based Education. The section below examines the different approaches used nationally, including how states address students that attend school less than 100 percent of the time.

Policy Scan of Current Statewide Student Count Practices

The study team reviewed how students are counted for state funding formulas in all 50 states and the District of Columbia (DC). While each state is unique in the specifics of how it counts students, there are a number of commonly used approaches.

Most states (38, including DC) base their student counts on membership. However, states still vary in the specific mechanisms they use to count either student attendance or student membership.

The following exhibit summarizes the approach taken by each state.

Exhibit 29. Specific Count Mechanism Taken by State

Specific Mechanism	Membership	Attendance
Single Count	Delaware, District of Columbia, Indiana, Louisiana, Maine, Maryland, Massachusetts, New Jersey, South Dakota, West Virginia	Colorado, Connecticut, Iowa, Kansas
Multiple Counts	Florida, Georgia, Michigan, Montana, New Mexico, South Carolina, Washington, Wisconsin	
Average (short period)	Alabama, Alaska, Ohio, Vermont	Kentucky, Illinois
Average (long period)	Arizona, Arkansas, Hawaii, Minnesota, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Utah, Virginia, Wyoming	California, Idaho, Mississippi, Missouri, New Hampshire, New York, Texas

Within each of these categories, the specifics of the exact dates, frequency of count days, and length of count windows vary. Examples of each type of student count are provided below.

Single Count

Typically, states using a single count day have chosen a day early in the school year. For example, **South Dakota** uses the number of students that are enrolled on the last Friday of September, while **Connecticut** uses the number of students that are in attendance on October 1st.

Multiple Counts

States basing their student count on one or more days range in the number of days they consider, from two days (typically one day in the fall and one in the spring) up to nine days (**Florida**). For example, **Montana** bases its student count on the number of students enrolled the prior year’s October 1st and February 1st, while **New Mexico** uses the number of students enrolled on the prior year’s 80th and 120th days of school.

Average (short period)

A limited number of states base their Average Daily Membership (ADM) or Average Daily Attendance (ADA) on a shorter set window of time. **Alabama, Alaska, and Vermont** base their ADM on a set 20-day window, while **Ohio** bases its ADM on the average number of students in attendance during the first full week of October. **Kentucky** and **Illinois** based their ADA upon a window of time instead of a full year. Kentucky's is based upon the highest two-month average of students in attendance over the past two years, and Illinois similarly uses the highest three-month average in the prior year.

Average (long period)

Utah's primary approach to counting students, ADM, falls into this category (with a secondary count to adjust for growth). Most states that use ADA or ADM base these figures on the average number of students over the entire school year, or at least the majority of a school year. States using a partial school year include **Arizona** (the first 100 or 200 days of the school year), **Arkansas** (first three quarters), and **Idaho** (highest 28 weeks). All other states in this category, including **Nevada, North Dakota, and Utah**, use an average of the entire school year.

Other Factors

There are two other key decisions that states make to address student counts: (1) how to address declining enrollment or growth, and (2) how to count students that are enrolled less than full time.

Addressing Declining Enrollment or Growth

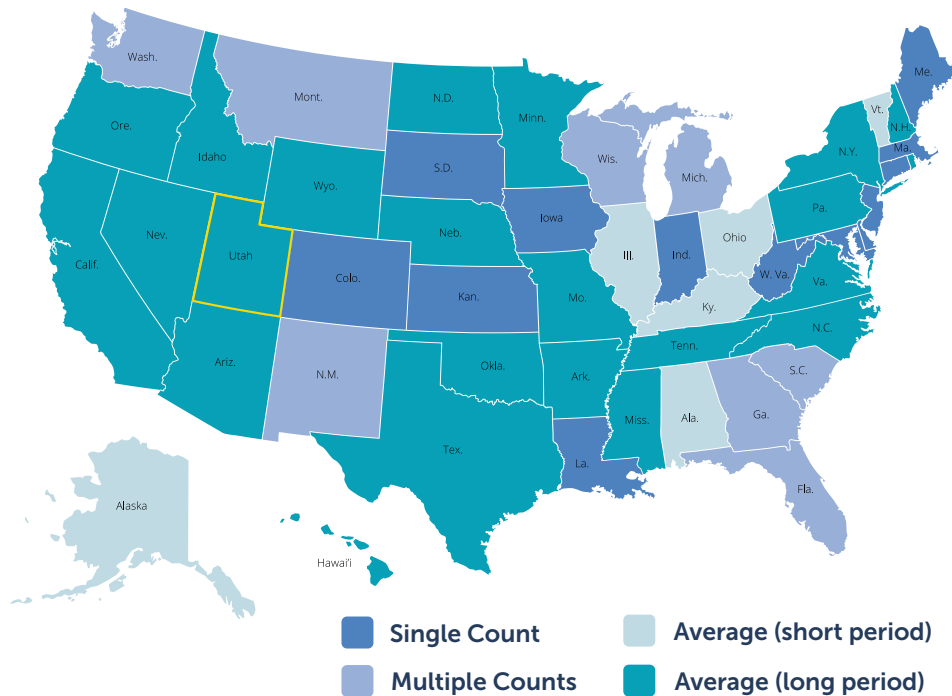
States make different adjustments to account for either increasing or declining enrollment. To address declining enrollment, some states use an average across years (of count days, windows, or annual figures). To address growth, some states make adjustments for when current year student counts are higher than the prior years. **Utah** is an example of the later. Utah uses prior-year ADM, but also adjusts this figure based on a growth factor determined by fall enrollment counts. One approach to address both declining and increasing enrollment is to use a “best of” or “greater of” approach, such as in **Wyoming**. Wyoming determines a district's ADM based upon the greater of either the average enrollment of the prior three years (addressing declining enrollment) or the prior year's enrollment.

Partial Student Counts

Finally, states differ on how they count students that are enrolled less than full time. For example, **South Carolina** counts any student enrolled at least 50% time as a 1.0 (Full-Time Equivalent) FTE, and anything less as a 0.5 FTE. In **Wyoming**, the threshold is higher, with students enrolled less than 80% time counted as partial FTEs, and anything above that threshold as 1.0 FTE. **Alaska** similarly determines membership based upon the number of days in which an enrolled student is scheduled to attend a school, rounded to the full day (therefore anything above 4 days a week, 80%, would be a full FTE).

Exhibit 30 below identifies student count policies for all 50 states and DC.

Exhibit 30. Student Count Policies, 50 States



Competency-Based Education Funding

In addition to the commonly used student count practices described above, several states have also considered incorporating alternative measures for counting students, other than seat time. One such approach is competency-based education, which has implications for a multitude of state education policy areas, including funding and how to count students who may be moving more quickly or more slowly through education than a traditional student.

A commonly accepted definition of competency-based education identifies five key elements (iNACOL, 2018):

1. Students advance upon demonstrated mastery.
2. Competencies include explicit, measurable, transferable learning objectives that empower students.
3. Students receive timely, differentiated support based on their individual learning needs.
4. Assessment is meaningful and a positive learning experience for students.
5. Learning outcomes emphasize competencies that include application and creation of knowledge, along with the development of important skills and dispositions.

Most states, even those that are moving toward — and implementing elements of — competency-based systems, still utilize more traditional methods of counting students for state funding purposes, such as those described earlier in this section. Many have funded pilot programs or other efforts to allow districts the flexibility to implement competency-based education, but changing state funding formulas has not been prevalent.

A 2017 report from the U.S. Department of Education’s REL Central examined the competency-based education policies of seven central region states. It also noted the policies of five states identified as

being advanced in aligning their state policies to competency-based education: **Iowa, Kentucky, Maine, New Hampshire, and Oregon.** The report found that the leading states have funded efforts to develop definitions of competency-based education, to develop and implement common assessments and grade-level or course-specific competencies, and to develop resources and networks to pilot competency-based education. However, it did not identify any changes in state funding formulas to distribute funding differently (Brodersen, Yanoski, Mason, Apthorp, & Piscatelli, 2016).

A June 2018 iNACOL report, *State Funding Strategies to Support Education Innovation*, identifies “17 states, including Utah, that have comprehensive policy alignment and/or have established an active state role to build educator capacity in local school systems for competency-based education. Thirteen states have open state policy flexibility for local school systems to transition to competency-based education” (iNACOL, 2018). The report documents examples of funding strategies to support competency-based education, including:

- **Utah** — In 2016, the Utah legislature created the Utah Competency-Based Education Grants Program, a pilot program provides grants to school districts and charter schools to transform learning to personalized, competency-based learning. In the 2017–18 school year, USBE, in partnership with national experts and LEA leaders, conducted site visits to competency-based education sites, hosted a state workshop and released the Utah Competency-Based Education Framework. A planning grant program will be released in FY 2021 to support LEA planning for competence-based education, with a competitive competence-based education implementation grant program slated for FY 2021–22.²²
- **Vermont** — The Vermont Agency of Education used one-time, repurposed state funds to enable school districts to participate in a series of professional development seminars on a systemic approach to proficiency-based learning. Approximately half of Vermont’s school districts participated in the series.
- **Rhode Island** — The Rhode Island Office of Innovation categorized and cataloged the state’s work for student-centered learning through a Statewide Personalized Learning Initiative. In partnership with the Rhode Island Department of Education, the Highlander Institute, and other organizations, the office launched the initiative with a white paper, creating shared definitions and an understanding of what personalized learning means (and does not mean) in Rhode Island. This white paper served as a tool for organizations to raise funds for creating a community of practice for personalized learning.
- **South Carolina** — The South Carolina Department of Education (SCDE) developed the South Carolina Framework for Personalized Learning, which identifies the essential elements in transforming learning systems to ensure students attain the knowledge, skills, and characteristics of the Profile of a South Carolina Graduate. It also repurposed approximately \$1 million in recurring funds from SCDE’s operating budget and created an Office of Personalized Learning with staff to work as liaisons with schools, engage communities, provide professional development, and support school leaders and educators working to implement personalized, competency-based learning.

A handful of states have implemented a completion-based funding model for online schools, which may provide an example of how states might consider different funding formulas for competency-based education. It is important to note, however, that completion-based is not the same as competency-based; completion-based funding compensates schools when students meet predefined milestones, which are not necessarily competency-based (Miller, Just, & Cho, 2016; p. 5).

New Hampshire utilizes a completion-based funding model for the state’s online/virtual high school, the Virtual Learning Academy Charter School (VLACS). Through a memorandum of understanding, the state

22 For more information see: <https://www.schools.utah.gov/curr/competencybased?mid=4181&tid=0>.

converts the school’s completions into membership, enabling the state to distribute funds based on average daily membership, as required by the state. The state funds “VLACS based on predicted completions each year and then reconciles predicted with actual completion rates at the end of the academic year. Any surplus or deficit carries over to the following year’s funding” (Miller, Just, & Cho, 2016; p. 6). **Florida** utilizes a completion-based funding model for students taking online courses, but completion is measured by passage of an end-of-course assessment (Miller, Just, & Cho, 2016; p. 3). **Minnesota** also funds based upon completion of online courses and calculates the average daily membership equivalent as the basis for payment (Minn. Stat. 124D.095 (2019), Subd. 8).

As no state has implemented a broad scale state funding mechanism for competency-based education state-wide, beyond the traditional means of counting students, any change to how states count students for funding purposes should be modeled to demonstrate the potential impact of that change — and identify any unintended consequences — on a variety of student, school, and district scenarios.

Student Count Advisory Group

On September 20th, the Student Count Advisory Group met. The advisory group including school board members, budget officers, stakeholders, and state policy staff. The meeting was focused on understanding the concerns districts have with the current student count policies in relationship to competency-based funding and on beginning to explore possible paths for identifying a solution.

Stakeholders identified that districts have a perverse incentive to restrict students from progressing more quickly, as districts can lose funding if students do not take a full course load in later grades.

District staff and board members discussed the difficulty in providing flexibility to students and families within the current student count structure. Districts are working to allow students to progress through the system at a pace that best meets their academic needs, which includes students taking courses outside of the traditional school calendar and/or showing competencies in subjects earlier in their academic progression than the usual course progression.

The group did not focus on the need for a new student count system in total, but instead focused on adjustments to the current approach that would allow for more flexibility for students and families.

A possible solution would allow districts to receive full funding, in this case 13 years of funding, regardless of when competency is shown. It was highlighted that current funding laws might allow for this with the restrictions actually aligned to rules/policy versus law. It was agreed that the group would investigate the alternatives during its further work.

Research Objective 3d: Analysis of the impact of year-round schooling models

Today, school calendars have settled into a common approach wherein students attend school continuously from fall to early summer, except for holiday breaks, and then take a long break over the summer. However, this typical calendar has not always been the norm, and some districts have always employed alternative approaches. Generally, these alternatives are referred to under the broad name of Year-Round Schooling (YRS), also referred to as a “balanced calendar.”

YRS typically structures instructional time so as to provide students with shorter and more frequent breaks, in some cases also extending instructional time, though this is typically viewed as a separate policy.

Two common types of YRS are the **single-track** and **multi-track**. Single-track variation comes in the form of 45 days on and 15 days off or 60 days on and 20 days off. The defining aspect of this type is that students are all on the same calendar. In contrast, multi-track refers to multiple school calendars or “tracks.” Generally, as many as three tracks may exist at one time (Boyd, 2018). The exhibit below illustrates the difference between these two types.

Exhibit 31. Multi-Track vs. Single-Track

Single-Track

AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Instruction	Instruction	Break	Instruction	Instruction	Break	Instruction	Instruction	Break	Instruction	Instruction	Break
ALL STUDENTS											

Multi-Track

AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Instruction	Instruction	Break	Instruction	Instruction	Break	Instruction	Instruction	Break	Instruction	Instruction	Break
STUDENT GROUP A											
AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Break	Instruction	Instruction	Break	Instruction	Instruction	Break	Instruction	Instruction	Break	Instruction	Instruction
STUDENT GROUP B											

History of YRS in the United States and in Utah

Historically, the school year calendar, whether it be YRS or traditional school year, was based on community needs, and varied community to community. In fact, before 1890, schools in urban regions were following an 11-month calendar. But by 1900, the traditional school year calendar began to gain popularity, though it still competed with the YRS calendar in some regions (Presden, 2012). Locations such as Bluffton, Indiana; Newark, New Jersey; Aliquippa and Ambridge, Pennsylvania; Nashville, Tennessee; and Omaha, Nebraska implemented a year-round calendar system between 1904 and 1924.

In some cases, YRS was implemented in cases of high population growth. For example, as late as 1968–1970, YRS was established in Missouri, Illinois, Minnesota, and California to specifically address the rapid growth in population (Presden, 2012). And in 1972, California began to create multi-track schools to further address growth. It was during this time that educators gathered to create the National Association for Year-Round Education (Presden, 2012).

In Utah, YRS began to increase in the late 80s/early 90s, according to an article written in 1991 in the *Deseret News*. Specifically, in 1987, YRS surged after legislatures closed down buildings that did not operate at 70% capacity or more. With capital expenditures declining and enrollment growing, YRS was seen as a strategy for accommodating this growth. In 1990–91, there were 65 YRS schools in Utah, all but five of which were elementary schools. Among the typical YRS schedules, the most popular in Utah is 45 days on and then 15 days off (Desert News, 1991).

Relevant YRS Research

Generally, research into the value of YRS over traditional school calendars has been limited. The research that does exist tends to focus on three areas: (1) impact on student achievement, (2) impact on costs, and (3) local impact/support. In fact, these areas of research align with the common arguments for and against adopting YRS. This may suggest that the interest in assessing YRS is often driven by advocacy one way or the other. The exhibit below outlines the common arguments on both sides of the issue (Skinner, 2014).

Exhibit 32. Common Arguments For and Against YRS

For YRS	Against YRS
Impact on Student Achievement	
<ul style="list-style-type: none">Mitigates “summer learning loss”Creates opportunities for remediationIncreases student achievement	<ul style="list-style-type: none">Distracts from more effective reforms
Impact on Costs	
<ul style="list-style-type: none">Results in cost savings	<ul style="list-style-type: none">Adds costs for facilities, operations, staff, etc.General challenges with implementing multi-track schools
Local Impact/Support	
<ul style="list-style-type: none">Prevents staff burnout	<ul style="list-style-type: none">Creates scheduling issues for familiesEliminates summer job opportunitiesNegatively impacts local summer industries

Note: The National Association for Year-Round Education (NAYRE) advocates for YRS, while the National Coalition for the Traditional School Year and Summer Matters advocate against it.

Summary of Available Research

The limited available research into the impact of YRS on student achievement is mixed. While Cooper, Valentine, Charlton, and Melson (2003), in a meta-analysis, found some evidence for a positive impact on achievement, the authors noted there were often weak research designs and caution against strong inferences. More recent studies are also somewhat mixed, including a 2010 study employing more rigorous research methods, which found no impact of YRS on achievement (Wu & Stone, 2010).

With respect to its impact on costs, there is some evidence supporting cost savings resulting from multi-track school calendars, particularly with respect to capital and operational costs (Daneshvary & Lauretie, 2001). However, some research suggests these savings come at a cost to achievement (Graves, 2010), and there is some evidence that other approaches, such as single-track calendars, may actually cost more (Joint Legislative Audit and Review Commission [JLARC], 2012).

Finally, assessments of public opinion on YRS have evolved over time. An early meta-analysis, Cooper et al. (2003), suggested attitudes were generally positive. However, more recent studies find negative reactions to be more likely (von Hippel, 2015), and suggest there may be unintended impacts on the local workforce. For example, a 2013 study finds that maternal employment declines when available childcare is broken up into shorter intervals (Graves, 2013).

YRS Implementation in Utah

In 1996, Utah had the second highest number of year-round schools (Shields, 1996). Between the years 1990 to 1995, data from a school district in Utah were used to compare a multi-track YRS calendar and a traditional calendar. There were several findings that came out of this small study. First, it was revealed that YRS schools provided “slightly superior educational experience” in regard to reading ability. Non-academic outcomes between YRS schools and traditional calendars were the same; however, “student academic performance in YRS over a 6-year period exceeded the performance of students in traditional schools” (Shields, 1996). In a 2015 news article, Butterfield Canyon Elementary and Herriman Elementary, both of which are part of the Jordan School District in Utah, were converting from YRS to traditional calendars. The article took a look at the primary reaction to this change. During this time, Jordan School District was — and still is — ranked as the fourth largest school district in Utah. With respect to local support, the news article found that 80% of teachers favored the YRS, whereas 70% of parents preferred the traditional calendar (Wood, 2015). As of 2019, both of these schools are currently on a traditional school year calendar.

Assessment of YRS Impact on Spending Efficiency and Student Learning

Impact on Spending Efficiency

Regarding the cost savings of utilizing YRS, studies have not conclusively proven it to be effective. As an example of construction costs, it was found that districts did save money without having to build new structures (or as many) compared to a traditional calendar school (Inger, 1994). Another study found that when “average daily attendance, test performance and socioeconomic variables” were taken into account, YRS indicated spending efficiencies compared to traditional calendars (Daneshvary & Clauretie, 2001).

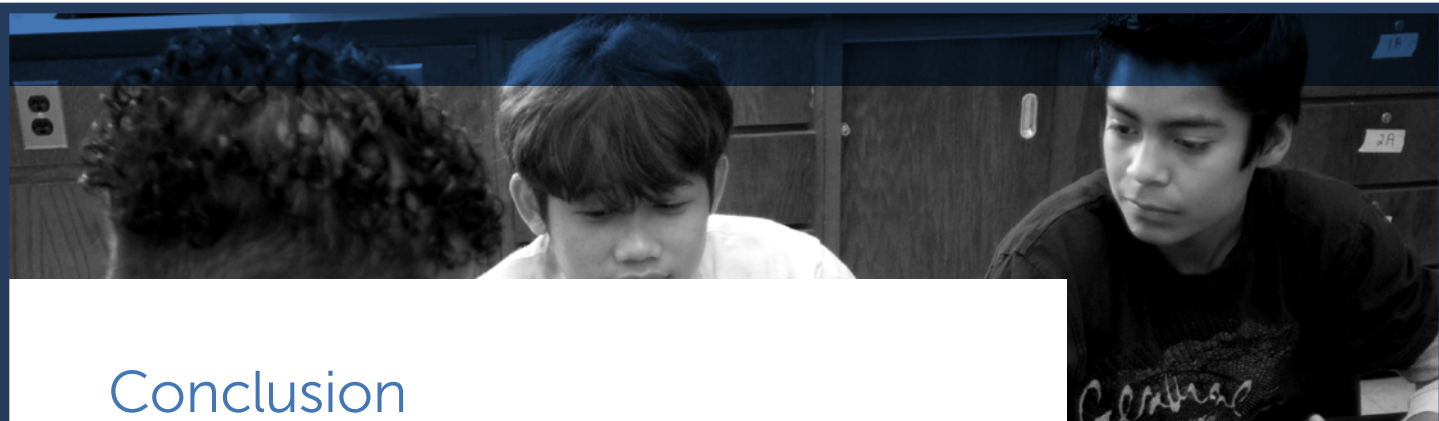
However, based on the Joint Legislative Audit and Review Commission, “literature indicates that YRS using a multi-track design may delay or avoid projected capital expenses, while a single-track design may *increase* operating costs” (JLARC, 2012). When transition costs from traditional to YRS were included — such as “feasibility studies, administrative planning time and teacher in-service training,” and operating costs of a school running for approximately 242 days a year, maintenance, utility increase, and availability of administrators and staff for 12 months — the cost savings were mixed (Inger, 1994). And, as noted above, some research suggests any savings may come at a cost to achievement (Graves, 2010).

Impact on Student Learning

In a very small case study with three schools, it was found that YRS students compared to traditional calendar students “outperformed” compared to “mean scores for fifth grade reading national percentiles and the growth from third to fifth grade in both subjects” (Ramos, 2006). The authors continued that reading achievement compared to traditional calendar year was not statistically significant (Ramos, 2006). In fact, studies have failed to show significant differences between YRS and traditional schools due to limited evidence (Zykowski et al., 1991; Cooper et al., 2003; Wu & Stone, 2010). Hence, additional research is needed to validate if student learning is positively impacted by YRS.

In conclusion, while there is some suggestive evidence in Utah and beyond regarding the impact of YRS on costs and student outcomes, the findings are mixed and limited. This suggests that any consideration of YRS as a policy matter might benefit from pilot testing or other approaches to assessing the effectiveness of the policy in meeting the intended goals within the specific implementation context in Utah.

In Phase 2, the study team will conduct some analysis regarding the extent to which YRS implementation is a significant factor in spending efficiency.



Conclusion

As the state of Utah continues to evolve and change, its public education system must adjust to provide the appropriate supports for students and families in order to serve the educational and economic demands of the next generations of Utahns.

This study examines the function of the funding system for the public education system with a specific lens towards alignment between Utah's vision for students and the Minimum School Program as defined by statute. It serves as a baseline analysis of the distance between Utahns' expectations of a minimum school program and how the Minimum School Program (as defined in statute) structures the flow of funds to students in the state of Utah. It does so by examining distribution formulas and the roles of state and local jurisdictions in funding the needs of Utah's students.

Part 1: What are the current expectations in Utah for a minimum school program?

The analysis in Part 1 examines the state-endorsed or adopted standards, assessments, and strategic documents and compares them to stakeholder perceptions of an ideal minimum program. It concludes by identifying core components and subcomponents of a minimum school program, organized using identified levels of support across the sources of information considered.

In summary, Utah stakeholders reported that the vision set by the USBE strategic plan aligns to their own vision for Utah's schools, and they emphasized the importance of early learning, safe and healthy schools, and a focus on the teacher shortage. Stakeholders also expressed confidence in the core standards and the related scope and sequence, noting them as the right path. However, they noted that there is one significant exception with respect to social-emotional learning and emphasized the need for integrating this within a holistic academic program.

Part 2: How does the current funding system align with these expectations?

The analyses in Part 2 consider the extent to which the current statutory Minimum School Program aligns with these core components, the equity of the current system, alignment with evidence-based practices, and a review of the balance between state and local contributions to the education system in Utah.

Research Objective 1b: Evaluation of current distribution formulas

With respect to alignment between statute and the identified core components, this report finds that there is general alignment between the expectations of the minimum school program, the target outcomes based on the PoG, and the assignment of funding based on statute and related categorical programs. However, stakeholders noted the burden of pursuing grant funding under the Minimum School Program as an area for additional exploration.

Research Objective 1b: Equitable Access to the Minimum School Program

In terms of equity, this study finds that per student resources, revenues or expenditures, increase across the quintiles along with wealth per pupil. This may suggest that a relationship exists between local wealth and the educational resources available per ADM, and that Utah's school funding system is not as equitable as it could be.

With respect to horizontal equity — comparing resources across school districts — using a standard metric in the research literature, in both years examined (2013–14 and 2017–18), only average teacher salary meets the equity standard, and, when comparing resources with weighting for the need of students, there is little difference in the standard metric, indicating that the funding formula is not providing sufficient additional resources for students with greater needs.

Finally, with respect to fiscal neutrality, examining the relationship between the wealth of a district and the resources it has for educating its students, many of the fiscal neutrality measures exceeded the standard, indicating that to some degree, district resource levels are related to district wealth.

Research Objective 1b: Alignment with evidence-based practices

The review of evidence-based practices points to a growing body of rigorous national research providing evidence to inform future policy discussions in Utah, including directing resources to high need students, targeting investments, and building effective decision-making practices.

Research Objective 1c: Analysis of the role and balance of the state and local contribution

The review of the balance of state and local contributions in this section finds that Utah is generally more reliant on state funds than the national average, but finds no evidence that the division of funding by source bears any relationship to overall equity.

Moreover, the study team recommends that Utah continue to both set a required local contribution amount, while still being cognizant of the equity issues that may arise without limits or equalization of the local revenues raised above the minimum program.

Part 3: What do other pathways offer?

Finally, Part 3 of this report examines two specific, policy-relevant topics: the incentives and alternatives to enrollment-based funding, and the impact of year-round schooling.

Research Objective 3b/3c: Examination of the behaviors the current enrollment-based funding model incentivizes and alternative proxies

A key takeaway from the review of methods by which states count students for the purpose of education funding is that most state still utilize more traditional methods of counting students for state funding purposes, even in states that are pursuing competency-based systems.

Given that no state has implemented a broad scale state funding mechanism for competency-based education statewide, this section of the report concludes that any change to how states count students for funding purposes should be modeled to demonstrate the potential impact of that change on a variety of student, school and district scenarios.

The engagement with stakeholders investigating competency-based funding systems and its interaction with funding reveals a consensus that current funding laws might allow for necessary flexibilities. However, the conversation is ongoing. Modeling of any changes should be conducted prior to implementing.

Research Objective 3d: Analysis of the impact of year-round schooling models

This analysis of research into year-round schooling finds that while there is some suggestive evidence in Utah and other states regarding the impact of an alternative calendar on costs and student outcomes, the findings are mixed and limited.

The section concludes that any consideration of year-round schooling as a policy matter might benefit from pilot testing or other approaches to assessing the effectiveness of the policy in meeting the intended goals within the specific implementation context in Utah.

Looking ahead to Phase 2

The aims of this report and the first phase of this study overall were primarily to examine and reflect the current system in Utah with respect to a few key aspects of the system. While the study team identifies key findings and reaches some conclusions, generally this first phase represented the beginning of the work, not the end.

In the second phase of the study, the team will draw on a broader base of quantitative and qualitative data, continue to engage with Utah stakeholders, and conduct more comprehensive analysis. This includes conducting a few specific analyses, including:

- a cost function analysis to examine cost differences by educational context,
- a deeper examination of current equalization programs, including the impact on equity of requiring a local funding match, and

-
- a modified successful schools analysis to understand how high-performing districts allocate resources and utilize non-monetary resources to improve student outcomes.

Ultimately, Phase 2 of this study will conclude with a final report detailing the results of these analyses, and including actionable recommendations to address discrepancies between funding and intended purposes or how to otherwise improve equitable access in the state of Utah.

Appendix A

Stakeholder Summary

The following summarizes the stakeholder engagement approach for Phase 1 of the study. All quotes are not verbatim, and are slightly modified for brevity. Participants are not identified.

Engagements²³

- Enrollment Input Session: September 20th, 2019
- MSP Input Session 1: September 17th, 2019
- MSP Input Session 2: September 18th, 2019
- MSP Input Session 3 (Business Administrators): October 24th, 2019
- MSP input Session 4 (Charter LEA Directors): December 9th, 2019
- Phone Interviews: 11 total interviews held throughout September

Stakeholder Profiles

Minimum school program Input Sessions #1 and 2

- 15 total stakeholders participated
- The stakeholders who engaged in this Phase 1 report were superintendents representing the full geographic and demographic range of Utah, as well as district business administrators
- 8 Superintendents or Assistant Superintendents
- 6 Business Administrators
- One Director of Accounting

Minimum school program Input Session #3 (Business Administrators)

- 35 Business Administrators

Minimum school program Input Session #4 (Charter LEA Directors)

- 7 Charter School Directors

²³ Note: Some individuals participated in both an interview and an input session

Districts Represented

- Alpine School District
- Cache School District
- Duchesne School District
- Granite School District
- Iron School District
- Juab School District
- Millard School District
- Nebo School District
- North Summit School District
- Ogden School District
- Provo School District
- Rich School District
- San Juan School District
- Sevier School District
- South Sanpete School District
- Weber School District
- Athenian eAcademy
- Guadalupe School
- Lumen Scholar Institute
- Monticello Academy
- Roots Charter High School
- Success Academy
- Summit Academy

Detailed Summary

Minimum school program Input Sessions #1 and 2

The superintendents shared a concern that the current funding is not sufficient to support an expanding set of goals that schools are expected to accomplish, and they value local control with state guidance and support.

Participating superintendents reported strong agreement that the current funding system is equitable. According to their comments, the MSP and Weighted Pupil Units structure works as a tool for distributing funds. Rural district superintendents shared that the funds provided from Necessarily Existent Small Schools (NESS) help them adjust for a lack of economies of scale. “Core mastery is what we’re accountable for,” the superintendents agreed. They are confident in the quality of the K–12 curriculum with a solid scope and sequence that helps students grow academically. They are proud of steps taken to ensure high school students take more challenging coursework. They believe the core work should be around preparing all students for college and entry level jobs in the workforce. The superintendents would like the opportunity to pilot innovative approaches that inform teaching and learning that suit the local context.

Superintendents shared an interest in increased support for meeting the needs of ELs, students impacted by trauma, and support for the effects of poverty.

Some participants shared an interest in moving to a system that weights funding by pupil needs, especially for the rapidly growing districts with larger high-poverty and EL populations, but this finding needs further exploration with a wider pool of stakeholders. Several superintendents made strong statements in favor of equity (as defined based on student need) over funding systems based on equality. Multiple rural districts shared that the pressure to pursue grant funding takes away from their capacity to attend to other district needs.

Additionally, integrated social-emotional learning and expanded mental health support is necessary throughout the public education system.

"The demands of schooling have changed in the 21st century, and autonomy and purpose are just as important as mastery." All twelve superintendents say they have rapidly growing needs to work with students on strengthening social and emotional learning. Two of the superintendents in our focus groups had just dealt with traumatic incidents in their districts. They reported needing more counselors, psychologists, and nurses to support the mental and emotional health components of the Portrait of a Graduate.

Career and Technical Education is an asset.

Stakeholders emphasized that any definition of an MSP needs to allow for free movement of students and not stigmatize or lock in those students who choose a career track. Preserving multiple pathways, all equally valued, is a priority for the superintendents. The superintendents do want to see the labor market data for various careers and to share those with students to help them inform their educational choices.

A shortage of teachers is a priority issue for superintendents.

Offering pay increases in direct competition with other districts that can afford to raise salaries without straining local fiscal capacity is an issue. All districts face recruiting challenges, with rural districts reporting only one qualified applicant for an opening. In rural districts, there remains a concern about being able to offer enough advanced math and science courses so that students are prepared to succeed at Utah universities due to a lack of both qualified staff and resources.

Early Learning should be expanded.

The superintendents made the case for the need to invest more in early learning. They shared an observed gap in school readiness between students that attend preschool and students that do not, making the first years of schooling more challenging for the public education system.

A unanimously supported quote shared by a superintendent summarized the sentiments of the two input sessions:

"We don't have enough resources overall. Don't redistribute what's in an already too small pie — increase the size of the pie for all."

Minimum school program Input Session #3 (Business Administrators)

On October 24th, WestEd joined a larger meeting of Business Administrators (BAs) to gather input on the Phase 1 of this report, with a focus on processes in place for decision-making with respect to school funding. Approximately 35 BAs were in the room. While there was no specific identification of districts represented, the number of BAs out of the total number of districts in Utah assured ample representation in the room.

The following key prompts were used in the session:

Describe your local decision-making process for strategically allocating resources.

What should we consider as we prepare for Phase 2 analyses?

The BAs reported a variety of methods for allocating resources and no single process reflected the group. Common elements included use of the district's strategic priorities, conferring with superintendents and/or a small cabinet of department leads, and a small number included other district stakeholders.

No direct stakeholder quotes were collected in this session due to the size of the group. Instead, facilitators gathered input via post-it notes at the close of the session with an open request for additional comments. Common themes (3 or more post-its out of 20 collected) from the post-it notes are included below:

The research team should examine...

- Role of bonds (4 post-its)
- Grant requirements for funding (3 post-its)

Funding is impacted/influenced by...

- School boards and Local politics (3 post-its)
- Economic gaps in local populations impacting district funding (state vs. local role)

Minimum school program Input Session #4 (Charter LEA Directors)

On December 9th, a virtual session was held with seven charter school representatives. The schools represented a mix of elementary, middle, and high school grade bands. They also included classroom-based models, online, and blended learning.

Generally, the group agreed that the Portrait of a Graduate was an appropriate goal to describe the outputs of the Utah education system. However, some of the participants had concerns about the role of the state in determining the pathways for reaching the outcomes described by the PoG. Some leaders specifically warned against the state getting involved in determining measurement of outcomes related to Autonomy or Purpose goals.

The following key prompts were used to anchor the discussion:

What reactions do you have to Portrait of the Graduate as the target of the system?

How does this align with your school model?

Selected responses to these prompts are included below:

"If LEAs are measured and accountable for all of those things, they are not prepared to provide [them]. These dilute the charge of the LEA. This is too ambitious."

"We mesh really well with PoG in that we take a holistic view. We are a college prep school with a well-rounded program and we have this built in based on a college-bound culture. We are working on different models of learning, like competency-based education. It's difficult for traditional public schools to do what we do because we are small and nimble."

We use the [Autonomy] & [Purpose] to fuel the [Mastery] in our model. I'm not sure the state could or would measure this.

How is your charter school unique in its approach to implementing core components?

What about the charter sector in Utah overall?

Selected responses to these prompts are included below:

"Specialization — we don't have to be general like regular schools do. We get to zero in on skills and needs of the community we serve."

"By design, we are able to shift quickly. We are structured to do so. We can reach outcomes because we are faster to change."

Appendix B

USBE Strategic Plan: List of Strategies

Early Learning

- 1A: Promote high-quality instruction in every early grade classroom
- 1B: Increase optional access to high-quality extended day kindergarten programs
- 1C: Increase optional access to high-quality preschool
- 1D: Increase engagement of families with young children in early learning experiences

Effective Educators & Leaders

- 2A: Support districts and schools in providing effective mentoring for beginning educators and leaders
- 2B: Assist districts and schools in providing continuous personalized professional learning for each educator and leader
- 2C: Evaluate and support educator preparation programs in meeting requirements established by the Board while providing room to innovate
- 2D: Lead in changing the perception of teaching as a profession

Safe & Healthy Schools

- 3A: Support districts and schools in creating and maintaining conditions for safe and healthy learning environments
- 3B: Increase adoption of evidence-based student health and wellness practices
- 3C: Build capacity of educators and other stakeholders to meet students' mental, emotional, and social needs

Personalized Teaching and Learning

- 4A: Empower the USBE, educators, parents, and students with access to timely, useful, safeguarded data
- 4B: Support LEAs in providing a personalized learning plan for each student
- 4C: Increase access to qualified school personnel to design personalized learning plans in partnership with teachers, students, and families
- 4D: Promote new school system models for personalized learning implementation

Appendix C

Partial List of Utah Assessments

- Pre-Kindergarten Entry and Exit Profile (PEEP); Kindergarten Entry and Exit Profile (KEEP)
- Formative Assessment Tools: Acadience Reading (K–2)
- State Assessments (as required by the Every Student Succeeds Act)
- English Language Arts and Mathematics Grades 3–8
- Utah Aspire Plus end-of-grade tests in English, Mathematics, Reading, and Science in grades 9 and 10
- ACT, grade 11
- Utah Core Standards Benchmarks: Productivity testlets for Grades 9–12
- Science, Grades 4–8
- Writing, Grades 5 and 8
- American Civics Education Initiative: Passage of basic civics test as condition of graduation as of 2016. LEAs may build their own test from USCIS naturalization test. LEAs record passing rates and report to USBE as requested. (S.B. 60, 2015; R-277-700-8)
- Readiness Coursework (Advanced Placement, Concurrent Enrollment)
- ACT Benchmarks
- Graduation
- High School Feedback Reports published by Utah System of Higher Education (USHE): show how Utah’s high school graduates are making the transition to higher education. Most recent is for the class of 2017.

Appendix D

Equity Analysis Technical Appendix

As part of Phase 1, the study team conducted an equity analysis of Utah's school finance system. As a school finance term, "equity" is concerned with how resources are allocated across school districts and, ultimately, across schools and students. While the most common notion of equity assumes that a school finance system that distributes resources *equally* is equitable, school systems vary in their number of students with additional needs, and thus will vary in the level of resources required to provide *equal opportunity*.

Furthermore, school districts differ in their abilities to raise revenues locally. Disparities in local property and income wealth mean that some school districts may be able to raise significantly higher local revenues, with a lower level of tax effort, than other districts. Some districts also face factors beyond their control that can lead to higher operating costs. For example, districts may have small student enrollments or low population density.

Ultimately, a strong finance system that is truly equitable will accommodate for differences between districts in terms of (1) student resource needs, (2) district characteristics, and (3) district revenue-raising abilities.

The equity analysis in this report makes use of generally accepted statistical methods used in studies across the country to assess the equity of states' school finance systems. The analysis examined the fiscal equity of Utah's school finance system for fiscal years 2013–14 and 2017–18. The USBE provided all of the data used in this analysis, including datasets of district revenues, expenditures, taxable values, student counts and demographics, and staff counts and salaries.

What follows is an overview of key terms, a definition of school finance equity, key school district characteristics, the results of the horizontal equity, vertical equity, and fiscal neutrality analyses, and key conclusions of this analysis.

Defining Terms and Data Elements Used in This Report

Need Factor. The need factor is a measure used by the study team to compare the level of student need across districts. Districts with high-need factors serve higher concentrations of students with additional needs than districts with low-need factors. The need factor is calculated by first applying student weights to adjust counts of economically disadvantaged, EL, and special education students. A weight represents the expected additional resources needed to serve a student above the needs of a general education student. These weights were taken from a study of student weights used in state funding formulas, as well as those recommended in numerous school finance costing-out studies conducted over the past two decades.

For this study, specific weights for student need were applied to account for the additional costs of serving economically disadvantaged, EL or special education students. Specifically, economically disadvantaged students were assigned a weight of 0.35, EL students a weight of 0.5, and special education students a weight of 1.1.

These weights were established by the study team based upon the team's years of experience in estimating these additional costs.

Weighted ADM (WADM). Weighted ADM is a district's ADM count adjusted by pupil weights to account for the number of students with greater needs in the district. For this study, specific weights were applied to estimate a district's level of student need. Specifically, economically disadvantaged students were assigned a weight of 0.35, EL students a weight of 0.5, and special education students a weight of 1.1. These weights were established based upon the prevailing evidence and research literature.

State and Local Revenues. Includes all state and local revenues except capital local and debt service levies (revenue codes 1124-1129, 1174, 1178), tuition from other LEAs within the state (1320), transportation fees (1410-1440), food service receipts (1610-1690), miscellaneous revenue from other school districts (1950), related to basic programs (3200), capital outlay programs (3700), and revenues from the tax increment fund (26).

Total Revenues. Consists of the state and local revenues listed above with the addition of federal funds excluding child nutrition programs (4560-4574) and federal USDA commodities (4970).

Total Expenditures. Consists of district expenditures from the general fund (10), special revenue funds (20), and student activity fund (21), except for the following functions: student transportation (2700), food service (3100), facilities acquisition and construction services (4000), and debt service (5000s).

Instructional Expenditures. Consists of expenditures in the instruction function (1000) from the general fund (10), special revenue funds (20), and student activity fund (21).

Defining Equity

School finance equity has been discussed and analyzed both in terms of (1) the focus on whom or what is being treated equitably and (2) the particular type of equity of interest. Most often, equity studies focus on the distribution of resources to school districts, since nearly every state calculates its state school finance formula at the district level. While equity at the school level is also of concern, resource allocations to individual schools are, in nearly all cases, the result of local school board policies and procedures.

However, it is also reasonable to be concerned about how equitably resources are ultimately directed toward schools and individual students. Are resources being allocated fairly to schools within districts? Are more resources being targeted toward students with greater educational needs? Taxpayers comprise another legitimate focus of equity. Are some taxpayers subject to much higher tax rates solely because they live in a school district with little wealth? Do other taxpayers enjoy the ability to raise much higher levels of revenues at lower tax efforts because they live in wealthier communities? Because state funding systems, including Utah's, focus primarily on funding school districts rather than individual schools (with the exception of charter schools) or students, this study addresses how equitably resources are allocated to the state's school districts.

There are multiple equity concepts that are typically addressed in school finance equity analyses. The most common equity concepts are horizontal equity, vertical equity, and fiscal neutrality (Berne & Stiefel, 1984). These concepts are described below.

Horizontal equity is concerned with how equally resources are allocated to districts or students in similar situations. It is sometimes said that horizontal equity addresses the "equal treatment of equals." That is, an equitable school finance system will provide a roughly equal amount of resources to students with similar educational

needs. Under a school finance system with high horizontal equity, students with no additional needs are funded roughly equally, regardless of which school district they attend.

Vertical equity measures how well school finance systems take into account varying student and district needs. A system with high vertical equity will provide more resources for students with greater educational needs or districts with characteristics that impact costs, such as very small size or geographical isolation. In this way, a system with high vertical equity provides additional resources for supporting the programs and interventions that are required for students with greater educational needs to succeed in school. It also incorporates mechanisms for providing resources to offset the effects of characteristics that influence costs that are outside the control of districts.

Fiscal neutrality assesses the link between local wealth and the amount of revenue available to support a school district. A touchstone of school finance theory asserts that there should be little or no relationship between local wealth, such as the local property tax base, and the amount of resources available to a local school district. A school finance system with high fiscal neutrality minimizes the relationship between local wealth, or capacity, and district spending.

These three dimensions of school finance are the focus of the study team's analysis of school finance equity in Utah.

School District Characteristics

The state of Utah has a small number of school districts compared to other states. Only Hawaii (which has one statewide district), Nevada (18), Delaware (19), Maryland (24), and Rhode Island (32) have fewer than Utah's 41 school districts (Snyder, de Brey, & Dillow, 2019). The districts vary considerably in terms of enrollment size, measured here by the average daily attendance, or ADM, count. In 2017–18, the state's smallest district, Daggett School District, enrolled 165.9 ADM, while its largest district, Alpine School District, enrolled 78,279.5 ADM. Six of the state's districts serve fewer than 1,000 ADM, while eight districts serve more than 25,000 ADM.

Exhibit D-1 presents summary information on a number of key district and school finance characteristics for fiscal year 2017–18.

Exhibit D-1. Key School District Enrollment and Fiscal Characteristics: FY 2017–18

Variable	Minimum	Maximum	Range	Mean	Median
Student Counts					
ADM	165.9	78,279.5	78,113.6	13,935.4	4,724.1
Weighted ADM	201.9	93,541.3	93,339.4	17,970.7	5,935.3
Need Ratio	1.17	1.65	0.48	1.29	1.31
Wealth					
Assessed Value Per Pupil	\$194,662	\$3,026,544	\$2,831,882	\$436,893	\$487,734
Revenues Per Student					
Local Revenues Per ADM	\$1,623	\$14,816	\$13,193	\$3,070	\$3,316
State Revenues Per ADM	\$698	\$14,935	\$14,237	\$4,763	\$4,958
State and Local Revenues Per ADM	\$6,327	\$21,425	\$15,098	\$7,833	\$8,402
Federal Revenues Per ADM	\$209	\$4,334	\$4,124	\$507	\$541
Total Revenues Per ADM (includes federal funds)	\$6,537	\$23,768	\$17,231	\$8,340	\$8,911
Expenditures Per Student					
Total Expenditures Per ADM	\$5,805	\$21,872	\$16,068	\$7,328	\$8,215
Total Instructional Expenditures Per ADM	\$4,275	\$12,323	\$8,048	\$5,044	\$5,319
District Characteristics					
Average Teacher Salary	\$41,997	\$65,227	\$23,230	\$51,402	\$50,952
Teachers Per 1,000 ADM	39.1	101.1	62.0	44.0	48.1
Certified Staff Per 1,000 ADM	47.4	128.0	80.6	55.0	59.9
Student-Teacher Ratio	9.4	25.2	15.8	22.1	20.2

For most of the measures discussed here, the wide range in values is explained in large part by the existence of very small districts and schools in the state and the way in which the funding formula adjusts resources to compensate for these small sizes. Daggett, the state's smallest school district, had the highest number of teachers and certified staff per 1,000 ADM (101.1 and 128.0 respectively) and the lowest student-teacher ratio (9.4). Salt Lake School District, one of the state's largest districts, had the highest average teacher salary (\$65,227) compared to Nebo School District's \$41,997. Nebo is also a large district with more than 30,000 students, but is among the lowest property wealth districts.

In addition to a summary of fiscal measures for all 41 school districts, policymakers and analysts are also interested in examining whether there are differences among groupings of districts. The most common approach to grouping districts in an equity analysis is by wealth per pupil. These analyses may group districts by percentiles, quintiles, or quartiles. Because there are relatively few districts in Utah, this analysis uses quintiles to organize districts into groups.

Exhibit D-2 presents key fiscal information by each wealth quintile.

Exhibit D-2. Key School District Enrollment and Fiscal Characteristics by Wealth Quintiles: FY 2017–18

School Finance Variables	State Total	Wealth Quintiles–1 (Lowest)	Wealth Quintiles–2	Wealth Quintiles–3	Wealth Quintiles–4	Wealth Quintiles–5 (Highest)
Districts	41	8	8	9	8	8
Students (ADM)	571,353	153,350	203,063	126,429	76,248	12,262
Need Factor		1.25	1.26	1.37	1.33	1.25
Total Wealth per ADM	\$436,893	\$279,923	\$337,100	\$448,534	\$762,288	\$1,895,990
State and Local Revenue per ADM	\$7,833	\$7,083	\$7,500	\$7,996	\$9,139	\$12,930
Total Revenue per ADM (includes federal funds)	\$8,340	\$7,525	\$7,970	\$8,606	\$9,704	\$13,425
Sum of Voter and Board Approved Levies and Guarantee per ADM	\$1,611	\$1,270	\$1,347	\$1,698	\$2,405	\$4,410
Total Expenditures per ADM	\$7,328	\$6,754	\$6,913	\$7,528	\$8,508	\$11,956
Instructional Expenditures per ADM	\$5,044	\$4,835	\$4,827	\$5,082	\$5,592	\$7,461
Certified Staff per 1,000 ADM	55.0	51.1	53.2	57.9	60.6	70.9
Teachers per 1,000 ADM	44.0	41.4	43.0	45.8	47.2	56.6
Student-Teacher Ratio	22.1	20.5	22.4	19.6	18.9	16.4
Average Teacher Salary	\$50,776	\$50,498	\$48,925	\$50,493	\$52,817	\$54,392

Horizontal Equity, Vertical Equity, and Fiscal Neutrality

This equity analysis examines horizontal equity, vertical equity, and fiscal neutrality. Horizontal equity is concerned with how equally similarly situated students are funded across school districts. Vertical equity assumes that a greater amount of resources is needed to effectively educate some students, such as special education students, EL students, and economically disadvantaged students. Fiscal neutrality examines the relationship between the wealth of districts and the amount of money that districts spend on educating their students.

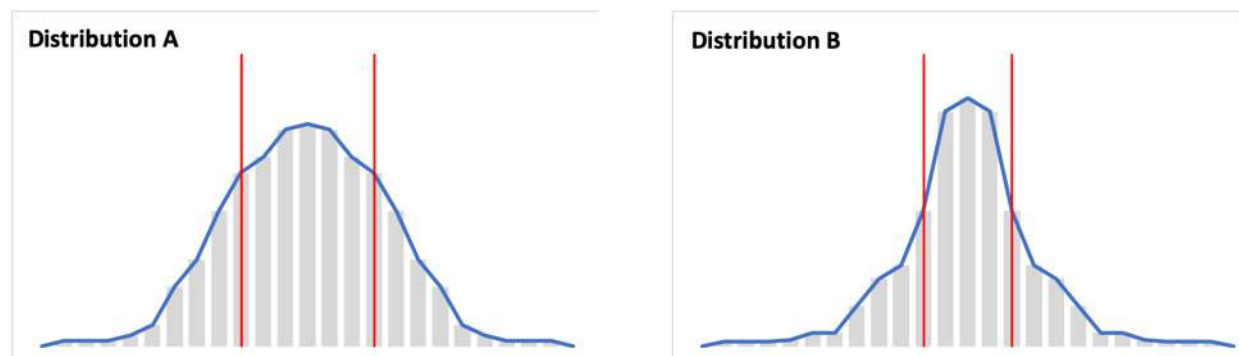
While there are a number of generally accepted statistical approaches to analyzing equity (Berne & Stiefel, 1984; Odden & Picus, 2014), the study team has found that there are several statistical measures that are most useful for policymakers trying to understand the equity of a school finance system. These statistical measures are described below:

Range: Range describes the difference between the smallest and largest values of any given variable, like per student spending. The greater the range within a system, the less likely it is that a system is equitable.

Coefficient of Variation (CV): The CV measures how much items vary around an average. In statistical terms, CV is the standard deviation divided by the mean (average). If per student expenditures do not vary greatly across districts (low variation), then all of the expenditure figures will be tightly packed around the average. If expenditures do vary greatly across districts (high variation), then the expenditure figures will be widely dispersed from the average.

Exhibit D-3 below illustrates two sample normal distributions, one in which there is relatively more variation (Distribution A), and one with relatively less variation (Distribution B). The red lines indicate observations within a standard deviation comprising of about 68% of all observations. As can be seen, in Distribution A, the observations within a standard deviation, are not as tightly clustered around the mean as those in Distribution B, indicating generally more variation and a higher CV.

Exhibit D-3. Sample Distributions Illustrating Differences in Variation



The value of the CV ranges from zero and higher and can be presented as a percentage (30%) or as a decimal (0.30). A lower number (closer to zero) indicates less variation and a higher number indicates more variation, with a number over 0.010 showing a higher amount of variation than is typically desirable in a school finance system (Odden & Picus, 2014). The range and CV may be used for measuring both horizontal and vertical equity. However, measures of vertical equity use weighted student counts while horizontal equity uses non-weighted counts. By using weighted student counts, which provide a measure of student need, the study team is able

to assess how spending varies with student need. The study team’s expectation is that higher spending will be associated with higher levels of student need.

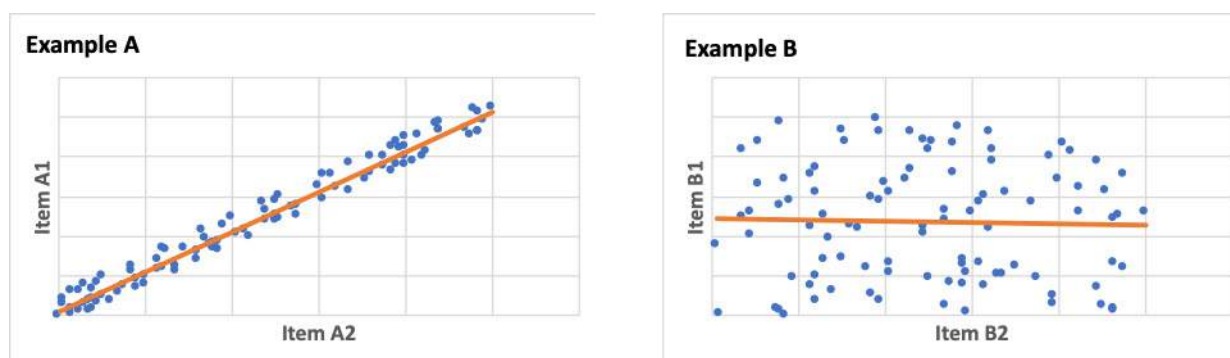
McLoone Index and Verstegen Index: The McLoone and Verstegen Indices are lesser known but valuable measures of equity. Used together, they can help to pinpoint where — in terms of the per student revenue or expenditure distribution of school districts — a state is most equitable or inequitable. The McLoone Index was created to measure the bottom half of the per student distribution of school districts to indicate the degree of equity of those school districts below the median value of revenues or expenditures per student (or the 50th percentile). The McLoone Index ranges from zero to 1.0, with 1.0 representing perfect equity. An index of at least 0.95 is considered desirable. Conversely, the Verstegen Index provides the same information for the top half of the revenue or spending distribution — those districts above the median revenues or expenditures per student. The ideal value of the Verstegen Index is 1.0 and the standard is no more than 1.05.

Correlation Coefficient: The correlation coefficient is the most common statistic used for measuring fiscal neutrality, or the relationship between per student property wealth and per student revenues or spending. A high-quality school finance system will exhibit little relationship between the two, since local property wealth should not determine how much money a school system has available to spend.

The correlation coefficient ranges from -1.0 to 1.0, where -1.0 represents a perfect negative relationship and 1.0 represents a perfect positive relationship. In a perfect negative relationship, a one-unit increase in one item — such as a one-unit increase in per student property wealth — results in a one-unit decrease in another item (e.g., per student spending). In a perfect positive relationship, a one-unit increase in one item results in a one-unit increase in the other item. A correlation of zero means there is no relationship between two items. The generally accepted standard for an acceptable level of equity is equal to or less than 0.50.

Exhibit D-4 below illustrates sample relationships between two things, one with a strong, positive relationship (Example A), and the other with no clear relationship (Example B). As can be seen, in Example A, it is evident that as the value of Item A1 goes up, the value of Item A2 also increases, suggesting a positive relationship. In Example B, there is no clear expected change in Item B2 based on a change in Item B1. Thus, the correlation coefficient would be much stronger for Example A than Example B.

Exhibit D-4. Sample Data Illustrating Correlation Coefficients



Appendix E

Role and Balance of State and Local Contributions — Additional Tables

Exhibit E-1. Revenue by Source, 2015–16

State	State Share Percentage	Local Share Percentage	Federal Share Percentage
Alabama	54.7%	34.2%	11.2%
Alaska	64.6%	23.0%	12.4%
Arizona	45.9%	41.5%	12.6%
Arkansas	51.1%	37.3%	11.6%
California	59.4%	32.1%	8.5%
Colorado	43.7%	49.2%	7.1%
Connecticut	40.3%	55.3%	4.3%
Delaware	57.4%	34.3%	8.3%
Florida	39.3%	49.2%	11.6%
Georgia	45.8%	44.6%	9.5%
Hawaii	89.4%	1.9%	8.6%
Idaho	65.3%	24.1%	10.6%
Illinois	24.1%	67.4%	8.4%
Indiana	55.6%	36.4%	8.0%
Iowa	53.8%	38.9%	7.3%
Kansas	63.1%	28.4%	8.4%
Kentucky	54.7%	33.6%	11.6%
Louisiana	43.5%	43.8%	12.7%

State	State Share Percentage	Local Share Percentage	Federal Share Percentage
Maine	39.4%	53.6%	7.0%
Maryland	43.9%	50.2%	5.8%
Massachusetts	37.8%	57.2%	5.0%
Michigan	60.2%	30.9%	8.9%
Minnesota	66.8%	27.5%	5.6%
Mississippi	51.2%	34.1%	14.7%
Missouri	33.0%	58.4%	8.6%
Montana	47.8%	39.6%	12.6%
Nebraska	33.0%	58.6%	8.3%
Nevada	35.6%	55.5%	8.9%
New Hampshire	32.9%	61.4%	5.7%
New Jersey	42.7%	53.1%	4.2%
New Mexico	70.0%	16.2%	13.7%
New York	41.7%	53.2%	5.0%
North Carolina	62.1%	26.3%	11.6%
North Dakota	57.8%	33.1%	9.1%
Ohio	44.9%	47.4%	7.7%
Oklahoma	48.3%	40.2%	11.5%
Oregon	52.3%	40.0%	7.6%
Pennsylvania	37.6%	55.6%	6.8%
Rhode Island	41.4%	50.9%	7.7%
South Carolina	47.7%	42.8%	9.5%
South Dakota	30.4%	55.8%	13.8%
Tennessee	46.2%	42.3%	11.5%
Texas	40.9%	48.6%	10.6%
Utah	54.6%	37.0%	8.3%

State	State Share Percentage	Local Share Percentage	Federal Share Percentage
Vermont	89.3%	4.0%	6.6%
Virginia	39.5%	53.8%	6.6%
Washington	62.2%	30.4%	7.4%
West Virginia	55.5%	34.1%	10.4%
Wisconsin	45.5%	47.3%	7.1%
Wyoming	57.6%	36.4%	6.1%
Average	50.0%	41.0%	8.9%

Note: Only states are reported. Other jurisdictions, or entities, such as Washington, DC, are not included.

Exhibit E-2. State Share, Local Share, and Equity Score, 2015–16

State	State Share Percentage	Local Share Percentage	Education Week Equity Score
Alabama	54.7%	34.2%	89.0
Alaska	64.6%	23.0%	73.3
Arizona	45.9%	41.5%	86.7
Arkansas	51.1%	37.3%	87.2
California	59.4%	32.1%	88.8
Colorado	43.7%	49.2%	87.4
Connecticut	40.3%	55.3%	85.6
Delaware	57.4%	34.3%	83.0
Florida	39.3%	49.2%	92.6
Georgia	45.8%	44.6%	86.8
Idaho	65.3%	24.1%	80.7
Illinois	24.1%	67.4%	81.5
Indiana	55.6%	36.4%	89.8
Iowa	53.8%	38.9%	90.4
Kansas	63.1%	28.4%	89.0

State	State Share Percentage	Local Share Percentage	Education Week Equity Score
Kentucky	54.7%	33.6%	90.8
Louisiana	43.5%	43.8%	84.0
Maine	39.4%	53.6%	83.5
Maryland	43.9%	50.2%	90.4
Massachusetts	37.8%	57.2%	83.9
Michigan	60.2%	30.9%	87.9
Minnesota	66.8%	27.5%	88.5
Mississippi	51.2%	34.1%	88.9
Missouri	33.0%	58.4%	87.4
Montana	47.8%	39.6%	82.5
Nebraska	33.0%	58.6%	85.0
Nevada	35.6%	55.5%	85.4
New Hampshire	32.9%	61.4%	80.6
New Jersey	42.7%	53.1%	86.0
New Mexico	70.0%	16.2%	87.4
New York	41.7%	53.2%	86.7
North Carolina	62.1%	26.3%	89.3
North Dakota	57.8%	33.1%	89.5
Ohio	44.9%	47.4%	84.3
Oklahoma	48.3%	40.2%	89.1
Oregon	52.3%	40.0%	89.4
Pennsylvania	37.6%	55.6%	85.3
Rhode Island	41.4%	50.9%	87.7
South Carolina	47.7%	42.8%	85.5
South Dakota	30.4%	55.8%	86.7
Tennessee	46.2%	42.3%	91.1

State	State Share Percentage	Local Share Percentage	Education Week Equity Score
Texas	40.9%	48.6%	87.7
Utah	54.6%	37.0%	86.7
Vermont	89.3%	4.0%	79.5
Virginia	39.5%	53.8%	86.3
Washington	62.2%	30.4%	89.5
West Virginia	55.5%	34.1%	89.5
Wisconsin	45.5%	47.3%	90.6
Wyoming	57.6%	36.4%	90.0

Note: Hawaii was removed from the analysis, as it did not receive an equity score since it is a single statewide district. National average is calculated as the average percentage of each of the 50 states. Numbers do not add up to 100% due to rounding. Only states are reported. Other jurisdictions, or entities, such as Washington, DC, are not included.

Exhibit E-3. Student Count Policies, 50 States

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
Alabama	Membership	Average (Short Period)	20 days after Labor Day
Alaska	Membership	Average (Short Period)	20 days ending on 4th Friday of October
Arizona	Membership	Average (Long Period)	First 100 or 200 days of the school year
Arkansas	Membership	Average (Long Period)	First 3 quarters of the school year

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
California	Attendance	Average (Long Period)	Total days of student attendance divided by the total days of instruction
Colorado	Attendance	Single Count	October 1st count day
Connecticut	Attendance	Single Count	October 1st count day
Delaware	Membership	Single Count	Count day on last day of September
District of Columbia	Membership	Single Count	October 5th count day
Florida	Membership	Multiple Counts	Up to 9 counts
Georgia	Membership	Multiple Counts	Count day in October and March
Hawaii	Membership	Average (Long Period)	
Idaho	Attendance	Average (Long Period)	Highest 28 weeks of prior year

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
Illinois	Attendance	Average (Short Period)	Highest 3 months prior year
Indiana	Membership	Single Count	1 count day in September
Iowa	Attendance	Single Count	1 count day in October
Kansas	Attendance	Single Count	September 20th count day
Kentucky	Attendance	Average (Short Period)	Higher of the first 2 months of the past 2 years
Louisiana	Membership	Single Count	Prior February 1st count
Maine	Membership	Single Count	October 1st, two most recent years
Maryland	Membership	Single Count	Prior year funding
Massachusetts	Membership	Single Count	October 1st
Michigan	Membership	Multiple Counts	90% for in year count and 10% of final audited count from prior year

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
Minnesota	Membership	Average (Long Period)	
Mississippi	Attendance	Average (Long Period)	Three-year average, adjusted for growth
Missouri	Attendance	Average (Long Period)	
Montana	Membership	Multiple Counts	October 1st and February 1st, average used for next year
Nebraska	Membership	Average (Long Period)	Prior year adjusted to fall membership
Nevada	Membership	Average (Long Period)	Average membership reported quarterly (October 1, January 1, April 1, and July 1)
New Hampshire	Attendance	Average (Long Period)	Prior year average
New Jersey	Membership	Single Count	Count day on last school day prior to October 16th

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
New Mexico	Membership	Multiple Count	Average of the prior year's student enrollment on the 80th and 120th day
New York	Attendance	Average (Long Period)	Average over all school days in session
North Carolina	Membership	Average (Long Period)	Initial allotments are based on the higher of the prior year's actual first 2 months of ADM or the projected higher of first 2 months of ADM.
North Dakota	Membership	Average (Long Period)	
Ohio	Membership	Average (Short Period)	Average over the first full week of October
Oklahoma	Membership	Average (Long Period)	
Oregon	Membership	Average (Long Period)	
Pennsylvania	Membership	Average (Long Period)	

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
Rhode Island	Membership	Average (Long Period)	
South Carolina	Membership	Multiple Count	Measured on 45th and 135th day
South Dakota	Membership	Single Count	Count day on last Friday of September
Tennessee	Membership	Average (Long Period)	
Texas	Attendance	Average (Long Period)	Average over required days of instruction
Utah	Membership	Average (Long Period)	From prior year, adjusted based on October 1st count growth
Vermont	Membership	Average (Short Period)	20-day count period (11th through the 30th day of the school year)
Virginia	Membership	Average (Long Period)	Start of school year through March 31st
Washington	Membership	Multiple Count	Monthly counts — 4th school day of September and 1st school day of October through June

State	Attendance vs. Membership	Count Mechanism	Additional Policy Detail
West Virginia	Membership	Single Count	Last school day of the 2nd month of the year
Wisconsin	Membership	Multiple Count	Two count days on the 3rd Friday of September and the 2nd Friday of January
Wyoming	Membership	Average (Long Period)	Greater of the average of the district's ADM counts completed at the end of the 3 immediately preceding school years or the district's ADM for the previous school year

Exhibit E-4. State Statute Language with Respect to Defining State and Local Contributions

State	Statutory Language
Florida	<p>FS Title XLVIII, Section 1000.03. Function, mission, and goals of the Florida K–20 education system</p> <p>(3) Public education is a cooperative function of the state and local educational authorities. The state retains responsibility for establishing a system of public education through laws, standards, and rules to assure efficient operation of a K–20 system of public education and adequate educational opportunities for all individuals. Local educational authorities have a duty to fully and faithfully comply with state laws, standards, and rules and to efficiently use the resources available to them to assist the state in allowing adequate educational opportunities.</p> <p>Florida Statute Title XLVII, Section 1011.62. Funds of operation of schools</p> <p>(4) Computation of district required local effort. The Legislature shall prescribe the aggregate required local effort for all school districts collectively as an item in the General Appropriations Act for each fiscal year. The amount that each district shall provide annually toward the cost of the Florida Education Finance Program for kindergarten through grade 12 programs shall be calculated as follows:</p> <p>(a) Estimated taxable value calculations.</p> <p>1. a. Not later than 2 working days before July 19, the Department of Revenue shall certify to the Commissioner of Education its most recent estimate of the taxable value for school purposes in each school district and the total for all school districts in the state for the current calendar year based on the latest available data obtained from the local property appraisers. The value certified shall be the taxable value for school purposes for that year, and no further adjustments shall be made, except those made pursuant to paragraphs (c) and (d), or an assessment roll change required by final judicial decisions as specified in paragraph (15)(b). Not later than July 19, the Commissioner of Education shall compute a millage rate, rounded to the next highest one one-thousandth of a mill, which, when applied to 96 percent of the estimated state total taxable value for school purposes, would generate the prescribed aggregate required local effort for that year for all districts. The Commissioner of Education shall certify to each district school board the millage rate, computed as prescribed in this subparagraph, as the minimum millage rate necessary to provide the district required local effort for that year.</p>

State	Statutory Language
Florida (continued)	<p>b. The General Appropriations Act shall direct the computation of the statewide adjusted aggregate amount for required local effort for all school districts collectively from ad valorem taxes to ensure that no school district's revenue from required local effort millage will produce more than 90 percent of the district's total Florida Education Finance Program calculation as calculated and adopted by the Legislature, and the adjustment of the required local effort millage rate of each district that produces more than 90 percent of its total Florida Education Finance Program entitlement to a level that will produce only 90 percent of its total Florida Education Finance Program entitlement in the July calculation.</p> <p>2. On the same date as the certification in sub-subparagraph 1.a., the Department of Revenue shall certify to the Commissioner of Education for each district:</p> <p>a. Each year for which the property appraiser has certified the taxable value pursuant to s. 193.122(2) or (3), if applicable, since the prior certification under sub-subparagraph 1.a.</p> <p>b. For each year identified in sub-subparagraph a., the taxable value certified by the appraiser pursuant to s. 193.122(2) or (3), if applicable, since the prior certification under sub-subparagraph 1.a. This is the certification that reflects all final administrative actions of the value adjustment board.</p> <p>(b) Equalization of required local effort.</p> <p>1. The Department of Revenue shall include with its certifications provided pursuant to paragraph (a) its most recent determination of the assessment level of the prior year's assessment roll for each county and for the state as a whole.</p> <p>2. The Commissioner of Education shall adjust the required local effort millage of each district for the current year, computed pursuant to paragraph (a), as follows:</p> <p>a. The equalization factor for the prior year's assessment roll of each district shall be multiplied by 96 percent of the taxable value for school purposes shown on that roll and by the prior year's required local-effort millage, exclusive of any equalization adjustment made pursuant to this paragraph. The dollar amount so computed shall be the additional required local effort for equalization for the current year.</p> <p>b. Such equalization factor shall be computed as the quotient of the prior year's assessment level of the state as a whole divided by the prior year's assessment level of the county, from which quotient shall be subtracted 1.</p> <p>c. The dollar amount of additional required local effort for equalization for each district shall be converted to a millage rate, based on 96 percent of the current year's taxable value for that district, and added to the required local effort millage determined pursuant to paragraph (a).</p>

State	Statutory Language
Florida (continued)	<p>3. Notwithstanding the limitations imposed pursuant to s. 1011.71(1), the total required local-effort millage, including additional required local effort for equalization, shall be an amount not to exceed 10 minus the maximum millage allowed as nonvoted discretionary millage, exclusive of millage authorized pursuant to s. 1011.71(2). Nothing herein shall be construed to allow a millage in excess of that authorized in s. 9, Art. VII of the State Constitution.</p> <p>4. For the purposes of this chapter, the term "assessment level" means the value-weighted mean assessment ratio for the county or state as a whole, as determined pursuant to s. 195.096, or as subsequently adjusted. However, for those parcels studied pursuant to s. 195.096(3)(a) 1. which are receiving the assessment limitation set forth in s. 193.155, and for which the assessed value is less than the just value, the department shall use the assessed value in the numerator and the denominator of such assessment ratio. In the event a court has adjudicated that the department failed to establish an accurate estimate of an assessment level of a county and recomputation resulting in an accurate estimate based upon the evidence before the court was not possible, that county shall be presumed to have an assessment level equal to that of the state as a whole.</p> <p>5. If, in the prior year, taxes were levied against an interim assessment roll pursuant to s. 193.1145, the assessment level and prior year's nonexempt assessed valuation used for the purposes of this paragraph shall be those of the interim assessment roll.</p>
Maryland	<p>(7) "Local contribution rate" means the figure that is calculated as follows:</p> <ul style="list-style-type: none"> (i) Multiply the statewide full-time equivalent enrollment by \$624, and multiply this product by: <ul style="list-style-type: none"> 1. 0.46 in fiscal year 2004; 2. 0.47 in fiscal year 2005; 3. 0.48 in fiscal year 2006; 4. 0.49 in fiscal year 2007; and 5. 0.50 in fiscal year 2008 and each fiscal year thereafter; (ii) Multiply the statewide full-time equivalent enrollment by the amount that the annual per pupil foundation amount exceeds \$624, and multiply this product by 0.50; (iii) Add the two products calculated in items (i) and (ii) of this paragraph, and divide the resulting sum by the sum of the wealth of all of the counties in this State; and (iv) Round the result obtained in item (iii) of this paragraph to seven decimal places and express as a percent with five decimal places. <p>(8) "Local share of the foundation program" means the product of the local contribution rate and a county's wealth.</p> <p>Maryland Code, Education § 5-202</p>

State	Statutory Language
Nevada	<p>NRS 387.163 Local funds available for public schools; reserve of net proceeds of minerals.</p> <ol style="list-style-type: none"> 1. Except as otherwise provided in subsection 2, local funds available are the sum of: <ol style="list-style-type: none"> (a) The amount of one-third of the tax collected pursuant to subsection 1 of NRS 387.195 for the school district for the concurrent school year; and (b) The proceeds of the local school support tax imposed by chapter 374 of NRS, excluding any amounts required to be remitted pursuant to NRS 360.850 and 360.855. The Department of Taxation shall furnish an estimate of these proceeds to the Superintendent of Public Instruction on or before July 15 for the fiscal year then begun, and the Superintendent shall adjust the final apportionment of the current school year to reflect any difference between the estimate and actual receipts. 2. The amount computed under subsection 1 that is attributable to any assessed valuation attributable to the net proceeds of minerals must be held in reserve and may not be considered as local funds available until the succeeding fiscal year. <p>(Added to NRS by 1977, 705; A 1979, 1243, 1588; 1983, 1906; 1999, 2925; 2003, 2941; 2005, 2080, 2375; 2007, 1560; 2013, 3139) — (Substituted in revision for NRS 387.1235)</p> <p>NRS 387.195 Levy of tax for county school district; deferred use of money attributable to net proceeds of minerals.</p> <ol style="list-style-type: none"> 1. Each board of county commissioners shall levy a tax of 75 cents on each \$100 of assessed valuation of taxable property within the county for the support of the public schools within the county school district. 2. The tax collected pursuant to subsection 1 on any assessed valuation attributable to the net proceeds of minerals must not be considered as available to pay liabilities of the fiscal year in which the tax is collected but must be deferred for use in the subsequent fiscal year. The annual budget for the school district must only consider as an available source the tax on the net proceeds of minerals which was collected in the prior year. 3. In addition to any tax levied in accordance with subsection 1, each board of county commissioners shall levy a tax for the payment of interest and redemption of outstanding bonds of the county school district. 4. The tax collected pursuant to subsection 1 and any interest earned from the investment of the proceeds of that tax must be credited to the county's school district fund. 5. The tax collected pursuant to subsection 3 and any interest earned from the investment of the proceeds of that tax must be credited to the county school district's debt service fund. <p>[127:32:1956] — (NRS A 1979, 1244; 1981, 301; 1983, 1635, 1950; 1987, 639; 1999, 2925; 2013, 3139)</p>

State	Statutory Language
Utah	<p>Utah statutes for minimum school program (2018 code): Title 53F, chapter 2, Part 3, section 301.5 Current language:</p> <p>(a) "Basic levy increment rate" means a tax rate that will generate an amount of revenue equal to \$75,000,000.</p> <p>(d) "Equity pupil tax rate" means the tax rate that is:</p> <ul style="list-style-type: none"> (i) calculated by subtracting the minimum basic tax rate from the rate floor; or (ii) zero, if the rate calculated in accordance with Subsection (2)(d)(i) is zero or less. <p>(e) "Minimum basic local amount" means an amount that is:</p> <ul style="list-style-type: none"> (i) equal to the sum of: <ul style="list-style-type: none"> (A) the school districts' contribution to the basic school program the previous fiscal year; (B) the amount generated by the basic levy increment rate; and (C) the eligible new growth, as defined in Section 59-2-924 and rules of the State Tax Commission multiplied by the minimum basic tax rate; and (ii) set annually by the Legislature in Subsection (3)(a). <p>(f) "Minimum basic tax rate" means a tax rate certified by the commission that will generate an amount of revenue equal to the minimum basic local amount described in Subsection (3)(a).</p> <p>(g) "Rate floor" means a rate that is the greater of:</p> <ul style="list-style-type: none"> (i) a .0016 tax rate; or (ii) the minimum basic tax rate.

State	Statutory Language
Wyoming	<p>2113102. Maximum rate of school district tax; recapture of excess; equalization of permissive levies.</p> <p>(a) Except as otherwise provided by law, the maximum rate of school district tax that may be levied for all school purposes, exclusive of bond interest and redemption, for any school district in any school year on each dollar of assessed valuation within the school district is as follows:</p> <ul style="list-style-type: none"> (i) In a unified school district: Twenty-five (25) mills shall be levied for combined elementary, junior high and high school purposes. (ii) In any nonunified school district consisting of kindergarten through grade eight (8): Twenty-five (25) mills shall be levied for school purposes. <p>(b) For each school year:</p> <ul style="list-style-type: none"> (i) A school district whose revenues from the sources provided by W.S. 2113310 exceed the foundation program costs determined under W.S. 2113309 by more than three hundred percent (300%), as estimated to the districts on or before August 15 and as subsequently certified to the districts on or before March 1 of the current fiscal year under subsection (e) of this section, shall rebate fifty percent (50%) of the excess revenues to the department of education by January 15 of the applicable school year. The balance of the excess revenues shall be rebated to the department on or before June 15 of that school year; (ii) A school district whose revenues specified under W.S. 2113310 for any school year exceed the foundation program costs determined under W.S. 2113-309 by three hundred percent (300%) or less, as estimated and certified under subsection (e) of this section, shall rebate forty percent (40%) of the excess revenues to the department by January 15 of the applicable school year. The balance of the excess revenues shall be rebated to the department on or before June 15 of the applicable school year; (iii) Amounts rebated under paragraphs (i) and (ii) of this subsection shall be credited to the public school foundation program account defined in W.S. 2113101(a)(ix). <p>Wyoming Title 21 Education</p>

Appendix F

Supplemental Tables

Exhibit F-1. Enrollment by School Type — 1999–00 through 2018–19

School Year	Total Enrollment	District Enrollment	Charter School Enrollment	% Charter Enrollment	School Age Population (5–17)	Home School Count	Private School Count
1999–00	475,974	475,584	390	0.1%	-	-	-
2000–01	475,269	474,732	537	0.1%	-	-	-
2001–02	477,801	477,160	641	0.1%	-	-	-
2002–03	481,143	479,617	1,526	0.3%	-	7,037	-
2003–04	486,938	483,685	3,253	0.7%	-	6,950	-
2004–05	495,682	489,445	6,237	1.3%	-	7,573	-
2005–06	510,012	498,484	11,528	2.3%	-	8,540	-
2006–07	524,003	504,792	19,211	3.7%	-	8,808	-
2007–08	537,653	515,457	22,196	4.1%	-	8,895	18,675
2008–09	551,013	523,644	27,369	5.0%	-	9,177	-
2009–10	563,273	529,107	34,166	6.1%	-	8,154	19,447
2010–11	576,335	536,214	40,121	7.0%	-	8,023	-
2011–12	587,745	542,853	44,892	7.6%	-	8,260	17,399
2012–13	600,060	550,184	49,876	8.3%	-	8,988	-
2013–14	611,711	557,651	54,060	8.8%	-	10,438	18,720
2014–15	621,237	560,718	60,519	9.7%	-	13,033	-
2015–16	633,398	566,387	67,011	10.6%	666,974	16,085	15,911
2016–17	644,476	572,982	71,494	11.1%	676,459	-	-
2017–18	652,347	576,781	75,566	11.6%	684,631	-	17,747
2018–19	659,438	581,054	78,384	11.9%	693,269	-	-

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Utah

Education Funding Study

PHASE 1 REPORT



AUGENBLICK,
PALAICH AND
ASSOCIATES

Owner Requirements

APA does not anticipate requiring any services, equipment or space to be provided by the owner. As noted in the Detailed Plan, within one week of contract award, the study team will provide an outline of any remaining data needs. The study team will require receipt of those data (if any) within three weeks of its request in order adhere to the study timeline. The study team may request the assistance of the Commission in facilitating requests of data from state agencies, if needed.

Client References

Three Recent Comparable Contracts with References

APA and WestEd offer the following three recent comparable contracts with references.

Client: General Assembly of Maryland, Department of Legislative Services

Dates: September 2016 – March 2020

Contact: Rachel Hise | Email: rachel.hise@mlis.state.md.us | Telephone: 410-946-5510

Address: 90 State Circle, Annapolis, MD 21401

Following APA's 2016 Maryland Adequacy study, APA has continued work with the state by providing support to the Department of Legislative Service and the state's Commission on Innovation and Excellence in Education (Kirwan Commission). This includes work includes:

- Working with Commission members and DLS staff to develop recommendations for adjustments for at-risk and EL students along with a concentration of poverty adjustment for schools. This work required a review of the current funding formula, adequacy study results, and best practices nationally.
- Working with Commission members and DLS staff to design an implementation process for universal preschool for four-year-olds and preschool for at-risk three-year-olds. This included estimating the cost of a quality program, estimating the available preschool slots in both public and private settings during phase-in and ramp up, and finalizing a 10-year phase in cost model.
- Working with Commission member, DLS staff, staff from the National Center on Education in the Economy staff built a complex educator compensation model. This model included a multi-year phase in of increased salaries and a career ladder for teachers and administrators.

APA staff continued to provide support to the Commission as it finalized its recommendations for the 2020 legislative session. This included attending Commission meetings and supporting DLS staff with research, cost modeling, and presentations as needed.

Client: Nevada Department of Education (NDE), NV School Finance Study and Technical Assistance

Dates: January 2018 - Present

Contact: Megan Peterson | Email: meganp@doe.nv.gov | Telephone: (775) 687-9236

Address: 700 E. Fifth Street, Carson City, NV 89701

In 2018, APA conducted a study of the Nevada school funding system. The study included:

- a full examination of the state's funding formula structure;
- implementing the professional judgement approach to identify the resources needed to support at-risk, ELL, and special education students;
- conducting case studies of successful schools;
- a large statewide stakeholder engagement process, which included public meetings across the state, along with targeted focus groups and online surveys;

- incorporating the results of APA’s prior 2006 and 2015 adequacy work in Nevada to address base funding and additional adjustments for school and district characteristics to develop a new funding formula; and
- fiscal modeling.

Following the final report, NDE further contracted with APA to provide technical assistance, fiscal modeling and other support during the legislative session. This included meetings with Department staff and district administrators to understand how APA’s findings could be incorporated successfully into a new funding model for the state. WestEd, through the federal West Comprehensive Center, also provided technical assistance, including stakeholder facilitation, to the Department during this time. The legislature passed a bill to update the state’s funding formula using recommendations from APA’s study and created the Nevada Commission on School Funding to work to finalize the new funding formula.

APA and WestEd have both continued to work with the state to support the Commission. APA provides policy options and models the impact of those options for consideration by Commission members. WestEd provides support on policy implementation, including finance and accountability reporting.

Client: Utah State Board of Education, **Utah Education Funding Study**

Dates: June 2019 – June 2024

Contact: Tiffany Stanley | Email: tiffany.stanley@schools.utah.gov | Telephone: 801.538.7715

Address: 250 E 500 S, Salt Lake City, UT 84111 | **Mailing Address:** PO Box 144200, Salt Lake City, Utah 84114-4200

WestEd is conducting a study evaluating Utah’s school funding system to determine the extent to which current funding formulas meet their intended purposes and provide equitable access to education in the state, and to gather recommendations regarding how existing resources could be better targeted to meet these goals and raise student achievement. APA is contributing to the equity analysis and case studies of successful schools as a subcontractor to WestEd.

Other Information (Appendices)

The following information is included as an Appendix:

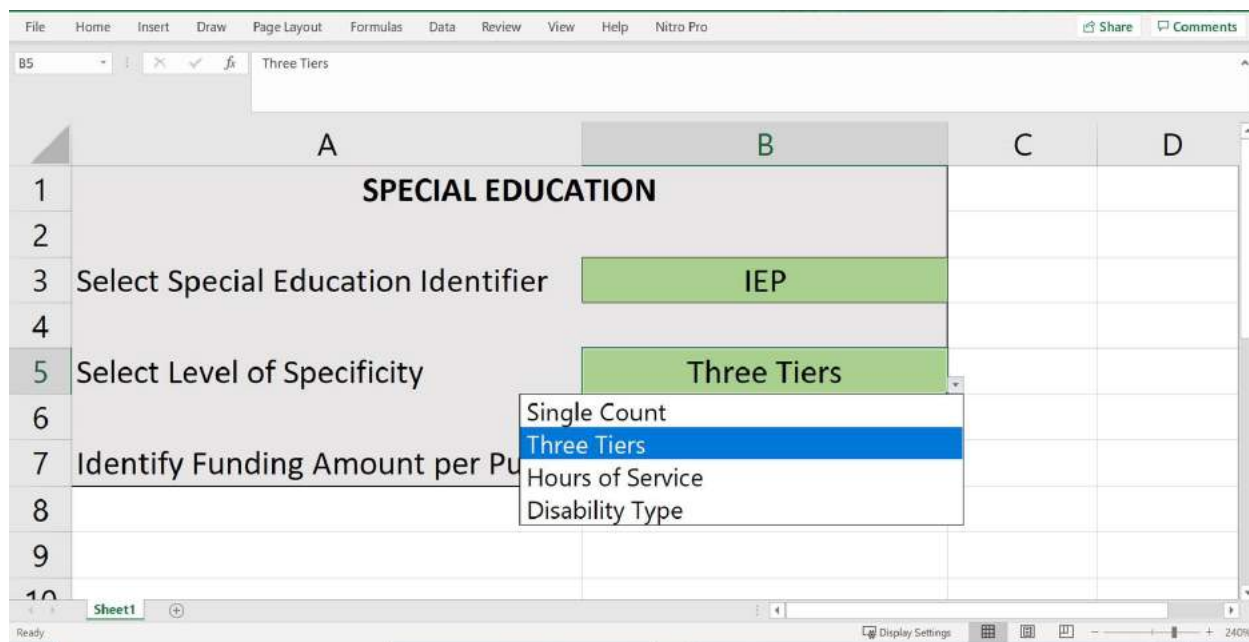
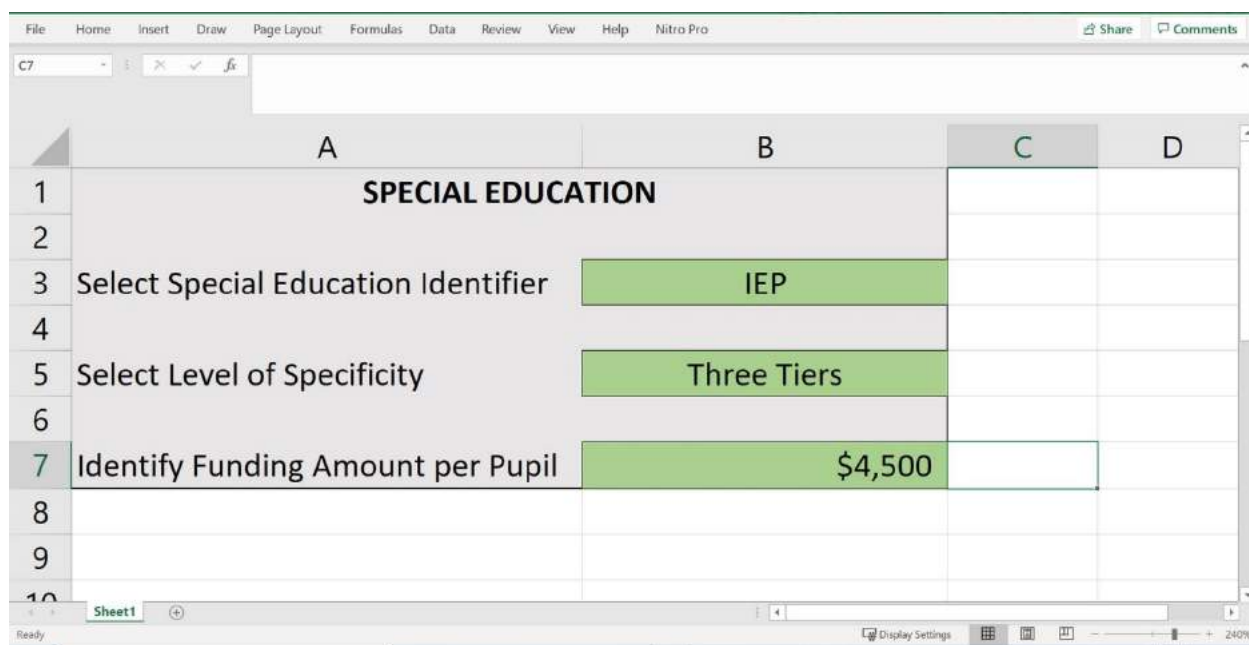
Appendix A: Example of Potential Model User Selections

Appendix B: Example of Visualizing Disparities through Mapping

Appendix C: Study Team Member Resumes

Appendix A: Example of Potential Model User Selections

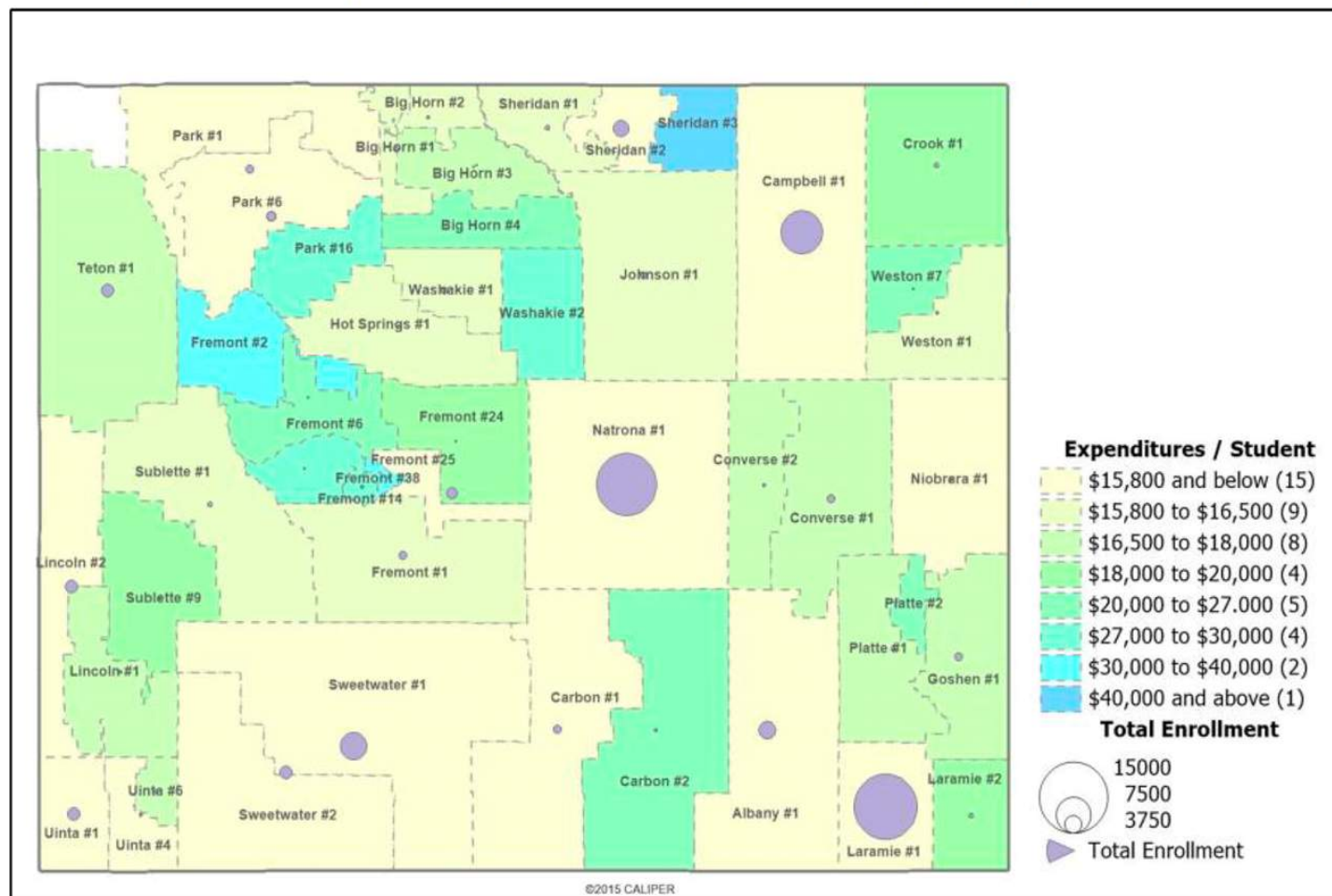
These screenshots are for illustrative purpose only, and show an example of how users would be able to use the model APA develops to make selections for a variety of indicators, in this example, special education. The model output would then show the impact of the user selections. The options included in the model would be developed as a result of the research and analysis conducted during the course of the study and based on input from and decisions made by the Commission.



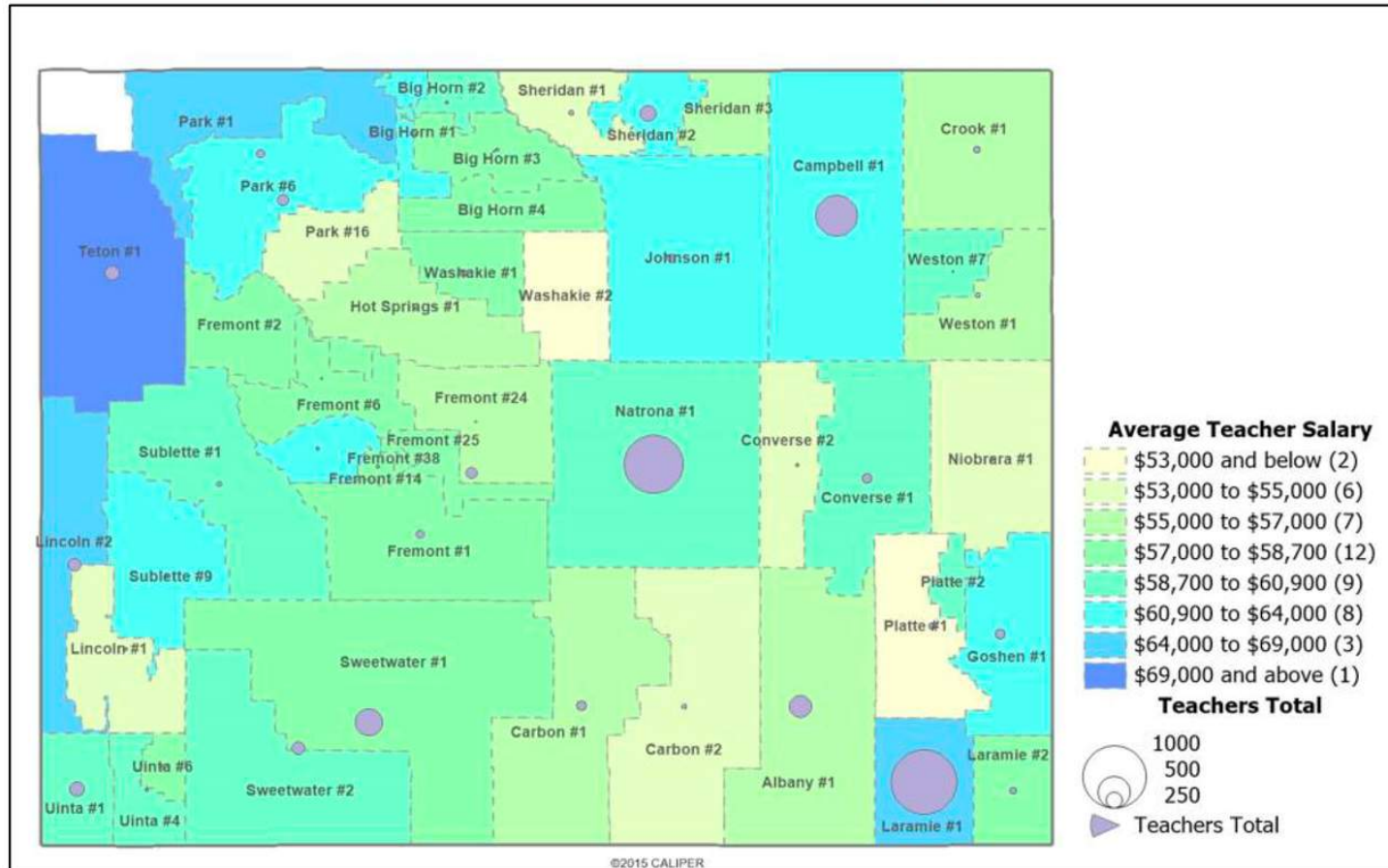
Appendix B: Example of Visualizing Disparities through Mapping

The following data visualizations are for illustrative purposes only and show an example of how the study team could use mapping software to visually display data on disparities across the state.

Expenditure per Average Daily Membership (ADM)



Equalizing Compensation (Average Actual Teacher Salaries)



Appendix C: Study Team Member Resumes



AUGENBLICK,
PALAICH AND
ASSOCIATES

Justin Silverstein

Co-CEO

720.227.0075 | jrs@apaconsulting.net

Summary of Related Experience

Justin Silverstein joined APA in 1998. He is currently co-CEO and leads APA's school finance and cost modeling work. He has worked with over 25 states to help them understand the costs associated with meeting state educational standards. This included helping to develop and refine two of the nationally recognized adequacy approaches. Additionally, he has helped states identify the costs of specific programs and legislation, such as Colorado's Achievement Plan for Kids (CAP4K). Through his work with states, Mr. Silverstein understands how to work with policymakers to design and implement projects that are digestible to the general public and create actionable next steps.

Mr. Silverstein's cost modeling work includes models for policymakers in Idaho, Michigan, the District of Columbia and other states. His cost models are dynamic providing the user with the ability to understand the consequences of changes in specific parameters of programs. The models have been developed in excel and in online formats.

Areas of Expertise

- Project leadership/management
- K-12 school finance
- Determining the costs of programs, legislation and initiatives
- Stakeholder engagement
- Fiscal modeling
- Cost effectiveness, return on investment
- Technical assistance

Education

B.S., Business Administration (Accounting)
University of Colorado, Boulder, CO

1998

Professional Experience

Augenblick, Palaich & Associates (APA), Denver, CO
Co-CEO

**2017-
Present**

- Oversees the school finance and cost modeling areas for the firm.
- Has provided project management on multiple large-scale projects.
- Oversees finance and operations for APA.
- Has organized and conducted school finance studies in over 25 states over the past 20 years.
- Leads the continued refinement and implementation of nationally recognized school finance research strategies, including professional judgment and successful district schools approaches.
- Project lead on numerous state level school finance studies including:
 - Reviewing Alaska's current funding formula and suggesting changes to the formula to better serve students,
 - Conducting an equity and adequacy study for the state of Alabama,

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- Conducting an update of the Nevada Adequacy study,
 - An analysis of New Jersey’s census-based funding approach for special education.
- Conducted analysis of educator compensation systems including:
 - A study of Hawaii’s current teacher compensation system including the structure and pay levels of the system.
 - Ongoing support of Jefferson County Public Schools staff compensation system including: yearly analysis of pay levels, support in designing the district’s TIF application, and analyzing and modeling the costs of alternative pay structures for the district.
- Researched student assessment practices in both Illinois and Colorado by designing, implementing, and analyzing data generated through statewide surveys of assessment practices.
- Provides facilitation and support to district committees in Jefferson County Public Schools and Littleton Public Schools examining the districts’ facility usage.

Augenblick, Palaich & Associates (APA), Denver, CO
Vice President

2009-2016

- Organizational lead in the area of school finance.
- Organized and conducted school finance studies nationally.

Augenblick, Palaich & Associates (APA), Denver, CO
Senior Associate

2003-2008

- Conducted multiple adequacy studies across the country including statewide studies for Colorado, Pennsylvania, Montana, Nevada, and others.
- Provided facilitation and support to a district committee in the Littleton Public schools examining the district’s facility usage. The work resulted in the repurposing of two district buildings.
- Provided support to the Poudre Public Schools staff in the design of a student-based budgeting formula.

Augenblick, Palaich & Associates (APA), Denver, CO
Associate

1998-2002

- Conducted school funding adequacy analyses in multiple states, including work for the Thornton Commission in Maryland which established a state school aid formula designed to ensure that school systems have the resources needed to provide every student with an adequate and equitable education.
- Participated in the development and refinement of the Professional Judgment and Successful School District approaches to study adequacy, which have become nationally recognized models for conducting school finance research.

Selected Reports and Other Publications

“Alternative Approaches to Recalibration and Reconciliation of Study Results to Provide Final Recommendations” for the Wyoming Select Committee on School Finance Recalibration (2018).

“Costing Out the Resources Needed to Meet Michigan’s Standards and Requirements” for the Michigan School Finance Collaborative (2018).

“Michigan Education Finance Study” for the State of Michigan (2016).

“Final Report of the Study of Adequacy of Funding for Education in Maryland” for the Maryland State Department of Education (2016).

“Review of Alaska’s School Funding Program,” Silverstein, J., Brown, A., Fermanich, M. Denver, CO. Augenblick, Palaich, and Associates (2015).

“Equity and Adequacy in Alabama Schools and Districts” for the Alabama State Department of Education (2015)

“Equity Analysis of Colorado’s Education Funding System.” Prepared for the Colorado School Finance Project, August 2015.

“Professional Judgment Study Report,” with APA staff. Prepared for Lincy Institute at the University of Nevada, Las Vegas, January 2015.

“Study of Hawaii’s Compensation System,” by Augenblick, Palaich and Associates with Chris Stoddard, November 2014.

“Study of Assessment Use in Colorado Districts and Schools,” with APA staff. Prepared for the HB14 - 1202 Standards and Assessment Task Force, November 2014.

“Analysis of the Impact of Colorado’s Achievement Plan for Kids (CAP4K): Postsecondary and Workforce Readiness, Final Report”, Prepared for Colorado Department of Education, October 2014.

“Overview of the Structure of the Illinois School Finance System,” with APA staff. Prepared for the Illinois State Board of Education, September 2013.

“Study of Assessment Use and Need in Illinois Race to the Top Districts,” with APA staff. Prepared for Illinois State Board of Education, May 2013.

“Cost of Student Achievement: Report of the DC Education Adequacy Study,” with The Finance Project and APA staff. Prepared for D.C. Deputy Mayor for Education, December, 2013.

“Salary Schedule Comparison.” Prepared for Jefferson County Public Schools, April 2012

“Analysis of New Jersey’s Census-Based Special Education Funding System,” with APA staff. Prepared for the New Jersey Department of Education, October 2011.

“Costing Out the Resources Needed to Meet Colorado Education Standards and Requirements,” with APA staff. Prepared for Children’s Voices, March 2011.

“Colorado Average Daily Membership Study: A Feasibility Study of Alternatives to the October 1 Student Count Method,” with Mark Fermanich and Tracie Rainey. Prepared for the Colorado Department of Education, January 2011.

“Recommendations to Strengthen North Carolina’s School Funding System,” with APA staff. Prepared for the North Carolina General Assembly, September 2010.

“Final Report: Jeffco Facilities Usage Committee,” with committee staff. Prepared for the Jefferson County Public Schools, December 2009.

“Facility Use Task Force Final Report,” with committee staff. Prepared for the Littleton Public Schools, October 2008.

“Costing Out the Resources Needed to Meet Pennsylvania’s Public Education Goals,” with APA staff. Prepared for the Pennsylvania State Board of Education, November 2007.



AUGENBLICK,
PALAICH AND
ASSOCIATES

Jennifer Piscatelli
Associate

720.227.0090 | jhp@apaconsulting.net

Summary of Related Experience

Jennifer Piscatelli joined APA in 2012 and brings over 20 years of education policy experience to the Comprehensive Center proposal. She has contributed to APA's role in REL Central for the past 7 years, contributing to the development of REL Central's research alliances and managing APA's regional educational laboratory subcontract. She regularly works with policymakers through her roles in APA school finance, evaluation, and assessment projects. Prior to joining APA, Jennifer spent over 8 years as a researcher and policy analyst at the Education Commission of the States, staffed New Hampshire Governor Jeanne Shaheen's Kids Cabinet, and served as a Legislative Aide to the New Hampshire State Senate Education Committee.

Areas of Expertise

- Program/project administration
- School finance
- Education policy development and implementation
- Meeting facilitation
- Survey development and analysis
- Qualitative data analysis
- Focus group and Interview development and facilitation

Education

M.A., Political Science (Emphasis: Public Policy) **2006**
University of Colorado at Denver, Denver, CO

B.A., Political Science and Women's Studies (Magna Cum Laude) **1998**
University of New Hampshire, Durham, NH

Professional Experience

Augenblick, Palaich & Associates (APA), Denver, CO **Feb. 2012-**
Associate **Present**

- Member of APA's school finance team. Contribute to school finance adequacy and costing out projects and Professional Judgment Group panels in multiple states, including Alabama, Alaska, Maryland, Michigan, and Nevada.
- Provide analysis, support and facilitation for a variety of APA projects, including educator evaluation systems, student assessment, teacher compensation, and early childhood education. Lead focus groups, conduct interviews and surveys and facilitate meetings.
- Serve as administrator of APA's subcontract as a partner providing services as the Regional Educational Laboratory Central (REL Central). Conduct research as part of REL Central. Research projects have included educator effectiveness, teacher mentoring, competency-based education, and cost-benefit analysis.

Independent Consultant, Castle Rock, CO

Aug. 2010-

Self-employed

Feb. 2012

- Managed multiple clients and projects while delivering high-quality work. Developed a “case statement” and accompanying funding scout report for a Washington, D.C.-based non-profit organization.
- Designed and facilitated a session on service-learning policy for the Wisconsin Department of Public Instruction.
- Provided support to the Executive Director of an education professional association. Responsible for managing and executing all communication with association members and coordinating the association’s annual conference.

Education Commission of the States (ECS), Denver, CO

Feb. 2002-

Policy Analyst; Assistant Policy Analyst; Researcher; Special Projects Associate

Aug. 2010

- Supported ECS’ vision to serve state policymakers across the country as they develop education policy through multiple roles over 8+ years:
 - Supported the ECS National Center for Learning and Citizenship’s (NCLC) national initiatives on state and school district policy to sustain high-quality citizenship education and service-learning. Authored and co-authored grant proposals to fund and sustain the Center’s work. Supervised the creation and updating of web-based state policy databases. Presented findings at state and national conferences.
 - Contributed to ECS’ Postsecondary and Workforce Development Institute; conducted state policy research on postsecondary remedial education. Managed the institute’s database and generated reports, and facilitated discussions of experts and policymakers.
 - Served as an ECS State Liaison, regularly connecting with up to 28 ECS Commissioners in 4 states and conducting needs assessments.
 - Coordinated the ECS President’s “Distinguished Senior Fellows” program.
 - Served as the ECS liaison for the Pathways to College Network policy; Coordinated and participated in interviews of 35 national education experts on school accountability; represented ECS at state meetings.

Office of the Governor, Concord, NH

Feb. 2001-

Program Specialist

Sept. 2001

- Staff to New Hampshire Governor Jeanne Shaheen, the Governor’s Kids Cabinet and three Cabinet Subcommittees. Prepared the Governor’s briefing materials and served as liaison between the Governor’s Office and the thirteen Cabinet members (state agency heads).
- Coordinated monthly Cabinet and subcommittee meetings, developed meeting agendas consistent with Cabinet priorities, provided research and administrative support for Cabinet and Subcommittee members and meetings. Secured private grant funding for the KIDS Cabinet School Age Care Outreach Project.

New Hampshire State Senate, Concord, NH

Jan. 1999-

Legislative Aide

Feb. 2001

- Served as legislative aide to the New Hampshire Senate Education Committee and all education-related study committees and commissions. Attended committee hearings and meetings, prepared meeting/hearing reports, reviewed committee amendments for accuracy, researched bills and issues, drafted interim and final study committee reports.

- Drafted Senators' floor statements outlining committee recommendations for Senate floor debate. Responded to information requests and inquiries from legislators, members of the public, state agency personnel, lobbyists and other interested parties in a timely manner.

Selected Reports and Other Publications

- "Hawaii Teacher Compensation Study and Recommendations" for the Hawaii Department of Education, with APA staff. Denver, CO. January 2020.
- "Oakland Health Career Pathways: Resource Study," for SRI International, with APA staff. Denver, CO. November 2019.
- "Nevada School Finance Study" for the Nevada Department of Education, with APA staff. Denver, CO. October 2018.
- "Costing Out the Resources Needed to Meet Michigan's Standards and Requirements," with APA staff and Picus, Odden and Associates. Denver, CO. Augenblick, Palaich and Associates, 2018.
- "Overview of selected state policies and supports related to K–12 competency-based education" (REL 2017–249). Brodersen, R. M., Yanoski, D., Mason, K., Apthorp, H., and Piscatelli, J. (2016). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central.
- "A Review of Teacher and Principal Input Regarding The 27J Teacher Evaluation System," with APA staff. Prepared for School District 27J, Colorado, June 2015.
- "Review of Alaska's School Funding Program." Silverstein, J., Brown, A., Fermanich, M. Denver, CO. Augenblick, Palaich and Associates, 2015.
- "Professional Judgment Study Report," with APA staff. Prepared for Lincy Institute at the University of Nevada, Las Vegas, January 2015.
- "A Review of Teacher Survey Data Regarding The 27J Teacher Evaluation System," with APA staff. Prepared School District 27J, Colorado, August 2013.
- "Study of Assessment Use and Need in Illinois Race to the Top Districts," with APA staff. Prepared for Illinois State Board of Education, May 2013.
- "State Policies on School Climate and Bully Prevention Efforts: Challenges and Opportunities for Deepening State Policy Support for Safe and Civil Schools," with Chiqueena Lee. National School Climate Center, July 2011.



AUGENBLICK,
PALAICH AND
ASSOCIATES

Amanda Brown

Senior Associate

720.227.0088 | arb@apaconsulting.net

Summary of Related Experience

Amanda Brown's primary focus areas are school finance and evaluation, both at the state and local level. Since joining APA 15 years ago, she has worked at the state level on large-scale adequacy studies; completed evaluations of state funding mechanisms to improve allocation of resources; conducted studies to understand the resource implications of specific education reform legislation and implementation of instructional best practices; and led stakeholder engagements efforts including in-person listening sessions, interviews and statewide surveys. She has led recent projects including studies of the education finance systems in Nevada and Wyoming as well as contributing to all of APA's state-level school finance studies since 2005. She has also provided technical assistance to two state school finance commissions, Nevada's Commission on School Funding and Maryland's Commission on Innovation and Excellence in Education (Kirwan Commission). At the local level, Brown has assisted local school districts to develop school-based budgeting formulas; conducted salary competitiveness studies; addressed issues of declining enrollment; determined the efficiency of facilities usage; and evaluated the implementation costs and return on investment of programs.

Areas of Expertise

- Project leadership/management
- K-12 school finance
- Determining the costs of programs, legislation and initiatives
- Stakeholder engagement
- Fiscal modeling
- Cost effectiveness, return on investment
- Technical assistance
- Program evaluation
- Qualitative research methods

Education

M.P.A., Public Administration **2009**
University of Colorado, Denver, CO

B.A., Sociology, and **B.S.**, Advertising **2005**
University of Colorado, Boulder, CO

Professional Experience

Augenblick, Palaich & Associates (APA), Denver, CO **Jan. 2005-**
Senior Associate **Present**

Senior Associate Policy Analyst (08/11- present) in a firm that conducts studies on education policy issues for state and local policymakers. Previous positions: Associate; Intern.

- Recent projects: Conducting adequacy studies at the state and district across the country to determine the resources needed to effectively meet federal and state standards; evaluating the

cost implications of education programs and policies; and working with local school districts and community groups to address declining enrollment, the use of student-based budgeting, and the implementation of best practice standards; and Implementation and impact evaluations of early literacy and early childhood professional development and education programs.

- Recent clients: Hawaii Department of Education; Nevada Department of Education; Wyoming State Legislature; Maryland State Department of Education; State of Michigan; Alaska State Legislature; Alabama Board of Education; Deputy Mayor of Education's Office, District of Columbia; Colorado Department of Education; New Jersey Department of Education; North Carolina General Assembly; Pennsylvania State Board of Education; Nevada State Legislature; Louisiana State Board of Elementary and Secondary Education; Virginia Department of Education; Jeffco Public Schools; Littleton Public Schools; Poudre School District; Denver Public Schools; Colorado Governor's State Council on Educator Effectiveness; Lincy Institute at the University of Las Vegas; Gates Family Foundation; Colorado Legacy Foundation; Colorado School Finance Project; Denver Preschool Program; Donnell-Kay Foundation; Piton Foundation; Children's Voices; ELPASO Movement; Reach Out and Read Colorado; a Providers Advancing School Outcomes (PASO), funded through Mile High United Way.
- Duties: project management; program evaluation; research; data collection and analysis; observation; conducting interviews; focus groups, and surveys; meeting facilitation; writing and presenting reports; accounting and office management.

P.S.1 Charter School Denver, CO

Member of the Board of Directors, served as Accountability Committee Chair

May 2009-

June 2011

Selected Reports and Other Publications

In collaboration with other Augenblick, Palaich, and Associates staff:

- "Hawaii Teacher Compensation Study and Recommendations" for the Hawaii Department of Education, January 2020.
- "DPS Innovation Zones: Benefits and Lessons Learned" for the Gates Family Foundation, December 2019.
- "Oakland Health Career Pathways: Resource Study" for SRI International, November 2019.
- "Evaluation of ELPASO Program, 2017-18 and 2018-19" for the ELPASO Movement, 2017-2019.
- "Nevada School Finance Study" for the Nevada Department of Education, October 2018.
- "Evaluation of Providers Advancing School Outcomes: Years 1-5" for PASO and Mile High United Way, 2012-2018.
- "Alternative Approaches to Recalibration and Reconciliation of Study Results to Provide Final Recommendations" for the Select Committee on School Finance Recalibration, WY Legislature, January 2018.
- "Final Report of the Study of Adequacy of Funding for Education in Maryland" for the Maryland State Department of Education, November 2016.
- "Michigan Education Finance Study" for the State of Michigan, June 2016.
- "Review of Alaska's School Funding Program" for the Alaska State Legislature, July 2015.
- "Equity and Adequacy in Alabama Schools and Districts" for the Alabama State Department of Education, March 2015.

- “Professional Judgment Study Report” for the Lincy Institute at the University of Nevada, Las Vegas, January 2015.
- “Study of Assessment Use in Colorado Districts and Schools” for Prepared the HB14- 1202 Standards and Assessment Task Force, November 2014
- “Cost of Student Achievement: Final Report of the DC Education Adequacy Study” for the Deputy Mayor of Education, District of Columbia, December 2013.
- “Costing out the Resources Needed to Meet Colorado Education Standards and Requirements: Final Report,” for Children’s Voices, March 2011, and “Update Report,” for the Colorado School Finance Project, February 2013.
- “Analysis of the Costs of Colorado’s Achievement Plan for Kids (CAP4K): First Interim Report,” “Second Interim Report” and “Final Report”, for the Colorado Department of Education, March 2010, October 2011, November 2014.
- “Analysis of New Jersey’s Census-Based Special Education Funding System,” for the New Jersey Department of Education, October 2011.
- “An Evaluation of the Denver Preschool Program 2008-09; 2009-10; 2010-11,” for the Denver Preschool Program, June 2009, September 2010, September 2011.
- “Costing Out the Resource Implications of SB 10-191 in Colorado School Districts,” for the State Council for Educator Effectiveness, March 2011.
- “Recommendations to Strengthen North Carolina’s Funding System,” for North Carolina General Assembly, November 2010.
- “Participant Perceptive of Reach Out and Read Colorado,” for Reach Out and Read Colorado, August 2010.
- “Final Report: Jeffco Facilities Usage Committee,” for Jefferson County Public Schools, December 2009.
- “Assessment of Denver Public Schools Student-Based Budgeting System,” for Metro Organizations for People, December 2008.
- “Facilities Usage Analysis,” for Facility Use Task Force, for Littleton Public Schools, October 2008
- “Costing Out the Resources Needed to Meet Pennsylvania’s Public School Education Goals,” for the Pennsylvania State Board of Education, December 2007.
- “State and Local Costs of the No Child Left Behind Act in West Virginia,” for the West Virginia Dept. of Education, May 2007.
- “Estimating the Cost of an Adequate Education in Nevada,” for the Nevada State Legislature, August 2006.
- “The Cost of Fulfilling the Approved Procedural Requirements of the No Child Left Behind Act in New Mexico,” for the New Mexico Public Education Department, May 2005.



AUGENBLICK,
PALAICH AND
ASSOCIATES

Dr. Mark Fermanich

Senior Associate

720.227.0101 | mlf@apaconsulting.net

Summary of Related Experience

Dr. Mark Fermanich joined APA in 2013, bringing nearly 30 years of experience working in the fields of education policy, research and administration. He has worked at the state policy level as a legislative education policy analyst; at the LEA level as a policy analyst and administrator for two large, urban school districts; and as a researcher in higher education settings. He also has nearly 10 years of experience teaching adult learners working toward graduate degrees or certification as K-12 or post-secondary administrators. For six years Dr. Fermanich served as a national technical assistance provider for grantees of the federal Teacher Incentive Fund Grant program. He has extensive experience in helping education organizations design, implement and estimate the costs of state or local school financing systems, alternative educator compensation plans, and in identifying and assessing the costs and effectiveness of educational strategies and interventions.

Areas of Expertise

- Project leadership/management
- Technical assistance
- K-12 school finance
- Cost benefit, cost effectiveness, and return on investment analysis
- Teacher recruitment, retention, mentoring, and quality
- Teacher compensation
- Fiscal modeling

Education

Ph.D., Educational Leadership and Policy Analysis **2003**
University of Wisconsin Madison, Madison, WI

M.A., Public Administration **1982**
University of Wisconsin Madison, Madison, WI

B.A., Political Science **1979**
University of Wisconsin Oshkosh, Oshkosh, WI

Professional Experience

Augenblick, Palaich & Associates (APA), Denver, CO **2013-**
Senior Associate **Present**

Serve as principal investigator on small- to large-scale research and evaluation projects. Conduct policy research, evaluation, and cost-effectiveness analyses in the areas of education policy, finance, and reform; teacher compensation and effectiveness; and early childhood education. Prepare and present reports, both technical and academic for clients, policymakers and academic journals. Advise and provide technical assistance to state and local education policymakers.

APA Consulting | 1547 Gaylord St | Denver, CO 80206 | 303.293.2175

Oregon State University, Corvallis, OR 2011-2013
Assistant Professor

Taught courses, both campus-based and online, in the areas of education policy, finance and politics for K-12 and higher education leadership graduate programs in the College of Education. Maintained active research agenda, served on Master's and Doctoral committees and engaged in service activities.

University of Colorado Denver, Center for Education Policy Analysis, Denver, CO 2009-2011
Research Faculty

Served as principal investigator and researcher on small- to large-scale research and evaluation projects. Conducted policy research and evaluation in areas of education policy, finance and reform; and state fiscal policy. Advised and provided technical assistance to state and local education policymakers. Taught core graduate classes in the School of Public Affairs.

Colorado Children's Campaign, Denver, CO 2007-2009
Research Director

Directed policy research and analysis on education, health care and early childhood issues for nonprofit policy research and advocacy organization. Directed the use of data and research to shape and guide the organization's policy agenda and proposals within the Colorado state context. Worked collaboratively with policy actors including state and local policymakers, foundations and higher education institutions.

Sonoma State University, Rohnert Park, CA 2004-2007
Associate Professor

Taught graduate courses in the areas of education policy, finance, politics, and leadership for the Department of Educational Leadership and Special Education in the School of Education and for the Capital Area North Doctorate in Educational Leadership Program at the University of California Davis. Other responsibilities included supervising educational administration interns in school placements, serving on masters and doctoral committees, and engaging in scholarship and service activities.

University of Wisconsin Madison, Consortium for Policy Research in Education, Madison, WI 1998-2003
Assistant Researcher

Conducted policy research in areas of education finance and reform with a focus on spending for school and instructional improvement, professional development, resource reallocation, school-based budgeting, decentralization, and education finance equity and adequacy.

St. Paul Public Schools, St. Paul, MN 1997-1998
Compensatory Education Coordinator

Coordinated all activities pertaining to district and site-based compensatory education programs for disadvantaged and at-risk students. Responsibilities included reviewing and approving expenditures for \$40 million compensatory education program and assisting school sites with budget, administration, best practice, and program implementation issues. Also assumed a leadership role in the district's site-based management initiative and provided troubleshooting in areas of budget and state policy.

Minneapolis Public Schools, Minneapolis, MN
Manager, Intergovernmental Relations

**1995-
1997**

Managed the district's intergovernmental relations efforts in support of its policies and strategic direction. Served as the district's liaison with the legislature, state executive branch, and other state and local government agencies. Responsibilities included identifying and analyzing key district policy issues and assisting the district in formulating solutions and initiatives; developing and nurturing collaborative efforts with state, county and city governments; and providing the Board of Education and district administration with interpretation and analysis of local, state and federal legislation.

Senate Counsel and Research, St. Paul, MN
Legislative Analyst

**1990-
1995**

Served as nonpartisan staff for State Senate K-12 Education Committee, providing analytical, technical and legal staff support. Responsibilities included researching salient policy issues, formulating proposals, drafting legislation, conducting fiscal analyses of legislative proposals, and projecting state and local costs. Extensive work in areas of education finance, special education, early childhood education, teacher preparation, and school-social services collaboration.

American International School of Rotterdam, Rotterdam, The Netherlands
Finance Manager

**1989-
1990**

Managed all business affairs for this K-8 elementary school with a budget of \$1.5 million.

State of Minnesota, Intertechnologies Group, St. Paul, MN
Information Center Analyst

**1988-
1989**

Primary support person within state government for SAS statistical software.

Minnesota State Department of Revenue, St. Paul, MN
Research Analyst

**1983-
1988**

Served as lead researcher on large-scale research projects in the areas of state and local tax policy and finance. Responsibilities included programming and maintaining a statewide property tax model for projecting state-paid aids and credits.

Selected Reports and Other Publications

Refereed Publications

Ely, T. & Fermanich, M. L. (2018). *Building blocks: Financing charter school facilities*. Manuscript submitted for publication.

Fermanich, M. L. (2017). *Interactions between tax and expenditure limits and school finance equity: An analysis of Colorado's TABOR*. Manuscript in preparation.

Ely, T. & Fermanich, M. L. (2013). *Learning to count: School finance formula count methods and attendance-related student outcomes*. *Journal of Education Finance*, 38(4), 343.

Fermanich, M. L. (2011). Money for music education: A district analysis of the how, what and where of spending for music education. *Journal of Education Finance*, 37(2), 130-149.

Odden, A. R., Borman, G. & Fermanich, M. L. (2004). A framework for assessing teacher, classroom and school effects, including fiscal effects. *Peabody Journal of Education*, 79(4), 4-32.

- Miles, K. H., Odden, A. R., Fermanich, M. L., & Archibald, S. (2004). Inside the black box of school district spending on professional development: Lessons from five urban districts. *Journal of Education Finance*, 30(1), 1-26.
- Picus, L.O., Odden, A. R. & Fermanich, M. L. (2004). Assessing the equity of Kentucky's SEEK formula: A ten-year analysis. *Journal of Education Finance*, 29(4), 315-336.
- Odden, A. R., Archibald, S., Fermanich, M. L., & Gross, B. (2003). Defining school-level expenditure structures that reflect educational strategies. *Journal of Education Finance*, 28(3), 323-356.
- Fermanich, M. L. (2002). School spending for professional development: A cross-case analysis of seven schools in one urban district. *The Elementary School Journal*, 103(1), 27-50.
- Fermanich, M. L. & Kimball, S. M. (2002). You can get there from here: How three urban schools could use existing resources to afford comprehensive school reform. *Journal of Education Finance*, 28(1), 75-96.
- Odden, A. R., Archibald, S., Fermanich, M. L., & Gallagher, H. A. (2002). A cost framework for professional development. *Journal of Education Finance*, 28(1), 51-74.
- Odden, A. R., Archibald, S., Fermanich, M. L., & Gallagher, H. A. (2002). How to figure the cost of professional development. *Journal of Staff Development*, 23(2), 53-58.

Book Chapters

- Odden, A. R., Archibald, S. & Fermanich, M. L. (2003). Rethinking the finance system for improved student achievement. In W. L. Boyd & D. Miretzky (Eds.), *American educational governance on trial: Change and challenge (102nd Yearbook of the National Society for the Study of Education)*. Chicago: The University of Chicago Press.

Research Reports and Other Publications

- APA Consulting. (2016). *Final Report of the Study of Adequacy of Funding for Education in Maryland*. Denver, CO: Author.
- APA Consulting. (2016). *A Return on Investment Analysis of Aurora Public Schools' Retired Mentors for New Teachers Program*. Denver, CO: Author.
- APA Consulting. (2015). *Equity and Adequacy in Alabama Schools and Districts*. Denver, CO: Author.
- Fermanich, M. L., Carl, B., & Finster, M. (2015). *Development and Implementation Costs of Student Learning Objectives: Considerations for TIF Grantees*. Washington, D.C.: U.S. Department of Education, Office of Innovation and Improvement.
- Fermanich, M. L. & Picus, L. O. (2015). *Adequacy Cost Study: An Interim Report on Methodology and Progress*. Denver, CO: Augenblick, Palaich & Associates.
- Humann, C., Palaich, R., Fermanich, M. and Griffin, S. (2015). *Final School Size Study Report: Impact of Smaller Schools*. Denver, CO: APA Consulting.
- Silverstein, J., Brown, A., & Fermanich, M. L. (2015). *Review of Alaska's School Funding Program*. Denver, CO: Augenblick, Palaich & Associates.
- Wool, S., Fermanich, M., & Reichardt, R. (2015). *A Review of the Literature on the Effects of Concentrations of Poverty on School Performance and School Resource Needs*. Denver, CO: APA Consulting.

- Aportela, A., Picus, L., Odden, A. & Fermanich, M. (2014). *A Comprehensive Review of State Adequacy Studies Since 2003*. Denver, CO: Augenblick, Palaich & Associates
- Fermanich, M., Picus, L. O. & Odden, A. (2014). *Proposed Methodology for Establishing Adequate Funding Levels in the State of Maryland*. Denver, CO: Augenblick, Palaich & Associates.
- Germeroth, C., Day-Hess, C. & Fermanich, M. (2013). *Evaluation study of early childhood workforce professional development strategies*. Denver, CO: McREL.
- Fermanich, M. L. (2011). *Colorado's fiscal future: We'll get what we pay for* (White Paper). Denver, CO: University of Colorado Denver, School of Public Affairs, Buechner Institute for Governance.
- Fermanich, M. L. (2010, September). *An analysis of decentralized funding plans for DPS innovation schools*. Denver, CO: University of Colorado Denver, School of Public Affairs, Buechner Institute for Governance.
- Fermanich, M. L. (2010). *Money for music: Exploring the costs and benefits of music programs in Mountain View School District*. Carlsbad, CA: NAMM Foundation.
- Fermanich, M. L. & Hupfeld, K. (2009). *Student-centered funding and its implications for Colorado: A primer for policy makers*. Denver, CO: Donnell-Kay Foundation and University of Colorado Denver, Center for Education Policy Analysis.
- Harris, C., Clemons, T., Williams, J., & Fermanich, M. (2009). *Greater Louisville Education Project Report*. Denver, CO: McREL.
- Fermanich, M. L. (2007). *They are all our kids: Examining resources for supporting CALSTAT leadership site models*. Rohnert Park, CA: California Institute on Human Services.
- Fermanich, M. L. (2006). Is the 65% solution THE solution? *School Business Affairs*, 72(2), 29.
- Fermanich, M., Picus, L. O. & Odden, A. (2006). *Washington Learns: Successful district study final report*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Odden, A., Picus, L. O., Goetz, M., & Fermanich, M. (2006). *An evidence-based approach to school finance adequacy in Washington*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Odden, A., Picus, L. O., Goetz, M., Fermanich, M., Seder, R. C., Glenn, W., & Nelli, R. (2006). *An evidence-based approach to recalibrating Wyoming's block grant school funding formula*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Odden, A., Picus, L. O., Fermanich, M., & Goetz, M. (2004). *An evidence-based approach to school finance adequacy in Arizona*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Odden, A., Picus, L. O. & Fermanich, M. (2003). *An evidence-based approach to school finance adequacy in Arkansas*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Odden, A., Fermanich, M. & Picus, L. O. (2003). *A state-of-the-art approach to school finance adequacy in Kentucky*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Picus, L. O., Odden, A. & Fermanich, M. (2003). *A professional judgment approach to school finance adequacy in Kentucky*. North Hollywood, CA: Lawrence O. Picus and Associates.
- Miles, K. H., Hornbeck, M. & Fermanich, M. L. (2002). *Chicago Public Schools: Professional development project*. Chicago, IL: The Chicago Public Education Fund.
- Picus, L. O., Odden, A. & Fermanich, M. (2001). *Assessing the equity of Kentucky's SEEK formula: A ten-year analysis*. North Hollywood, CA: Lawrence O. Picus and Associates.



AUGENBLICK,
PALAICH AND
ASSOCIATES

Michaela Tonking
Associate

720.790.8054 | mht@apaconsulting.net

Summary of Related Experience

Michaela Tonking worked at APA from 2016 – 2018 and re-joined APA in 2020 after working on state-level education advocacy. She primarily focuses on school finance formulas and analysis on educational resources. She regularly works with policymakers and stakeholders through her roles working on school finance and evaluation projects. Prior to joining APA, Michaela worked as a research assistant for Rhode Island's School Funding Formula Working Groups, as a school finance expert for Educate Nevada Now, and has worked for Deloitte in the audit department.

Areas of Expertise

- Determining the cost of programs
- K-12 School finance
- Education policy development and implementation
- Meeting facilitation
- Quantitative data analysis
- Qualitative data analysis
- Fiscal modeling and budgeting

Education

M.A., Urban Education Policy <i>Brown University, Providence, RI</i>	2016
M.S., Business Administration, (Emphasis: Accounting) <i>University of Colorado, Boulder, CO</i>	2015
B.S., Business Administration, (emphasis: Accounting) <i>University of Colorado, Boulder, CO</i>	1998

Professional Experience

Augenblick, Palaich & Associates (APA), Denver, CO <i>Associate</i>	March 2020- Present, June 2016 – Aug. 2018
<ul style="list-style-type: none">• Member of APA's school finance team. Contribute to school finance adequacy and costing out projects and Professional Judgment Group panels in multiple states, including Maryland, Michigan, Nevada, and Wyoming.• Provide analysis, modeling and support for a variety of APA projects, including teacher pay models, Return on Investment on services provided, and early childhood education. Lead focus groups, conduct interviews and create models for impact.	
Educate Nevada Now, Reno, NV <i>Data and Advocacy Director</i>	Aug. 2018- Feb. 2020
<ul style="list-style-type: none">• Updated and gathered data and research related to Educate Nevada Now's goals.	

- Advocated for Educate Nevada Now and Fund Our Future Coalition goals through direct policy advocacy toward stakeholders and lawmakers.
- Assisted with outreach efforts by speaking to various communities and parent groups, meeting and coordinating with organization partners.
- Educated legislatures and state officials on behalf of ENN through testifying before legislatures and agencies, drafting white papers, presenting to boards and stakeholders, and meeting directly with lawmakers
- Created school funding impact models for schools and districts across the state in collaboration with district CFOs and Superintendents.

Rhode Island School Funding Working Group, Providence, RI

**Aug. 2015-
Jan. 2016**

Research Assistant

- Analyzed current implementation issues in Rhode Island's funding formula
- Conducted analysis on the correlation between free and reduced-price lunch students and English Learners or Special Education students.
- Researched policies in 50 states on providing a weight for special education students and English Learners.

Selected Reports and Other Publications

"Tonking, M., Booth M, and Morgan A. (September, 2019) *Realities of Nevada's K-12 Budgets Across the Districts*. Educate Nevada Press Release.

Tonking M., Booth M., and Morgan A. (June, 2019) *Nevada's Missed Opportunity to Transform K-12 Funding*. Educate Nevada Now Press Release

Tonking M., Booth M. and Morgan A. (March, 2019) *Analysis Highlights Disparity in Resources for FRL. ELL Students Statewide*. Educate Nevada Now Press Release.

APA (June, 2018) *Costing out the Resources Needed to Meet Michigan Standards and Requirements*. Report Submitted by APA to The Michigan School Finance Collaborative.

Tonking, M., Shen, Y, and DeCesare, D (2017). *Early Learning Ventures Cost Savings to Early Childcare and Education Providers*. Report Submitted by APA to Early Learning Ventures.

APA (June, 2016) *Michigan Education Finance Study*. Report Submitted by APA to Michigan Department of Education

Jason Willis

730 Harrison Street, San Francisco, CA 94107



SUMMARY OF EXPERIENCE

Jason Willis is the Director of Strategy & Performance at WestEd. In this role, he oversees and guides the expansion of the agency's performance and accountability services, which include support to state and local education agencies to implement policies and financial infrastructure to support school system reform. Performance and accountability services provide this support through capacity building, facilitation, and analysis of financial data including the effective use of resources. He has also worked with numerous states and urban school systems to reimagine their funding distribution and regulatory systems to increase the effective use of resources.

Prior to joining WestEd, Willis served as Assistant Superintendent for the San Jose Unified School District. He also served as the Chief Financial Officer/Chief Business Official for the Stockton Unified School District and Budget Director for the Oakland Unified School District. Willis began his career as an Assistant Product Manager with Standard & Poor's, analyzing the debt and financial profiles of public institutions.

EDUCATION

- 2005 MAEd, Policy & Finance, Teachers College, Columbia University, New York, NY
- 2003 BA, Educational Studies & Psychology, The Catholic University of America, Washington, DC

PROFESSIONAL EXPERIENCE

- 2016– Present *Strategy and Performance Director*, Comprehensive School Assistance Program
WestEd, San Francisco, CA

Oversee and guide the expansion of CSAP's existing performance and accountability services, which include support to California's state and local education agencies to implement policies and practices to support the Local Control Funding Formula (LCFF) and realization of genuine continuous improvement efforts in school systems. Performance and accountability services provide this support through capacity building, facilitation of professional learning networks, and analysis of financial data including the effective use of resources.

- 2011– 2016 *Assistant Superintendent, Engagement & Accountability*, San Jose Unified School District, San Jose, California

Guided the design, development, and implementation of the school district's strategic plan for 2012–2017, including significant reforms such as teacher evaluation and compensation, transformational school redesign, and school performance management

systems. In addition, oversaw departments within the school district, including technology and information services; data, research, and accountability; strategic planning/implementation; student services; charter schools; public/media relations; and alternative programs.

2009–
2011 *Chief Financial Officer/Chief Business Official*, Stockton Unified School District
Stockton, California

Led and oversaw all non-instructional operations for the school district including finance, facilities, information technology, transportation, food services, and procurement. Balanced the SUSD district budget totaling approximately \$475 million. Managed approximately 600 staff, providing daily support for the instruction and education of students.

2007–
2009 *Budget Director and Program Manager*, Oakland Unified School District
Oakland, California

Supervised and managed the overall OUSD budget functions. Developed annual budget that aligned strategy with resource allocations. Managed the school district's annual \$710 million budget, which included operating, facilities, food service, early childhood, and adult education funds. Supervised nine staff members in the budget department who were responsible for assisting and communicating with school sites and central office departments. Provided support and training on budget management and strategic planning to school district principals.

2003–
2006 *Assistant Product Manager, Senior Research Assistant, and Research Assistant*, School Evaluation Services, Standard & Poor's, New York, NY

Helped to lead efforts to implement the Resource Management Service (RMS) for education leaders. Provided tools, analysis, and training to improve the management of school districts through a data-driven decision-making framework. Led efforts to design and implement the Municipal Analytical Platform, a web-based platform aimed to allow data comparisons of public entities for use in the S&P Public Finance department. Provided analytical and research support for the 'Resource Adequacy Study' for the New York State Commission on Education Reform.

SELECTED PUBLICATIONS

Willis, J., Krausen, K., Berg-Jacobson, A., Taylor, T., Caparas, R., Lewis, R., & Jaquet, K. (2019). *A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina's K-12 Public Education System*. WestEd. San Francisco, CA.

Willis, J., Krausen, K., Nakamatsu, E., & Caparas, R. (September 2018). *Leading in the Local Control Funding Formula Era: The Shifting Role of California's Chief Business Officers*. Getting Down to Facts II: Technical Report. Palo Alto, CA.

- Grunow, A., Hough, H., Park, S., Willis, J., & Krausen, K. (September 2018). *Towards a Common Vision of Continuous Improvement in California*. Getting Down to Facts II: Technical Report. Palo Alto, CA.
- Krausen, K. & Willis, J. (April 2018). *Silent Recession: Why California School Districts Are Underwater Despite Increases in Funding*. WestEd. San Francisco, CA.
- Krausen, K., Caparas, R., & Willis, J. (December 2018). *Education Budget Strategies for Challenging Times: How California School Districts are Addressing the Silent Recession*. WestEd. San Francisco, CA.
- Taylor, L., Willis, J., Berg-Jacobson, A., Jaquet, K., & Caparas, R. (March 2018). *Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students: A Cost Function Approach*. Prepared for the Kansas Legislature. WestEd. San Francisco, CA.
- Taylor, L., Berg-Jacobson, A., Atchison, D., Willis, J. & Levin, J. (March 2018). *Cost Differentials Across School Districts in Florida: Initial Report*. WestEd. San Francisco, CA.
- Baumgardner, C., Frank, S., Willis, J., & Berg-Jacobson, A. (February 2018). *Finding a Path Toward Equity: What States Can Learn from the Transformation of California's School Funding Model*. WestEd. San Francisco, CA.
- Hough, H., Willis, J. Grunow, A., Krausen, K., Kwon, S., Mulfinger, L., & Park, S. (October 2017). *Continuous Improvement in Practice*. Policy Analysis for California Education (PACE). Palo Alto, CA.
- Willis, J. & Hill, M. (November 2010). Budgeting to Support Student Achievement: New Strategies for Central Office. *Voices in Urban Education*. Annenberg Institute for School Reform. Providence, RI.
- Willis, J., Gazzo, P., Durante, R. (May 2006). *Towards Effective Resource Use: The Case for the Resource Management Service*. Prepared for the National Working Group on Funding School Success. A project of the School Finance Redesign Project. University of Washington.
- Durante, R. & Willis, J. (November 2005). The benefits dilemma: Rising healthcare and pension costs are squeezing education resources. *School Business Affairs*. Association for School Business Officials International: Reston, VA.
- Cox, W., Durante, R., Stewart, M., Gazzo, P., Hampel, M., Willis, J., Sharp, A., Skuthan, N. (March 2004). *Resource Adequacy Study for the New York State Commission on Education Reform*. School Evaluation Services Reports & Findings, Standard & Poor's: New York, NY.

SELECTED PRESENTATIONS

- California Association of School Business Officials. Silent Recession: Wrestling with Effective Resource Use. Fall CBO Symposium. Monterey, CA. 2018
- National Governors Association. Achieving Equity in School Funding. Little Rock, AR. 2018.
- Urban Institute. School Funding Reform – Stories from the States. Washington, DC, 2018
- National Conference of State Legislatures. The Cost of Addressing Barriers to Learning. Baltimore, MD, 2018
- National Conference of State Legislatures. Costing Out in Action – Experiences, Challenges and Successes in Costing Out Educational Adequacy. Baltimore, MD, 2018
- Public Financing Equity and Excellence in Schooling. Haas School of Business: University of California – Berkeley. Berkeley, CA, 2017
- School-level Per Pupil Allocations: Political and Technical Implications. Association for Education Finance Professionals Annual Gathering. Washington, DC, 2017.
- Implications for Weighted Student Funding Systems in our Public School Systems. Future of Education Finance Summit. Baltimore, MD, 2016.
- Implementing College Readiness Indicator Systems: Linking Data and Design in District Settings Panelist, Education Northwest. Portland, OR, 2015.
- National Governors Association (NGA) Resource Reallocation Policy Academy Presenter, “Using Data to Inform Strategic Decision-Making,” 2012.
- Testimony before the National Equity and Excellence Commission, U.S. Department of Education, on Effects of Implementing the Results-Based Budgeting System in an Oakland Unified School District. San Jose, CA, 2011.
- Haas Education Leadership Case Competition, UC Berkeley. Judge, “Los Angeles Unified: Budgeting for Student Achievement” Case, 2011.
- Turning Around the Nation’s Lowest-Performing Schools: Steps to Success Panelist, Center for American Progress. Washington, DC, 2011.
- Testimony before the Student-Based Budget Task Force, Louisiana Board of Elementary and Secondary Education, on Effective Practices of Student-Based Budgeting Systems on Urban Schools, 2010.

SELECTED PROFESSIONAL ACTIVITIES

- Board Member. Alder Graduate School of Education. Palo Alto, CA, 2017–2020
- Advisory Board Member. California Office to Reform Education (CORE). Sacramento, CA, 2017–2019
- Technical Working Group Member. National Study on the Impact of Weighted Student Funding Systems. Institute for Educational Studies (IES). U.S. Department of Education, 2016–2018
- Data Quality Campaign, District Data Use Working Group Advisory Committee Member, 2013–2015
- Deregulating School Aid in California: How Local Educators Allocate Flexible Dollars and Stimulus Funds, RAND Corporation and Policy Analysis for CA Education Advisory Committee Member, Sacramento, CA, 2009–2011

TEACHING

- Chief Business Officer (CBO) Mentor & Certification Program Faculty, Fiscal Crisis Management Assistance Team (FCMAT), California, 2015–Present
- School Site Finance and Resources, Principal Leadership Institute Adjunct Professor, Graduate School of Education, UC Berkeley, 2009, 2011
- The Broad Center Academy & The Broad Center Residency Faculty, “Effective Resource Allocation and Budgeting in Urban School Districts”, 2009, 2010, 2011

SUMMARY OF RELATED EXPERIENCE

WestEd research associate Raifu Durodoye Jr. is an experienced educational researcher and practitioner. His work consists of experimental and quasi-experimental evaluations of education programs, providing technical assistance to school districts and state education agencies, and conducting statewide assessments of educational finance systems. Dr. Durodoye Jr. has supported work affiliated with the REL –Northeast & Islands, REL-Mid-Atlantic, and WestEd’s Strategic Resource Management workgroup.

Previously Dr. Durodoye Jr. was the Title I–Part A program manager for the Delaware Department of Education. In that role, he worked to align planning and budgeting processes with school level needs assessment findings and provide data and policy guidance to district administrators. Dr. Durodoye Jr. was also tasked with instituting system level financial controls to ensure spending adhered to program guidelines and was directed to the students that needed it the most. Raifu and also served in the Delaware Department of Education as a data strategist with their Educator Support Division, and as a data fellow with the Strategic Data Project at the Center for Education Policy Research. In those posts his work focused on state education agency strategies to support low-performing schools, teacher evaluation and development, and programming geared to increase social-emotional competencies.

Prior to joining a state education agency, Dr. Durodoye Jr. worked in higher education as an analyst, and senior analyst in offices of institutional research, evaluation, and assessment. In those roles, Dr. Durodoye Jr. oversaw the development of university-wide early alert systems and evaluated student support initiatives. Dr. Durodoye Jr. has managed portions of university accreditation processes, and developed performance budgeting tools facilitate strategic resource allocation on the part of college deans and university administrators. He received his undergraduate degree, and master’s in public administration from the University of North Texas. He received his PhD in public administration and policy from Virginia Polytechnic Institute & State University.

EDUCATION

- | | |
|------|---|
| 2015 | PhD in Public Administration & Policy, Virginia Polytechnic Institute |
| 2008 | Master of Public Administration, University of North Texas |
| 2006 | Bachelor of Arts & Sciences |

PROFESSIONAL EXPERIENCE

- | | |
|---------|---|
| 2019 - | <i>Research Associate</i> |
| Present | WestEd, San Francisco, CA |
| | Learning Innovations Program |
| | <ul style="list-style-type: none">▪ Conduct large scale evaluations of program effectiveness and funding adequacy▪ Provide technical assistance to state departments of education and school districts |

- Support strategic planning and program implementation efforts of educational agencies
 - Secure funding and cultivate partnerships to support high impact, evidence-based educational practices and interventions
- 2018 - *Education Associate, Title I - Part A*
 2019 Delaware Department of Education, Dover, DE
 Student Support Division
- Steer district budgeting, programmatic, and monitoring practices to meet policy objectives
 - Steward over \$46 million in federal funds
 - Create systems of technical assistance and programmatic oversight
 - Streamline budgeting, management, and financial practices for stakeholders
 - Evaluate program performance and efficacy
 - Liaison to the U.S. Department of Education
- 2016 - *Strategic Data Project Fellow*
 2018 Harvard Graduate School of Education, Cambridge, MA
 Center for Education Policy Research
- Embedded in the Delaware Dept. of Education, Dover, DE
 - Formulated educator equity goals for Delaware's ESSA plan
 - Data analyses and briefings for executive cabinet, and district chiefs
 - Outreach to union leadership, advisory board members, and district superintendents
 - Team lead on standardized assessment metrics
 - Offered professional development for teachers and school leaders
- 2014 – *Research Analyst*
 2016 Virginia Polytechnic Institute, Blacksburg, VA
 Office of Institutional Research & Effectiveness
- Conducted institutional efficiency and benefit-cost analyses
 - Authored the Office of the Provost's institutional salary equity study
 - Managed sections of SACSCOC accreditation report submission
 - Data analysis and advanced statistical modeling in SAS
 - Instituted automated reporting and data quality scans
- 2013 – *Assistant Editor for Administration & Society*
 2014 Virginia Polytechnic Instituted, Blacksburg, VA
 Center for Public Administration & Policy
- Administration of peer review process
 - Initial review of manuscripts
 - Author and reviewer point of contact
- 2011 – *Graduate Assistant*
 2013 Virginia Polytechnic Institute, Blacksburg, VA
 Office of Institutional Research & Effectiveness

- Data analysis and ad hoc reporting in SAS & SQL
 - Data curation and quality control responsibilities
 - Annual internal and federal reporting
- 2011–
2010 *Institutional Research Analyst III*
University of North Texas, Denton, TX
Office of Institutional Research & Effectiveness
- Developed an early alert process to increase first year student retention
 - Statistical identification of at-risk students for program identification
 - Data analysis and statistical modeling in SAS & STATA
 - Presentation of findings to academic administrators and constituents
 - Supervision of graduate assistants

SELECTED PUBLICATIONS

- Ahmad, S., & Durodoye, R. (2019). Dig the Well Before You're Thirsty: Long-Term Strategies to Strategically Cultivate the Teacher Workforce. In B. A. Durodoye, & R. Bryant (Eds.), *From Disagreement to Discourse: A Chronicle of Controversies in Schooling and Education*. Charlotte, NC: IAP.
- Durodoye, R., Gumpertz, M., Wilson, A., Griffith, E., Ahmad, S. (2019). Tenure and Promotion Outcomes at Four Large Land Grant Universities: Examining the Role of Gender, Race, and Academic Discipline. *Research in Higher Education*.
- Gumpertz, M., Durodoye, R., Wilson, A., & Griffith, E. (2017, October). Retention and promotion of women and underrepresented minority faculty in science and engineering at four large land grant institutions. *PLOS ONE*.
- Tampke, D. R., & Durodoye, R. O. (2013). Improving Academic Success for Undecided Students: A First-Year Seminar/Learning Community Approach. *Learning Communities Research & Practice*, 1(2).

UNPUBLISHED REPORTS

- Lacireno-Paquet, N., Durodoye Jr., R., Melchior, K., & Turner III, H.M. (2019). Evaluation of the English Language Learners Parent/Teacher Training Certificate Project. Year 1 and 2 Summary Evaluation Report. San Francisco, CA: WestEd.

SELECTED PROFESSIONAL ACTIVITIES

- Co-Principal Investigator - IES Task 6 Research Study (Reginal Education Laboratory)
- Co-Project Lead - IES Task 5 Coaching Project (Reginal Education Laboratory)
- Evaluation of TIPS Randomized-Controlled Trial (Brockton, MA)
- Statewide school funding equity and efficiency analysis
- St. Anne's Episcopal School Trustee 2018

- DDOE Equity Council Co-Chair 2018
- Comprehensive Tableau Training 2017
- Family Services Cabinet Council - Integrated Data Systems Committee 2017
- Commission on Equal Opportunity and Diversity Vice Chair 2016
- Commission on Equal Opportunity and Diversity Workgroup Chair 2016
- Commission on Equal Opportunity and Diversity Member / University Council Representative 2015(16)
- IPEDS Data & Benchmarking Workshop 2014
- CSRDE IR Leadership Award in Student Retention Recipient (2010)
- Retention and Graduation Committee Member 2010(11)
- Soaring Eagle Award Recipient 2010
- AIR Forum IPEDS Workshop 2010
- MPA Alumni Scholarship Award Recipient 2008

Judith Ennis

1000 G Street, 5th Floor, Sacramento, CA 95814



SUMMARY OF RELATED EXPERIENCE

Judith Ennis is a Senior Engagement Manager in the Comprehensive School Assistance Program (CSAP). Ennis applies expertise and experience in the areas of organizational development, systems change, and policy analysis with an overarching focus on expanding equity and early childhood education. Ennis is a senior manager for the Strategic Resource Allocation team, a group within WestEd that specializes in school finance and systems change for district and state partners. She was a lead writer for the California's Strategic Plan for Early Childhood Education for the Preschool Development Grant (2019) and now serves as a lead of the Universal Pre-Kindergarten expansion team under the Master Plan for Early Learning and Care, a statewide initiative to expand access to early learning.

Ennis began her career in the elementary school setting before shifting to the district, state, and federal levels. Before joining WestEd, Ennis served as a manager for the Center on Great Teachers and Leaders at the American Institutes for Research. In this role, she provided policy analysis, research, and direct stakeholder engagement to states and districts across the country with a focus on recruiting and retaining excellent educators, and addressing inequitable access to excellent educators in lowest performing schools. At WestEd, Ennis served as the Deputy Director of the National Center to Improve Social Emotional Learning and School Safety. Ennis earned a master's degree at Columbia University's Teachers College in curriculum and instruction with a focus on education policy.

EDUCATION

- 2012 MA, Curriculum & Teaching, Columbia University Teachers College, New York, NY
- 2011 California Multiple Subject Credential, San Francisco State University at Bay Area Teacher Training Institute, San Francisco, CA (Expired)
- 2008 BA, History, University of California, Santa Cruz, CA
- Other: Certificate of Education Finance, Georgetown University (In progress)*

PROFESSIONAL EXPERIENCE

- 2016– Present *Senior Engagement Manager*, Comprehensive School Assistance Program
WestEd, Sacramento, CA
 - Provides organizational development assistance to districts and state partners through stakeholder engagement, data analysis, strategic planning, meeting facilitation, and improvement science-based implementation strategies.

- Applies expertise in the area of educator excellence and equity, specifically focusing on recruiting and retaining effective educators through expanding quality professional learning;
- Supports the implementation the ESEA and ESSA;

Highlighted Project Roles:

- *Deputy Director*, Center to Improve Social Emotional Learning and School Safety
- *Senior Manager*, Performance and Accountability Team
- *Lead*, Universal Pre-K Team for Master Plan for Early Learning
- *Technical Assistance Consultant*: California Comprehensive Center, MidAtlantic Comprehensive Center

2014–
2016 *Technical Assistance Consultant*, Center on Great Teachers and Leaders
American Institutes for Research (AIR), Washington, DC

- Provided collaborative and research-based technical assistance and consulting to state and district clients with a specific emphasis on issues related to equitable access to excellent educators, teacher leadership, educator preparation and professional learning.
- Designed, wrote, and facilitated the use of evidence-based materials and resources for client engagements, including national, state, and district policy groups and task forces.
- Led project teams for state and local education agencies and engaged task forces in collaborative decision-making. Facilitated development of strategic, data-driven solutions to pressing issues of educator effectiveness.

2013–
2014 *Teacher Practice Analyst*, New York City Department of Education Office of Teacher Effectiveness, New York, NY

Evaluated teacher practice using video and in-person observation and provided written coaching plans based on evaluation. Reviewed and approved course offerings for more than 15 educational partner organizations for the Afterschool Professional Development Program. Created online training materials for district leadership. Coached instructors from outside educational partners on alignment with state and district policy.

2012–
2013 *Professional Development Designer*, New York City Department of Education Office of Teacher Effectiveness, New York, NY

Critical member of the roll-out team for NYCDOE’s teacher evaluation system. Included materials development, stakeholder engagement, project management and site coordination resulting in 10,000 educators trained in four months. Designed a systematic approach to gathering and utilizing coach performance data to target citywide professional development needs on topics ranging from Common Core standards to teacher evaluation. Analyzed new legislation and regulations to determine program alignment. Created video resources and facilitated in-person training for evaluators using the Framework for Teaching.

2009– *Teacher*
2011 St. Paul’s Episcopal School, Oakland, CA

Co-taught a full day academic program, designed a new guided reading curriculum for grades K–2 based on school data, coordinated the service learning program for grades K–2, led the adoption of the Bridges math program, created interdisciplinary thematic units, and earned credential while in the classroom full-time.

HIGHLIGHTS FROM TECHNICAL ASSISTANCE CONSULTANT ROLE AT AIR

- *Project Manager and Lead of Direct TA, Center on Great Teachers and Leaders*: Managed a federal center serving all 50 states and territories with a \$2.4 million annual budget; managed staff and subcontractors; provided oversight and preliminary quality review of all materials; and ensured staff met all project timelines, budgets, and quality standards as evidenced by internal/external reviewer feedback.
- *Co-Lead, Equitable Access Initiative*: Contributed significant writing and design to the resources supporting state implementation of the Equitable Access to Excellent Educators Initiative; led strategy and stakeholder meetings for 17 states; provided feedback to states on their plan submissions; and planned and facilitated state team convenings and public webinars on equitable access issues. Resources and consulting services provided in this role received a 98% positive feedback rating from state clients in an external evaluation.
- *Project Lead, Teacher Evaluation for Maine Teacher Incentive Fund and Maine Schools for Excellence*: Provided teacher evaluation and measures of student learning systems support; facilitated strategic planning for state leads; developed professional development materials; and led stakeholder engagement events for revisions to evaluation system design.
- *Project Lead, Human Capital Management Systems using the Talent Development Framework*: Engaged state department of education leadership in extensive pipeline evaluation process resulting in priorities for strategic plans (Delaware, Michigan, Connecticut, and public webinars for regional center staff).

SUMMARY OF RELATED EXPERIENCE AND AREAS OF EXPERTISE

Lauren Outlaw is a Senior Policy Specialist and a member of the Learning Innovations and Comprehensive School Assistance Program teams at WestEd. Her work includes providing targeted technical assistance to help schools improve program quality, structures, and resource allocation and efficiency; and, using her extensive background in charter school administration and strategic risk management to provide high-value implementation support of WestEd’s Charter Schools Program Grant Monitoring project and the National Charter Schools Resource Center. In this role, Ms. Outlaw also translates K-12 education laws and regulations into actionable resources for schools, districts, and

regional systems, and engages a broad range of stakeholders on service assessment, process design, and leadership development.

Before joining WestEd, Ms. Outlaw successfully advocated for increased school-based mental health resources for public school students in the District of Columbia and structured and negotiated the 15-year charter school renewal agreement with the DC Public Charter School Board on behalf of KIPP DC. Her expertise is grounded in federal and local charter school and choice policies; legislative analysis and legal compliance; business and process improvement strategies; and promoting school safety, positive school climates, and the effective use of restorative practices.

EDUCATION

2011 Doctor of Jurisprudence, Indiana University Maurer School of Law, Bloomington, IN

2007 Bachelor of Arts in Political Science, Columbia College, Columbia University, New York, NY

PROFESSIONAL EXPERIENCE

2019-Present *Senior Policy Specialist*

WestEd, Washington, DC

Assists state and local agencies with planning, implementing, and managing resources and evidence-based practices to grow high-quality education opportunities and improve outcomes for students. Recommends individualized adjustments to state school finance, accountability, and support systems consistent with the Every Student Succeeds Act (ESSA) and other state laws. Contributes to the CSP monitoring project.

2015-2019 *Director of Policy*

KIPP DC, Washington, DC

Designed and implemented robust infrastructures founded on equitable, evidence-based policies, and best practices to promote consistency and legal compliance across 16 schools with approximately 6,400 students (e.g., student property searches, school visitors, and field trip protocols; discipline and due process procedures). Provided daily school-based support grounded in restorative practices, including risk assessment; conflict resolution; and, liaising with families, school leaders, executive staff, and third-party agencies. Mitigated potential liability through over 20-30 confidential employee, parent/guardian, and student investigations per year. Served as Title IX Coordinator and central point of contact for 50+ formal complaints annually on school-based issues such as sexual harassment, bullying, student safety and discipline, grade retention, and special education. Compiled myriad legally-mandated performance and data submissions (e.g., annual reports, student handbooks, discipline reporting to the Board of Trustees, responses to special education and other external audits, and residency verification documentation). Conducted detailed analyses of local budgets to determine annual appropriations to schools and education agencies and identify critical shortages (e.g., funding for school-based mental health personnel, social emotional learning practices,

special education investments that are more aligned with students' needs, and health and sex education curricula). Collaborated with the District's state education agency, government officials, and a diverse group of local education stakeholders to implement ESSA's new achievement targets and accountability system. Leveraged collaborative partnerships with 150+ families, elected and appointed city officials, state and city education agencies, and community members to: meaningfully inform pending legislation, rule-making, and policy initiatives by (i) delivering and/or training staff members to provide testimony before the DC Council, and (ii) preparing written public comments.

2014-2015 *Judicial Law Clerk*

The Honorable Robert R. Rigsby, Associate Judge, District of Columbia Superior Court

Supervised a domestic relations docket of 100+ cases, including litigant mediation; researching and writing bench memoranda on nuanced legal issues involving families and children. Managed 15-20 legal interns by delegating assignments, delivering constructive feedback, and facilitating high-quality final work product. Administered the Law and Government Explorers' Program (Law Camp) for 30-45 local high school students and professional mentor partners to expose DC high school students to various career opportunities while also helping them navigate the complex challenges impacting today's youth.

2012-2014 *Policy and Advocacy Associate*

Friends of Choice in Urban Schools (FOCUS), Washington, DC

Collaborated with the DC Public Charter School Board to modify local charter school renewal guidelines to ensure consistency with the DC School Reform Act (local charter law) and facilitated workshops on the revised guidelines for school leaders. Advanced pro-charter legislation and policy priorities to defend charter school autonomy, advocate for the equitable distribution of local funds and use of surplus public school buildings, and prevent the enactment of overly burdensome and/or duplicative federal and local monitoring requirements. Mobilized and trained a coalition of 75 parents and community member activists to advocate for their school-specific needs at the annual *Charter School DC Council Day*.

Spring 2011 *Policy Intern*

Early Childhood Development Policy Department, Children's Defense Fund (CDF), Washington, DC

Created a database with state-by-state analyses of school attendance requirements, Head Start and pre-kindergarten enrollment figures, early learning and kindergarten standards, and full-day kindergarten (FDK) programs, and then used this research to shape CDF's FDK campaign and prepare related materials. Evaluated national child welfare and education statistical data for CDF's *State of America's Children* publications. Analyzed President Barack Obama's FY 2012 budget proposal and the implications on early childhood education initiatives.

SELECTED PRESENTATIONS

B22-950. Students in the Care of DC Coordinating Committee Act. (2018, October.) Testimony before the DC Council, Committee on Education, Washington, DC.

Recommendations for the Department of Behavioral Health. (2018, April.) Testimony at the DC Council, Committee on Health, Budget Oversight Hearing, Washington, DC.

B22-023. School Innovations Grant Act of 2017. (2017, May.) Testimony before the DC Council, Committee on Health, Washington, DC.

Overview of KIPP DC's Restorative Practices at the FY 2017 Budget Oversight Hearing for the DC Office of the State Superintendent of Education. (2017, April.) Testimony before the DC Council, Committee on Education, Washington, DC.

B21-140. School Attendance Clarification Amendment Act of 2015. (2016, January.) Testimony before the DC Council, Committee on Education and Committee of the Whole, Washington, DC.

DC Municipal Regulations, Chapter 5A-21, The DC Office of the State Superintendent of Education Compulsory Education and School Attendance Rulemaking. (2013, May.) Testimony before the DC State Board of Education, Washington, DC.

Lauren R. Outlaw

1140 Third Street NE, Washington, DC 20002



SUMMARY OF RELATED EXPERIENCE AND AREAS OF EXPERTISE

Lauren Outlaw is a Senior Policy Specialist and a member of the Learning Innovations and Comprehensive School Assistance Program teams at WestEd. Her work includes providing targeted technical assistance to help schools improve program quality, structures, and resource allocation and efficiency; and, using her extensive background in charter school administration and strategic risk management to provide high-value implementation support of WestEd's Charter Schools Program Grant Monitoring project and the National Charter Schools Resource Center. In this role, Ms. Outlaw also translates K-12 education laws and regulations into actionable resources for schools, districts, and regional systems, and engages a broad range of stakeholders on service assessment, process design, and leadership development.

Before joining WestEd, Ms. Outlaw successfully advocated for increased school-based mental health resources for public school students in the District of Columbia and structured and negotiated the 15-year charter school renewal agreement with the DC Public Charter School Board on behalf of KIPP DC. Her expertise is grounded in federal and local charter school and choice policies; legislative analysis and legal compliance; business and process improvement strategies; and promoting school safety, positive school climates, and the effective use of restorative practices.

EDUCATION

2011 Doctor of Jurisprudence, Indiana University Maurer School of Law, Bloomington, IN

2007 Bachelor of Arts in Political Science, Columbia College, Columbia University, New York, NY

PROFESSIONAL EXPERIENCE

2019-Present *Senior Policy Specialist*

WestEd, Washington, DC

Assists state and local agencies with planning, implementing, and managing resources and evidence-based practices to grow high-quality education opportunities and improve outcomes for students. Recommends individualized adjustments to state school finance, accountability, and support systems consistent with the Every Student Succeeds Act (ESSA) and other state laws. Contributes to the CSP monitoring project.

2015-2019 *Director of Policy*

KIPP DC, Washington, DC

Designed and implemented robust infrastructures founded on equitable, evidence-based policies, and best practices to promote consistency and legal compliance across 16

schools with approximately 6,400 students (e.g., student property searches, school visitors, and field trip protocols; discipline and due process procedures). Provided daily school-based support grounded in restorative practices, including risk assessment; conflict resolution; and, liaising with families, school leaders, executive staff, and third-party agencies. Mitigated potential liability through over 20-30 confidential employee, parent/guardian, and student investigations per year. Served as Title IX Coordinator and central point of contact for 50+ formal complaints annually on school-based issues such as sexual harassment, bullying, student safety and discipline, grade retention, and special education. Compiled myriad legally-mandated performance and data submissions (e.g., annual reports, student handbooks, discipline reporting to the Board of Trustees, responses to special education and other external audits, and residency verification documentation). Conducted detailed analyses of local budgets to determine annual appropriations to schools and education agencies and identify critical shortages (e.g., funding for school-based mental health personnel, social emotional learning practices, special education investments that are more aligned with students' needs, and health and sex education curricula). Collaborated with the District's state education agency, government officials, and a diverse group of local education stakeholders to implement ESSA's new achievement targets and accountability system. Leveraged collaborative partnerships with 150+ families, elected and appointed city officials, state and city education agencies, and community members to: meaningfully inform pending legislation, rule-making, and policy initiatives by (i) delivering and/or training staff members to provide testimony before the DC Council, and (ii) preparing written public comments.

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Spring 2011 *Policy Intern*

Early Childhood Development Policy Department, Children's Defense Fund (CDF), Washington, DC

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B21-140. School Attendance Clarification Amendment Act of 2015. (2016, January.) Testimony before the DC Council, Committee on Education and Committee of the Whole, Washington, DC.

DC Municipal Regulations, Chapter 5A-21, The DC Office of the State Superintendent of Education Compulsory Education and School Attendance Rulemaking. (2013, May.) Testimony before the DC State Board of Education, Washington, DC.

Patrick McClellan

1000 G Street, Suite 500, Sacramento, CA 95814



SUMMARY OF RELATED EXPERIENCE

Patrick McClellan is a Research Assistant with the Comprehensive School Assistance Program at WestEd. Mr. McClellan contributes to research on the efficiency and equity of school finance systems. His work primarily consists of quantitative data analysis, as he prepares large public and administrative datasets for use in cost function models. Prior to joining WestEd, he conducted research on finance and real estate during the Great Recession in order to better understand the dynamics of financial crises in the future. McClellan holds a MS in Applied Economics & Finance from the University of California, Santa Cruz.

EDUCATION

- 2019 MS, Applied Economics & Finance, University of California, Santa Cruz
- 2017 BS, Economics, University of Oregon

PROFESSIONAL EXPERIENCE

- 2020– Present *Research Assistant*, Comprehensive School Assistance Program
WestEd, Sacramento, CA

Conduct quantitative analyses providing data-driven insight to state policymakers, school stakeholders, and researchers. Specify and estimate econometric models for resource allocation, equity, and finance in education.

- 2019– 2019 *Teaching Assistant*, Economics Department
University of California, Santa Cruz, CA

Led two 30-student discussion sections and held office hours for 120 students in tandem with *Economic History of the United States* lectures. Critiqued students' essay drafts, directed exam review, and made grade recommendations. Served as a liaison between students and lecturing professor; by addressing concerns regarding the course workload and scope, students' performance improved significantly throughout the term.

- 2016– 2018 *Research Assistant*, Capital Realty Corporation
Wilsonville, OR

Performed ad-hoc data cleaning and analysis in a study on the determinants and signals of credit bubbles throughout history, in order to better forecast financial markets in the future. Created database of historical Federal Reserve Z.1 releases from 1946–2016. Generated graphical representations of financial time series and estimated linear regressions with Stata and R to describe effects of liquidity shocks on asset prices.

2015– *Economics and Mathematics Tutor*, College of Arts and Sciences
2018 University of Oregon, Eugene, OR

Assisted students with coursework and exam review for introductory economics and mathematics classes. Provided instruction of fundamental concepts such as market equilibrium, probability theory, and optimization.