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

TECHNICAL PROPOSAL

April 24, 2020

Submitted to: New Hampshire Commission to Study School Funding
Carsey School of Public Policy
Huddleston Hall, 73 Main St.
Durham, NH 03824
Phone: 603-862-2821
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Submitted by: American Institutes for Research

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Technical Proposal

April 24, 2020

Jesse Levin and Drew Atchison, American Institutes for Research
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Carsey School of Public Policy
Huddleston Hall, 73 Main St.
Durham, NH 03824
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E-mail: SchoolFunding.Commission@unh.edu

RE: Request for Proposal: Research and Analysis on Behalf of the Commission to Study School Funding

Dear New Hampshire Commission to Study School Funding:

The American Institutes for Research (AIR) is pleased to submit its proposal, *Research and Analysis on Behalf of the Commission to Study School Funding,* to the New Hampshire Commission to Study School Funding.

Founded in 1946, AIR is one of the largest not-for-profit behavioral and social science research and evaluation organizations in the world. We develop innovative, evidence-based solutions to challenges in K–12 education, with a focus on providing all students with equal access to high-quality public schooling. Our mission and expertise are well aligned with the Commission's interest in ensuring equal and adequate educational opportunities for all of New Hampshire's students, accounting for the particular challenges faced by special education students, English learners, and students living in poverty.

AIR's proposed team has deep expertise in measuring educational disparities, estimating the cost of reducing these disparities, and providing actionable recommendations to policymakers. The proposed study leadership will be comprised of nationally recognized school finance expert Bruce Baker, Ed.D. (Rutgers University); principal research economist Jesse Levin, Ph.D. (AIR); researcher Drew Atchison, Ed.D. (AIR); and school finance researcher Tammy Kolbe, Ed.D. (University of Vermont). Bruce Baker and Jesse Levin have collectively directed high-profile education adequacy studies and funding system evaluations for multiple states. Of note for the present proposal, this team recently developed state-specific cost models for the Vermont Agency of Education and simulated the funding allocations, local tax burdens, and educational disparities resulting from alternative funding formulas. Collectively, the team has evaluated and advised on school finance systems, including Arizona, California, Colorado, Hawaii, Illinois, Kansas, Maryland, Nebraska, Nevada, New Jersey, New Mexico, Pennsylvania, Vermont, and Wyoming.

Together, AIR and its outside experts have crafted a technical approach for the proposed study that is both efficient in its design while responding to the research and analysis needs of the Commission. In addition to drawing upon multiple available data sources to estimate the cost of providing a high-quality education, we will make recommendations for both continued data collection and future funding distributions, accounting for the state's fiscal capacity.

We look forward to discussing our proposed analysis plan, as well as how our team's qualifications will allow us to provide practicable recommendations within the provided timeline. For technical questions, please contact the study's proposed co-principal investigator, Jesse Levin, at 650-843-8270 or jlevin@air.org. Please direct contractual questions about this proposal to Vanessa Humphreys, contracts specialist, at 202-403-6772 or airproposals@air.org.

Thank you for your consideration.

Sincerely,

Lawrence B. Friedman, Ph.D.
Vice President
Research and Evaluation

Introduction

Pursuant to New Hampshire General Court House Bill 4 passed in 2019, the Commission to Study School Funding was created and charged with the following:

> "(a) Review the education funding formula and make recommendations to ensure a uniform and equitable design for financing the cost of an adequate education for all public-school students in pre-kindergarten through grade 12 in the state.
>
> (b) Determine whether the New Hampshire school funding formula complies with court decisions mandating the opportunity for an adequate education for all students in pre-kindergarten through grade 12, with a revenue source that is uniform across the state.
>
> (c) Identify trends and disparities across the state in student performance in prekindergarten through grade 12 based on current school funding options.
>
> (d) Re-establish the baseline for the costs, programs, staffing, and facilities needed to provide the opportunity for an adequate education.
>
> (e) Act as an independent commission.
>
> (f) Study and produce recommendations regarding all costs and existing funding for special education, including listing any currently unfunded special education mandates issued to date by the state department of education.
>
> (g) Study integrating into the education funding adequacy formula a factor that accounts for the number of Class A, B, and C properties in a community, and the distribution of education funding costs across those numbers and classes of properties.
>
> (h) Consider other policy issues as the commission deems necessary. The commission may consult with outside resources and state agencies, including but not limited to the department of education, the department of revenue administration, and the legislative budget office" (HB 4-FN-A-LOCAL—FINAL VERSION, Section 193-E:2-e, page 79).[1]

The American Institutes for Research (AIR) proposed study team has developed the following proposal to address the topics identified by the Commission of key importance to the policy discussion about the financing of public schools in the state serving students in prekindergarten through Grade 12. Specifically, the proposed research and deliverables described herein will do the following:

- Provide the client with a greater understanding of disparities in educational opportunities, fiscal capacity, and education resources across the state.
- Identify opportunities and approaches to addressing resource inequities.
- Conduct modeling of funding options for improving the equity of educational opportunities.
- Make recommendations as to how school funding could be improved to ensure equity of educational opportunity and for future data collection and analysis that would enable sustained evaluation of equitable educational opportunity.

[1] The final text of House Bill 4 can be found online at http://gencourt.state nh.us/bill_status/billText.aspx?sy=2019&id=1336&txtFormat=pdf&v=current.

- Provide a final report that documents our research methods, analytical findings, and recommendations.

The proposed study team comprises nationally recognized experts in school finance and education policy, including Jesse Levin and Drew Atchison (AIR), Bruce Baker (Rutgers University), and Tammy Kolbe (University of Vermont), who have extensive experience conducting similar research focused on issues related to equity and adequacy of school funding in other states (Arizona, California, Colorado, Hawaii, Illinois, Kansas, Maryland, Nebraska, Nevada, New Jersey, New Mexico, Pennsylvania, and Wyoming). Most recently, the study team worked together on a similar study for the Vermont Agency of Education.

Below, we provide additional information about AIR (as the prime contractor for this project), describe our approach to the scope of work outlined in the request for proposal (RFP), and describe the key study personnel and their roles. We also present a detailed proposal budget (by deliverable), as well as provide references of previous projects and samples of relevant work.

Basic Proposal Information

Background on AIR

AIR is one of the world's largest behavioral and social science and research and evaluation organizations. For more than 70 years, we have applied rigorous research to the most pressing challenges in education, health, and the workforce in the United States and across the globe.

Our singular focus is using the best science to bring the smartest ideas and most effective approaches to improving people's everyday lives, from birth to old age, with a special emphasis on the disadvantaged. As a not-for-profit organization, we conduct our work with strict independence, objectivity, and nonpartisanship.

AIR has earned a national and international reputation for our immense body of work on research and evaluation *and* on policy, practice, and systems change. In a virtuous circle, evidence informs practice and policy, and practical experience informs science.

Our work helps leaders, policymakers, and practitioners at the highest levels and on the front lines understand what is working, and translate evidence into action. We work as trusted partners alongside clients, strengthening their capacity to deliver results efficiently and with fidelity in the field. The intellectual prowess and diversity of our more than 1,000 employees means that we can bring together interdisciplinary teams to provide comprehensive or targeted services—and tailor every engagement to client needs and expectations.

In research and evaluation, our deliverables range from state-of-art research design, analysis, and reporting to small- and large-scale studies and surveys to data analytics tools and techniques. In the policy and practice arena, our work extends from communications initiatives that inform key audiences to promotional campaigns that motivate healthy behaviors to expert assistance in transforming and continuously improving systems, programs, and activities.

Descriptions of Similar Projects

The proposed study team has an established track record of delivering high-quality school finance research studies with recommendations that have greatly informed state-level policy discussion and reform. The following provides a selected list of previous projects where we have examined issues relevant to those described in the RFP scope of work.

***Study of Pupil Weights in Vermont's Education Funding Formula* for the Vermont Agency of Education (2019).**[2,3] For this recent study of Vermont's funding weights (Kolbe, Baker, Atchison, & Levin, 2019), the study team (made up of the same team members proposed here) made use of a cost-function approach to examine the costs associated with achieving specified levels of student outcomes. Furthermore, we examined variations in the cost of achievement across districts and schools related to student needs (e.g., student poverty) and school and district characteristics, such as size and sparsity of population (being in a rural area) from which funding weights were derived. Recommended funding weights were used to generate a series of simulations of how both funding allocations and local tax burden would change as result of implementing the funding recommendations.

***What Does It Cost to Educate California's Students? A Professional Judgment Approach* for Stanford University (2018).**[4,5] This AIR study examined the cost of providing an adequate education to California's public PK–12 students using the professional judgment approach (Levin et al., 2018). The study involved convening panels of expert educators from across the state. The panels of expert educators identified the resources required to meet California's educational goals in schools that varied by schooling level, student poverty, share of English learners, and school size. Based on the resources specified by the expert panels, AIR researchers calculated the cost of providing an adequate education to PK–12 students in every school and district in the state, and compared these figures with current expenditures. In addition, the study evaluated current funding equity of the state's finance system.

***Study of Spending in Public Charter and Traditional Schools in California* for Stanford University (2018).**[6] This AIR study consisted of a comparative analysis of charter and traditional school spending in the state of California (Atchison, Levin, & Brodziak, 2018). Study tasks

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[2] This report can be downloaded here: https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf.

[3] Note that members of the proposed study team (Tammy Kolbe and Jesse Levin) also conducted a previous study for the Vermont Agency of Education focused on the state's financing of special education (Kolbe et al,, 2018), which can be downloaded here: https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-special-education-funding-study-executive-summary-and-full-report.pdf.

[4] This report can be downloaded here: https://gettingdowntofacts.com/sites/default/files/GDTFII_Report_Levin.pdf.

[5] Note that the 2018 report represents the second adequacy study conducted by AIR in California. The first report, titled *Efficiency and Adequacy in California School Finance: A Professional Judgment Approach,* was released in 2006 (Chambers, Levin, & DeLancey, 2006) and can be downloaded here: https://cepa.stanford.edu/sites/default/files/19-AIR-PJP-Report%283-07%29.pdf. In addition, as part of the same suite of studies, AIR released a study focused on special education finance in the state titled *Considering Special Education Adequacy in California* in the same year (https://cepa.stanford.edu/sites/default/files/21-AIR-Special-Ed%283-07%29.pdf).

[6] This report can be downloaded here: https://gettingdowntofacts.com/sites/default/files/18-6018_Charter%20Report%20-%20Final_0.pdf.

included collecting and analyzing fiscal data from the state's Standardized Account Code Structure (SACS) data, as well as school-level fiscal data from Los Angeles and Oakland Unified School Districts and two prominent charter management organizations. We used these data to conduct comparisons of spending between charter public schools and traditional public schools in California using both descriptive and conditional (regression) analysis in order to understand the extent to which observed spending differentials were due to differences in important cost factors, such as student needs.

***Review of Kansas Education Cost Studies* for the Kansas State Legislature (2018)**.[7] At the request of the Kansas State Legislature, AIR produced a rigorous scientific review of school finance studies performed for the state of Kansas between 2002 and 2018, with the goal of providing (1) a description of the methodologies used, (2) an evaluation of the rigor and fidelity with which methods were implemented, and (3) an objective assessment of the validity of findings. Deliverables included two detailed reports and the provision of in-person testimony to the Kansas State Legislature (Levin, 2018a; Levin, 2018b).

***Districts' Use of Weighted Student Funding Systems to Increase School Autonomy and Equity: Findings From a National Study* for the U.S. Department of Education (2019)**.[8] AIR conducted this large-scale (national) study of funding distribution mechanisms, with a focus on weighted student funding (WSF) systems used by districts to allocate resources to schools (Levin et al., 2019). As part of this study, we administered a nationally representative survey of school district administrators and school principals to understand how school districts allocate resources to schools and to compare traditional staff-based allocations with WSF systems. Furthermore, we conducted case studies of nine districts currently using WSF. As part of the case studies, we collected and analyzed school-level fiscal data to understand the distribution of spending across schools with respect to student needs.

***Study of Funding Provided to Public Schools and Public Charter Schools in Maryland* for the Maryland State Department of Legislative Services and the Maryland State Department of Education (2016)**.[9] This AIR study, commissioned by the Maryland State Legislature and the Maryland State Department of Education, examined school-level funding levels and patterns in Maryland, distinguishing between traditional and charter public schools (Levin et al., 2016). This included analysis of extant data, documentation, and interviews with school district and charter school officials. Based on this analysis, the research team compared average spending levels and patterns, unconditionally and adjusting for student needs, between traditional and charter public schools, and described charter school funding formulas and service arrangements in each Maryland school district with active charter schools.

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[7] These reports can be downloaded here: https://kasb.org/wp-content/uploads/2018/03/3.7-Report-1-APA-and-LPA-Studies-from-Dr.-Levin.pdf and http://www robblaw.com/PDFs/3.29%20Dr.%20Levin%20Review%20of%20Ks%20Ed%20Cost%20Studies%20-%20Second%20Report.pdf.

[8] This report can be downloaded here: https://www2.ed.gov/rschstat/eval/title-i/weighted-funding/report.pdf.

[9] This report can be downloaded here: http://marylandpublicschools.org/stateboard/Documents/01242017/TabG-CharterPublicSchoolFundingStudy.pdf.

***Educational Equity, Adequacy, and Equal Opportunity in the Commonwealth: An Evaluation of Pennsylvania's School Finance System* for the William Penn Foundation (2014)**.[10] This study, authored by proposed study team members Bruce Baker and Jesse Levin, contained an in-depth evaluation of the school finance system in Pennsylvania (Baker & Levin, 2014). The study included a descriptive overview of school funding in the state. This was followed by a review of the evolution of conceptions of educational equity based on role-specific perspectives (students/families versus taxpayers) and definitions of what is distributed (resources versus opportunity), an empirical evaluation of adequacy and equal opportunity in the state, a description of empirical methods for measuring education costs, and a scan of current policies across states and recent reforms.

***Evaluation of Hawaii's Weighted Student Formula* for the Hawaii Department of Education (2013)**.[11] In a study commissioned by the Hawaii State Legislature, AIR completed an evaluation of the equity and resource allocation implications, and the attitudes and perspectives of various stakeholders concerning implementation of Hawaii's 2006 adoption of a state WSF. The findings of this evaluation showed that the WSF generated increased awareness among these constituencies of how funding is distributed to Hawaii's public schools and has generally increased the equity with which funds are allocated among schools serving the diverse populations of students across the state. Despite being 7 years old, the report still regularly serves as a key resource for discussion of the state's Committee on Weights (the body that reviews and updates the state funding mechanism).

***Study of a New Method of Funding for Public Schools in Nevada* for the Nevada Legislative Counsel Bureau (2012)**.[12] AIR conducted this study for the Nevada State Legislature to investigate how the state finance system could be improved by addressing the differential funding needs of students and smaller rural districts (Chambers et al., 2012). The study team examined state funding formulas, demographic characteristics, and fiscal data from all 50 U.S. states. Based on empirical analyses of these data, the team identified best practices that would lead to an equitable distribution of funding with respect to the incidence of students in poverty, English learners, students enrolled in special education programs, and students attending schools in districts that have a small scale of operations. The study findings informed policy discussion and precipitated key reforms to the state finance system.

***Independent Comprehensive Study of the New Mexico School Funding Formula* for the New Mexico Legislative Funding Formula Task Force (2008)**.[13] This study, commissioned by the New Mexico State Legislature Funding Formula Task Force, used a hybrid approach (professional judgement and evidence-based approaches) to develop school, district, and state

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[10] This report can be downloaded here: https://williampennfoundation.org/sites/default/files/reports/AIR-EEAEO%20in%20the%20Commonwealth%20-%20Full%20Report%2010-09-14.pdf.

[11] This report can be downloaded here: https://www.hawaiipublicschools.org/DOE%20Forms/WSF/WeightedStudentFormulaEval061913.pdf.

[12] This report can be downloaded here: https://www.educatenevadanow.com/wp-content/uploads/2016/03/AIR_NV_Funding_Study_Sept2012_0.pdf.

[13] This report can be downloaded here: https://www.air.org/sites/default/files/downloads/report/An-Independent-Comprehensive-Study-New-Mexico-Public-School-Funding-Formula-2008.pdf. Further analysis of funding shortfalls and student outcomes were examined for the New Mexico Legislative Council Service (Levin, Manship, & Chambers, 2009).

estimates of the costs of providing an adequate educational opportunity to all K–12 students, accounting for important cost factors including student needs, scale of operations, and geographic locale (Chambers, Levin, DeLancey, & Manship, 2008). The adequacy-projected costs were compared with current expenditures and used to develop a recommended state school finance formula designed to promote funding distributions that were both adequate and equitable. The study involved close collaboration with educational policymakers and practitioners at the state and local levels to understand their perspectives on school programming and resource allocation.

Project Description and Approach

The RFP scope of work requested by the New Hampshire Commission to Study School Funding contains five key deliverables, which we characterize as follow:

1. A comprehensive review of existing data sources collected by the state with consideration for the usefulness of those data for evaluating disparities in educational opportunities and outcomes;
2. A summary of methodologies for evaluating and addressing disparities in educational opportunities applicable to New Hampshire and for making comparisons to other states in terms of funding and governance structures, including prekindergarten and special education;
3. Application of evaluation methodology to the New Hampshire context, and making recommendations regarding continuous collection of relevant data, for accountability and to provide necessary fiscal taxing capacity and additional state aid resources, including suggestions for making ongoing adjustments;
4. Modeling recommended options for ensuring the provision of more equal educational opportunities and outcomes across the state, including a comprehensive definition of adequate education to demonstrate projections of the combined local, state, and federal resources that would serve the goals of increased educational equity across the state; and
5. A final report that includes funding and distribution options based on other states' experiences.

We describe the approach we will take in addressing each deliverable below.

Deliverable 1: Identifying Appropriate Data for Evaluating Educational Opportunities and Outcomes

Deliverable 1 listed in the RFP calls for the study team to assist the Commission in identifying both the appropriate data and methodology to analyze disparities in educational opportunities and outcomes across the state. We will begin this task by developing a comprehensive framework that includes all the desired data elements for applying thorough and rigorous methods to analyze disparities. Appendix A offers a preliminary draft of this framework. The data elements listed serve multiple purposes as follows:

- Data on tax capacity (value of taxable property) and revenue data provide the basis for evaluating both taxpayer equity and determining tax policies for providing stability (a stable, balanced flow of revenues) to an equitably funded education system.

- Information on district expenditures and school resources provide the opportunity to measure nominal equity of schooling resources, programs, and services, but also to model the costs of providing equal opportunity for children, across the state, to achieve desired outcome goals.
- Data on student population characteristics provide opportunities to understand how student and family backgrounds are associated with differences in measured short-term and longer term outcomes. These data are ultimately necessary for estimating costs associated with providing children of different backgrounds an equal opportunity to achieve desired outcome goals.
- Other data on regional variations in labor costs, district and school structural characteristics, and factors such as population density also are necessary for determining the costs associated with providing all children equal opportunity to achieve desired outcome goals.
- Measures of intermediate- and long-term student outcomes are useful both as tools for evaluating whether schools are accomplishing their goals (e.g., accountability) and also necessary for determining the costs of achieving specific outcome goals across children and settings statewide.

Although such a framework may seem little more than a wish list, we have found much of the data are often available in states that have well-developed, comprehensive, and detailed school- and district-level data on student outcomes, student demographics/needs, and resource allocation. Upon initial examination, we have found that a number of student measures are publicly available from the New Hampshire Department of Education (NH DOE) website, including school enrollments by grade, measures of student background (school-level free and reduced-price lunch eligibility), counts of school safety and disciplinary incidents, and measures of student outcomes (school-level average state test scores, high school dropout rates, Advanced Placement and SAT performance, district-level attendance).[14]

NH DOE also has made available, at the district level, per-pupil expenditures, Adequate Education Aid (New Hampshire state aid) corresponding to various higher need groups, and teacher salary schedules through 2018–19. In addition, the Department of Revenue Administration releases yearly property valuations and property tax rates (corresponding to both state and local education agencies) at the municipality level.[15] These disaggregated measures complement the summary of education revenues provided in the Comprehensive Annual Financial Reports.[16] The publicly available measures of student need, student outcomes, and fiscal capacity provide the starting point for the analysis. Moreover, the study team has extensive experience collecting and analyzing similar data across many states.

For this task, we will reconcile the availability of extant data that are currently collected by the state on an annual basis with the elements specified in our comprehensive data framework. Importantly, the RFP specifies the need to identify data that will be necessary for ongoing annual analysis of disparities. We agree that it is desirable to have ongoing annual collection of data that

[14] These data were identified here: https://www.education nh.gov/who-we-are/division-of-educator-and-analytic-resources/bureau-of-education-statistics/data-reports.
[15] The property tax and valuation data are publicly available here: https://www.revenue nh.gov/mun-prop/municipal/property-tax-rates.htm.
[16] The Comprehensive Annual Financial Reports can be found here: https://das.nh.gov/accounting/cafr.asp.

are measured in a consistent fashion and released on a timely basis. Unfortunately, data collected by federal agencies tend to lag in this regard (e.g., district financial data for fiscal year 2018 are released in June 2020). Typically, similar fiscal data are released by states earlier, but still often lag by 1 rather than 2 full years. However, information on school characteristics, student demographics, and student outcomes is generally released by states in a more timely manner. This deliverable will result in a final list of the data elements by source that will be necessary to support our analysis of disparities in educational opportunities and outcomes.

Deliverable 2: Identifying Appropriate Methods for Evaluating Educational Opportunities and Outcomes

Following the review and selection of available administrative data from state and federal sources, the second deliverable will identify the preferred methods that will be used to analyze disparities in educational opportunities and outcomes across the state. The primary emphasis of this deliverable will be to select methods that (1) measure both the variation in outcomes for different students and (2) provide a better understanding of the cost of providing equal educational opportunity for children to achieve common, specified outcome goals, regardless of where they live or their individual and family characteristics and backgrounds. A comparison of the cost of providing a similar opportunity for students across districts and the amount of funding that districts are allocated yields a clear measure of disparity in educational opportunity. Therefore, evaluating disparities in educational opportunity through a state school finance formula requires that we understand the value of the education dollar toward achieving common goals for different types of students attending school in different locations.

As part of this deliverable, we will first review state policies and approaches for measuring and reducing disparities in educational opportunity and outcomes. We will next examine specific recently conducted rigorous analysis of educational disparities and outcomes, and subsequent policies that have been undertaken, focusing on states that we believe have gone to greater efforts to evaluate, design, and adopt school finance system reforms with this goal in mind. The results of this work will inform the methods we will choose to evaluate disparities in educational opportunities and outcomes in New Hampshire, and develop remedial recommendations (described in Deliverable 3 below).

Review of State Policies and Practices

The study team will first perform a comprehensive scan of state finance systems used by states, with an emphasis on elements that address disparities in educational opportunities and outcomes. The scan will clearly delineate the different types of funding adjustments used to address the four types of factors that drive the cost of providing educational services: student needs, scale of operations and sparsity, grade range, and the price level of inputs. In addition, the scan will provide a description of the various funding mechanisms used by states, including (1) constant student funding weights for students within a given need category, (2) multiple weights for students in a similar need category (e.g., differential funding for students with different types and/or severity of disability), (3) resource-based allocations where funding is based on the cost of supporting set ratios of (non)personnel resources to students in different need categories, and (4) cost reimbursement where at least a portion of what is spent on serving students in different need categories is reimbursed. Our review will be careful to point out the similarities in finance system structure between New Hampshire and other states.

Review of Analytical Methods and Reforms in Other States

In addition, we will provide a more detailed analysis of specific states that have previously evaluated disparities and either have passed reforms or are in the process of doing so. First, we will present an in-depth account of the analysis of disparities performed by researchers for the states of Kansas and Vermont, which represent among the most recent and most rigorous research studies in this area. The study team has extensive experience documenting the methods used in these analyses; Jesse Levin was commissioned by the Kansas State Legislature to evaluate the recent 2018 analysis performed in that state, while the full proposed study team conducted the recent 2019 analysis performed for the Vermont Agency of Education (Kolbe, Baker, Atchison, & Levin, 2019).[17]

Next, the study team will provide reviews of school finance reforms undertaken in three states that have rich unique experiences (Kansas, Massachusetts, and New Jersey) addressing disparities in educational opportunities.[18] We will first provide a longitudinal review of school finance reforms in Massachusetts, from the Massachusetts Education Reform Act (MERA) in the 1990s, through recent reforms and aid increases to the current Chapter 70 formula, and a review of New Jersey's 2008 school funding reform in the decade that followed. It is important to note that New Jersey also forged an early path on the provision of universal prekindergarten programs, following 1998 court-ordered reforms. Reports on the fairness of school funding (Baker, DiCarlo, & Weber, 2019; Chingos & Blagg, 2017; Morgan & Amerikaner, 2018) have shown that these two state school systems have consistently delivered funding that is more adequate and equitable than other states, and have achieved among the nation's highest educational outcomes as measured by the National Assessment of Educational Progress.

Very few states have used comprehensive data modeling to evaluate the costs of providing all children with equal educational opportunities to achieve common outcome goals. Even fewer have adopted (or seriously considered adopting) reforms to state school finance policies based on such analysis. In 2006, and again in 2018, Kansas legislators commissioned cost modeling studies to inform school finance reforms that were subsequently undertaken. We will provide insights for the path forward in New Hampshire based on the Kansas experience. As mentioned above, we also will discuss the recent application of similar methods by the proposed study team in the state of Vermont, and how the findings of our cost modeling work have been integrated into policy proposals.

The work conducted under this deliverable will culminate in an analysis plan that clearly lays out both the necessary data identified in Deliverable 1 and the methods that will be used to both measure existing disparities in educational opportunities and outcomes, as well as develop recommendations on how these can be remedied.

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[17] It should be noted that the recent work completed by the study team in Vermont paid particular attention to the provision of funding for children with disabilities.

[18] Proposed study team members Bruce Baker and Jesse Levin have previously written about the reforms in these states (Baker & Levin, 2013; Baker, 2005).

Deliverable 3: Applying Methodologies and Recommending Remedies for Disparities In Educational Opportunities and Outcomes

After the study team has (1) determined and collected the data necessary for the analysis; (2) reviewed methods and policies used by states to measure and address disparities in educational opportunities and outcomes, respectively; and (3) finalized the analytical approaches that will be used, we will conduct the main study analysis. The analysis will examine existing disparities in New Hampshire and develop recommendations for how these could be remedied. Our tentative plan is to follow a similar approach to that used by the study team for a recent study of Vermont's school finance system (Kolbe, Baker, Atchison, & Levin, 2019). We stress that the proposed analysis that follows represents our current suggestion on the most rigorous methods available to examine disparities in opportunities and outcomes, the results of which are both intuitive and lead to actionable funding policy reform. Importantly, the application of the method will be tailored to fit New Hampshire's unique context (e.g., using the most appropriate data elements identified in Deliverable 1). Upon submission of the analysis plan (Deliverable 2), we plan to discuss these methods with the client to clarify any questions or concerns and determine whether any modifications are in order.

Analysis of Disparities in Outcomes—Student Risk Analysis

We will first conduct a "risk analysis" that examines the relationships between various student needs with outcomes. This analysis will enable us to examine which student need variables are most strongly indicative of lower student outcomes and, therefore, where disparities in outcomes across different groups of students are most evident across the state. The analysis will begin with simple pairwise correlations between typical measures of student need (incidences of poverty, English learners, and special education) and student outcomes based on student achievement on state standardized tests of English language arts and mathematics aggregated to the district level.[19]

We will then estimate a series of regression models to examine whether adding certain factors explains more variation in student outcomes. For this analysis, we will start with the most typical measures of student need, along with measures of scale (district size) and rurality (commonly measured as population density). To this model, we will add any additional measures of student need (e.g., parental education) to see whether the addition of this indicator significantly improves model fit. If the model fit improves significantly, this means that the added indicators both improve prediction of the outcomes and independently explain additional variation in outcome above and beyond the factors already included in the model. This would provide justification for including these factors in the cost function modeling used to estimate the cost of providing an

[19] Ideally, for the outcomes we would calculate district averages of student average scale scores on state standardized English language arts and mathematics tests, which are often made available by subject, grade level, and school on an annual basis. It seems that similar data are available on the NH DOE website (https://www.education.nh.gov/who-we-are/division-of-educator-and-analytic-resources/bureau-of-education-statistics/assessment-data), however, in some cases average scores have been suppressed due to having less than 11 students upon which they are based. In turn, we will work with the client to obtain an unsuppressed file that either includes the necessary data. AIR has extensive experience working with similar restricted-access data obtained from states and districts for research purposes, as well as direct collection through conducting assessments for various states. Moreover, all data collection at AIR is overseen by both its Institutional Review Board (on which proposed principal investigator Jesse Levin sits) and a dedicated data governance structure.

adequate educational opportunity and potentially in a state funding formula (depending on the results of the cost function).

Analyses of Disparities in Educational Opportunities

Equity Analysis

The analysis examining the equity of resource distribution across districts will use regression models to isolate the relationship between resource levels (funding) and different types of student needs. For instance, we will use this approach to identify whether districts with higher incidences of student poverty receive more (or less) funding per pupil compared with districts with lower incidences of student poverty, accounting for other student needs (i.e., special education and English learner rates), district size, population sparsity (an indicator of rurality), and proportions of students by grade level. This analysis will provide results that show the degree to which there exist general disparities with respect to the way funding is allocated across districts. Specifically, the findings will shed light on whether the current school finance mechanism allocates funding in a relatively progressive manner (districts with higher needs tend to receive more funding than those with lower needs) or regressive manner (districts with lower needs tend to receive more funding than those with higher needs).

Comparison of Equity Across States

We also will compare equity of resource distribution in New Hampshire with other states, building off of prior work by Bruce Baker (Baker, Farrie, & Sciarra, 2018). This work examines the progressiveness of school funding across districts with respect to poverty using national data to enable the comparison of equity in New Hampshire with other policy-relevant states. Like the equity analysis previously described, we will use regression analysis to examine the relationship between district funding levels and district poverty, controlling for other district factors that also may affect spending levels (i.e., district size, rurality, other student needs), but perform the analysis across a selection of other states. This will allow us to situate levels of equity observed in New Hampshire into a broader context of equity levels across other states. Specifically, we can compare New Hampshire with other states with proven track records of equitably distributing resources (New Jersey and Massachusetts), as well as states with less progressive resource distributions. In this way, we can benchmark New Hampshire against other states to better understand how severe resource disparities in the state are relative to its peers.

Cost-Function Modeling

Finally, the research team will estimate cost-function models that will help identify how resources *should* be distributed to provide all students an equal opportunity to achieve a specified level of outcome. We will estimate two cost-function models:

- A cost-function model using only data on New Hampshire school districts; and
- A regional cost-function model estimated across several states in the Northeast region, based on the National Education Cost Model (NECM) developed by Bruce Baker (Baker et al., 2018).

The cost-function model using New Hampshire-specific data may allow us to use more refined measures of student outcomes and student needs, depending on data availability and quality.

However, cost-function models generally perform better with more data points (i.e., a limited number of data points can result in less precise estimates). Therefore, the limitation of the New Hampshire model is the small number of districts in the state. We can overcome this limitation somewhat by pooling data across a number of school years.

However, to supplement the New Hampshire-specific cost-function model, we will also estimate a cost-function model pooling data across several states in the Northeast region.[20] This will allow us to increase the number of observations that we use in estimating the cost-function model, increasing the precision and stability of the parameter estimates. The cost-function model based on the NECM also has been proven to work well on a regional level, as demonstrated in the recent state school finance study conducted in Vermont (Kolbe, Baker, Atchison, & Levin, 2019).

Using these cost-function models, we will project the cost required for attaining a given level of outcomes accounting for the level of needs for each district.[21] We will then use the projected costs for each district as the dependent variable in a simpler estimated regression model that incorporates only the cost factors that would likely be used in a funding formula as predictors. Using the simpler regression model, we will then estimate base spending levels and funding weights for each student need and district characteristic included that can be used to compare to existing funding adjustments and to make subsequent recommendations. Specifically, these values will represent the collection of funding parameters for a model that equitably allocates funding and will provide an adequate opportunity for all students to achieve the set outcome levels, regardless of background or circumstance that are assumed to require additional educational resources.

We will compare estimates from the New Hampshire-specific model and the Northeastern regional model derived from the NECM. If parameters that are common to both models are estimated with the same directionality and magnitude, that will give us increased confidence in the validity of the results stemming from the New Hampshire-specific model. Furthermore, we will examine and compare the base per-pupil funding amount and funding adjustments for the different categories of student need estimated from the model with the analogous base and adjustments that currently exist in the state's Adequate Education Aid policy.[22] The degree to which the estimated and existing funding policy elements deviate will be clearly reported to show the extent to which the current funding mechanism needs to be modified.

[20] The research team also is open to exploring alternative models that include a selection of comparable peer states that are not necessarily in the Northeast.

[21] Determination of what level of outcomes should be used to determine an adequate opportunity will be done in collaboration with the client.

[22] For example, the current Adequate Education Aid policy funding mechanism provides a base grant amount for fiscal year (FY) 2020 of $3,708.08 per pupil, with additional upward adjustments provided on a per-student basis as follows: $725.63 for identified English learners, $1,854.38 for students eligible for the free and reduced-price lunch (FRPL) program, and $1,995.21 for special education students. In addition, students not eligible for any of those three categories of additional aid may draw an allocation of $725.63 over the base grant if they score below proficient levels on the state's third-grade reading assessment (New Hampshire Fiscal Policy Institute, 2019). Furthermore, in FY 2021, there will be additional funding added to the adequacy aid for districts with concentrations of FRPL students that are 12% or greater and those in towns with per-pupil property values over $1,000,000.

Developing Funding Mechanism Recommendations

We will use the results from the previously described analyses to develop recommendations for how the state's mechanism for distributing funding to school districts should change in order to generate more equitable and adequate resources across districts that would provide all students the opportunity to achieve educational success. Our recommendations will include specific values for the base grant amount and funding adjustments for specific model factors, some of which may not currently be accounted for in the state's current Adequate Education Aid policy. To this end, our funding mechanism recommendations also will include the complete set of data elements that should be collected on an annual basis, which will be necessary for calculating (adequate) funding projections that will eliminate opportunity and outcome disparities.

Deliverable 4: Modeling Recommended Options

We view the state's ongoing goals with respect to the funding of education to be driven by three broad policy objectives:

- Engaging in ongoing monitoring of students' intermediate and longer term outcomes, with an emphasis on identifying disparities between different student groups;
- Estimating costs of achieving specific outcome goals across different educational settings and types of students served, and periodically recalibrating those estimates in response to demographic and economic changes; and
- Achieving taxpayer equity and revenue stability to provide predictable support for the state's education goals.

The focus of the proposed analyses for Deliverable 3 largely supports the first and second bulleted objectives. Specifically, the proposed risk and equity analyses will enable us to identify disparities with respect to both resources (educational opportunities) and outcomes. With the proposed cost-function models, we will be able to estimate the cost of achieving given (adequate) levels of outcomes. Based on these analyses, we will be able to make recommendations regarding how the state should distribute funding to districts in order to reduce resource and outcome disparities. However, the funding targets are only one side of the equation.

In order to recommend changes to New Hampshire's school finance system, we also must develop a firm understanding of the way the state currently funds schools, including the revenue-generation process and its corresponding reliance on federal and state versus local revenue sources. Specifically, we must understand existing structures for raising revenue, and evaluate the degree to which actual resources available to districts and the estimated spending necessary for each to provide equal educational opportunities are in alignment. In turn, the study team will conduct an analysis of how the projected funding necessary to address any disparities in opportunities can be reconciled with the revenue sources capable of supporting this funding. This analysis will allow us to better develop recommendations that can more easily be integrated into the current school finance system.

For this deliverable we will take the recommendations presented as part of Deliverable 3 and show how the recommendations would play out with respect to the distribution of funding across districts within the state. In addition, we will show how this funding could be supported under different scenarios of revenue generation. Simulating funding formula alternatives involves the following two steps:

- Simulating projected funding based on the recommended changes to how districts are funded; and
- Determining local revenue capacity to finance equal educational opportunity across New Hampshire cities and towns, and simulating sample formula alternatives to raising sufficient revenues through equitable tax policies.

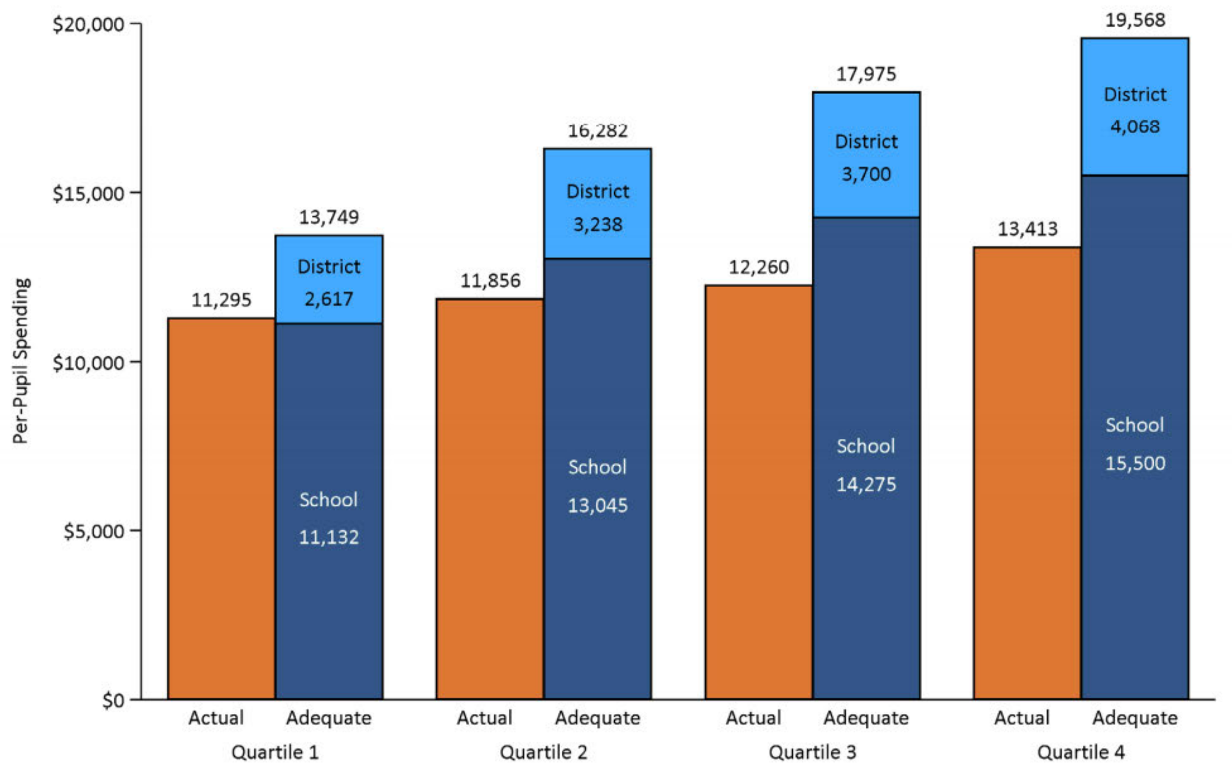
To simulate expected funding based on recommended changes, we will model how funding would be allocated to schools based on a recommended system of school funding. This is a matter of converting our recommendations into an actual formula that we can use to simulate the distribution of funding in New Hampshire, accounting for each district's incidences of student needs and characteristics.

As an example, in the Vermont study, we recommended specific funding weights for different types of student needs and district or school characteristics. In Vermont, funding weights directly affect local education tax rates, and indirectly may affect spending levels. Because of this Vermont-specific nuance, our charge was to simulate how the number of equalized pupils[23] and local tax rates would change based on the application of our recommended weights under the assumption that total spending by district did not change. In other words, Vermont's school funding policy means that at a given level of spending, higher need districts will have a lower tax rate. Another way of thinking about Vermont's school funding formula is that stronger weights for student needs will allow higher need districts to raise more revenue than lower-need districts at a given tax rate. We then provided the state with a comparison of actual and projected equalized pupils and local tax rates based on our simulations.[24]

In a recent adequacy study of education funding in California, we also conducted simulations to project the funding levels necessary for each district in the state to provide an equal opportunity to reach the achievement and content standards set by its State Board of Education (Levin et al., 2018). We then conducted a comparative analysis of the projected adequacy cost estimates and actual spending to understand the extent of funding gaps and how funding gaps varied across districts by student need and urbanicity (urban, suburban, small town, and rural/remote). As an example, Exhibit 1 shows our comparisons of actual spending and adequate funding across California school district by poverty quartile.

[23] In Vermont, equalized pupils are pupil counts adjusted based on the application of funding weights.
[24] For our reported simulation results, see Appendices C through F of the Vermont study (Kolbe, Baker, Atchison, & Levin, 2019): https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf. In addition to providing the simulation results for Vermont, we also provided an Excel simulator, which allowed individual users to select different policy alternatives or specify custom funding weights to see how projected tax rates changed for each scenario.

Exhibit 1. Comparison of Actual Spending and Projected Adequate Funding Across Districts in California by Poverty Quartile



Notes: This exhibit is Exhibit 4-3 in the study, *What Does it Cost to Educate California's Students? A Professional Judgement Approach:* https://gettingdowntofacts.com/sites/default/files/GDTFII_Report_Levin.pdf.

As mentioned, we conducted similar comparisons across districts by urbanicity (i.e., cities, suburbs, towns, rural areas), as well as calculating the number of districts and percentages students in districts where actual spending exceeded adequate funding levels. Although we used a professional judgement approach for the California study to inform our estimates of adequate costs, the modeling of adequate costs and the comparison of adequate funding with actual spending will be similar under the proposed approach of cost-function modeling.

We will produce similar deliverables for New Hampshire as we produced for our previous studies in Vermont and California. Specifically, we expect to be able to provide a series of straightforward spreadsheet simulations that include spending targets (based on equal educational opportunity goals) for New Hampshire school districts, with implications for local property tax rates based on current measures of local fiscal capacity and current policy structures. In addition, we can conduct some straightforward comparisons of actual spending compared with our projected spending targets, as well as actual tax rates compared with tax rates that have been adjusted to meet spending targets to understand which types of districts would be most affected if our proposed recommendations were enacted.

Deliverable 5: Final Report and Additional Consulting

Our final report will provide a synthesis of the results from across all prior deliverables. Specifically, we will display the results from our analyses undertaken under Deliverable 2, including a recap of the review of available data, analytical methods and policies used, and final data methods used for the risk, equity, and cost-function analyses. In addition, we will present our funding mechanism recommendations formed under Deliverable 3, as well as the results of the simulations that take into account these recommendations conducted under Deliverable 4.

Per the stated scope of work in the RFP, we also will be available for follow-up discussions as needed after delivery of the final report until the end of the contracted time period. During this time period, we will be able to answer any questions the client might have about our recommendations or analyses. In addition, we will be able to perform simple follow-up analyses using data that we collected for the study deliverables.

Working With the Client

The proposed AIR study team members (Drs. Drew Atchison and Jesse Levin), along with Dr. Baker and Dr. Kolbe, have extensive experience conducting analyses and writing useful and relevant reports for states. Much of our collective success can be attributed to the high level of collaboration we regularly maintain with our state clients. In line with this practice, throughout the entire process, we are committed to collaborating closely with the Commission to Study School Funding and its study liaison (the University of New Hampshire Carsey School of Public Policy) in order to ensure that our deliverables meet the goals and needs of the state. Indeed, given the aggressive timeline under which the study tasks must be completed, it will be necessary to foster an effective collaboration that facilitates timely data collection and sharing of key information concerning analytical decisions. A key part of this effort will be to schedule and host video-enabled meetings with the client on a regular basis. Given the swift pace of the planned work, these meetings will be even more important. Although the RFP calls for monthly updates, we feel that at least for the first month of the study weekly meetings will be necessary. As the work progresses, we also are open to discussing the possibility of organizing meetings in which one or more members of the study team are able to attend in person.

Ensuring Quality of Deliverables

In addition, AIR, as an organization with a reputation for providing excellent research in the field of education, has a rigorous process for ensuring that key deliverables, such as the final report, meet AIR's expectations for quality. The process includes editing and formatting by AIR's in-house publications team and quality assurance review by the quality assurance reviewer assigned to the project, who is a senior-level researcher at AIR with the content and methodological expertise necessary to provide a careful review of the research and writing. As quality assurance officer, we propose Jay Chambers, a nationally recognized education finance scholar with decades of experience performing studies similar in content and scope. After the study team addresses any comments or outstanding edits from the editor and quality assurance reviewer, we will provide the client with a draft of the proposal. The client can then provide feedback for the study team to consider as we prepare a final report. The final report will then go through the same editing and quality assurance process as the draft report.

Schedule

The table in Exhibit 2 provides the proposed schedule of study tasks.

Exhibit 2. Proposed Schedule of Study Tasks

Study Task	Start/End Dates
Deliverable 1: Identifying Appropriate Data for Evaluating Educational Opportunities and Outcomes	May 1, 2020–June 1, 2020
Deliverable 2: Identifying Appropriate Methods for Evaluating Educational Opportunities and Outcomes	May 1, 2020–May 31, 2020
Deliverable 3: Applying Methodologies and Recommending Remedies for Disparities In Educational Opportunities and Outcomes	June 1, 2020–June 30, 2020
Deliverable 4: Modeling Recommended Options	July 1, 2020–July 21, 2020
Deliverable 5a: Draft Report	July 15, 2020–July 31, 2020
Deliverable 5b: Final Report	August 1, 2020–September 1, 2020
Additional Consulting	September 1, 2020–December 31, 2020

Personnel

Our team is uniquely situated to provide this support to the Commission based on several recent and ongoing school finance projects in which our team members are engaged.

- Most recently, the proposed study team (Drew Atchison, Bruce Baker, Tammy Kolbe, and Jesse Levin) conducted a high-profile study for the Vermont Agency of Education (AOE) that made use of regional and Vermont-specific data at both the district and school levels to estimate the costs of achieving common outcome goals across all Vermont schools. From our statistical models of costs, we constructed simulations of formula alternatives for achieving more equitable per-pupil spending at a more equitable local tax effort.[25] The results have since been used by the Vermont State Legislature to drive extensive policy debate on school finance reform.
- In 2018, Tammy Kolbe and Jesse Levin delivered a more narrowly focused study on Vermont's special education funding to AOE, which made use of national census data and Vermont-specific district-level data. In addition to informing school finance policy at the highest level in that state, the study won the award for the best education policy report in the United States from the American Educational Research Association (AERA).
- Drew Atchison and Jesse Levin conducted a high-profile study of educational adequacy for the state of California in 2018, which used a combination of administrative data and resource allocation data collected from expert practitioners to calculate the cost of providing an equal educational opportunity for all PK–12 students in the state.[26]

[25] See Kolbe, Baker, Atchison, and Levin (2019) at https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf.

[26] See Levin et al. (2018) here: https://gettingdowntofacts.com/sites/default/files/GDTFII_Report_Levin.pdf.

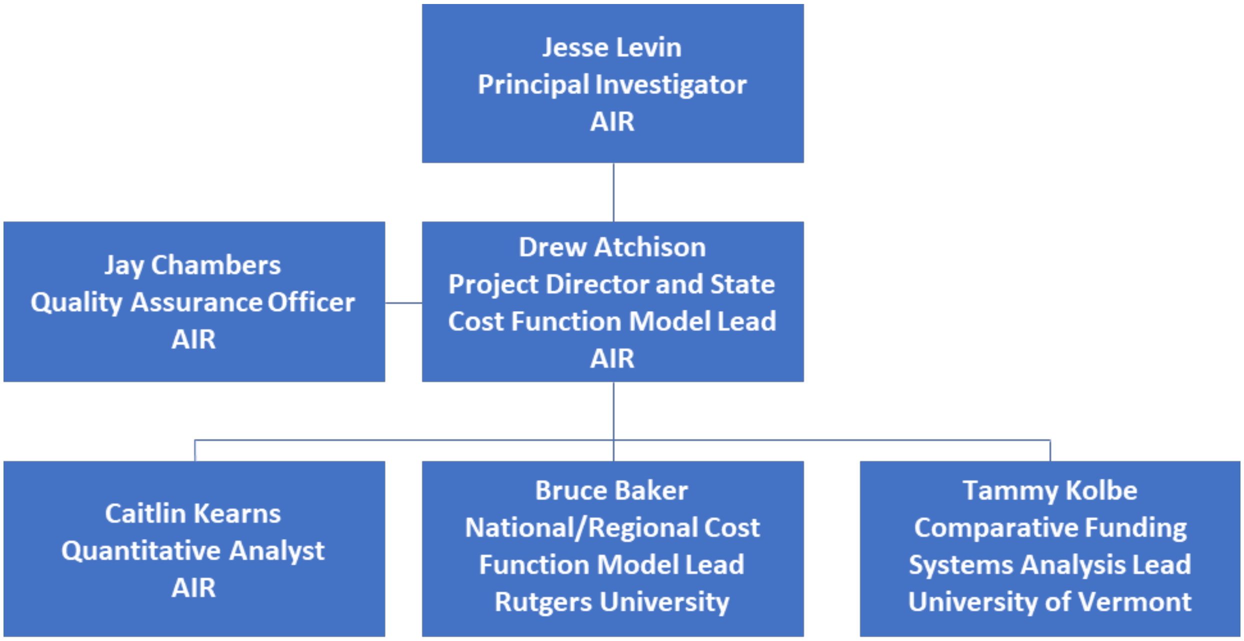
- Bruce Baker, a lead researcher on this project, is lead author and developer of the 2019 School Finance Indicators Database (SFID).
  - The data system includes state-level indicators of school funding equity (measured as progressiveness with respect to child poverty rates) along with a variety of other indicators on state school finance systems from 1993 to 2017. This system and its accompanying database are presently the most advanced and comprehensive data system for comparing the equity and (relative) adequacy of state school finance systems.
  - The data system also includes a comprehensive district-level data set on more than 13,000 school districts nationally, combining federal source data on education revenues, expenditures, student populations and other school district characteristics.[27]
- Bruce Baker, along with colleagues from Rutgers University, also is the creator of the National Education Cost Model (NECM), which generates estimates of the spending levels needed for each district in the country in order to achieve current national average outcomes in reading and math. The model is built by combining data from the SFID on district and student characteristics, as well as economic contexts, with data on student outcomes from the Stanford Education Data Archive.[28]
- Jesse Levin, Drew Atchison, and Bruce Baker engaged in a study to compare the expenditures of district and charter schools in Maryland, which involved the creation of a uniquely comprehensive statewide school-level expenditure database.[29] The main results were presented in 2017 to both the Maryland State Board of Education and four legislative committees.

Our intent in providing analysis and advisement to the New Hampshire Commission is to draw on these collective experiences to propose a leading model for monitoring and evaluating educational equity and adequacy over time, both internally and with respect to neighboring states and the nation as a whole.

Exhibit 3 contains an organizational chart for the proposed study depicting key staff and their roles. This is followed by professional biographies of the proposed study team.

[27] The SFID data system is available at http://schoolfinancedata.org/wp-content/uploads/2020/02/SID_Codebook_2020.pdf.
[28] The report from the earlier version of the NECM (Baker, Weber, Srikanth, Kim, & Atzbi, 2018) is available here: https://drive.google.com/file/d/1cm6Jkm6ktUT3SQplzDFjJIy3G3iLWOtJ/view.
[29] See Levin et al. (2016) here: http://marylandpublicschools.org/stateboard/Documents/01242017/TabG-CharterPublicSchoolFundingStudy.pdf.

Exhibit 3. Organizational Chart for the Proposed Study



Jesse Levin, proposed principal investigator and principal research economist at AIR, has directed projects investigating school finance equity and adequacy, resource allocation, and educational effectiveness. Dr. Levin recently conducted studies of the cost of providing an adequate education to students attending K–12 public schools in both Vermont and California, respectively, and a study comparing spending in California charter and traditional schools. In addition, he previously directed a study comparing charter and traditional school funding in Maryland, as well as other high-profile educational adequacy studies in New Mexico and New York; investigations of educator supply and demand in Oklahoma and Massachusetts; evaluations of state school finance systems in Hawaii, Nevada, and Pennsylvania; and studies of educational resource allocation and effectiveness, both within and across school districts. His work at AIR over the past 18 years has drawn upon his expertise in applied econometrics and quantitative methods. Prior to his work at AIR, Dr. Levin served as an economics researcher for the Institute for Research of Schooling, Labor Market and Economic Development (SCHOLAR) in the Netherlands, where he conducted research on the economics of education and labor economics, and performed major countrywide studies of the efficacy of class-size reduction, the differences in the effectiveness of private versus public schooling, and the measurement of the rate of return to educational investment. Dr. Levin earned his Ph.D. from the University of Amsterdam and Tinbergen Institute in the Netherlands in 2002.

Dr. Levin is an appointed member of the California Practitioners Advisory Group, which advises the California State Board of Education, and currently serves as school board president in his local school district in Pacifica, California. His articles on the economics of education and school finance have appeared in *Economics of Education Review*, *Empirical Economics*, *Labour Economics*, *Oxford Bulletin of Economics and Statistics*, and *Peabody Journal of Education*. He also regularly serves as a referee for several peer-reviewed journals (*Economics of Education*

Review, *Education Finance and Policy*, *Educational Policy*, *Empirical Economics,* and *Journal of Research on Educational Effectiveness*).

Drew Atchison, proposed project director and state cost function model lead, is a senior researcher at AIR where he regularly leads high-profile quantitative projects examining topics such as education finance, educational equity, and accountability. Dr. Atchison has led the quantitative analysis examining state education funding policies and practices in Vermont, California, and Maryland. He also has led the quantitative analysis for several national studies examining issues of education finance, including a study of district weighted student funding policies. In his role as lead quantitative analyst, Dr. Atchison has conducted analyses examining the adequacy and equity of education funding. These analyses have involved collecting and compiling detailed school- and district-level fiscal data, modeling the equity and adequacy of spending across schools and districts, and recommending policy changes intended to reduce disparities in educational opportunity. For his dissertation research examining educational equity of inputs- and outcomes-related accountability and school finance reform policies, Dr. Atchison was awarded the Jean Flanigan Outstanding Dissertation Award from the Association of Education Finance and Policy. Dr. Atchison has published articles in top education research journals, including the *Journal of Research on Educational Effectiveness*, *Education Finance and Policy*, and *Education Policy Analysis Archives.* Dr. Atchison completed his doctoral degree in education policy from the George Washington University in 2017.

Bruce Baker, proposed national and regional cost function analysis lead, is a professor in the Graduate School of Education at Rutgers University in New Brunswick, New Jersey. He was previously (1997–2008) a professor at the University of Kansas in Lawrence. His work focuses on school finance, the economics of education, and teacher labor markets. He is the lead researcher, in collaboration with Mark Weber and Matt Di Carlo, on the School Finance Indicators Database (www.schoolfinancedata.org) and author of *Educational Inequality and School Finance: Why Money Matters for America's Students*. He has consulted for state governments, most recently in Vermont and Maryland, and served as an expert witness in litigation over the equity and adequacy of financing for public schools in Arizona, Colorado, Connecticut, Kansas, Missouri, New Jersey, New York, and Texas.

Tammy Kolbe, proposed comparative funding systems analysis lead, is an associate professor of educational leadership and policy studies at the University of Vermont. Her research and consulting work focus on how state and local education agencies allocate resources to improve student learning, and the cost-effectiveness of PK–16 education policies and programs. She frequently works with states on issues related to general and special education funding and policy, and has been an expert witness in state-level school finance court cases. She was project lead for the *Study of Vermont State Funding for Special Education*, and, more recently, the *Study of Pupil Weights in Vermont's Education Funding Formula*. Dr. Kolbe's interests also include strategic finance in higher education and state-level policy reform for community college funding. Her book, *From Mission to Market: Strategic Finance in Higher Education* (with R. Staisloff & M. Anguiano, Johns Hopkins Press), will be in print in fall 2020. Previously, Dr. Kolbe worked as a professional evaluator at two large research consulting firms, and was a fiscal policy analyst in state budget offices. She received her master's degree in policy analysis and evaluation from the Pennsylvania State University, earned her doctoral degree in educational leadership and policy from the University of Vermont, and was a U.S. Department of Education/Institute of Education Sciences postdoctoral research fellow (at the University of Maryland). She currently serves on the editorial board for the *Journal of Education Finance,* and is the immediate past chair of the AERA's Finance, Economics, and Policy Group. In 2018, she received AERA's award for the best education policy report in the United States for her work on Vermont's special education funding reform.

Caitlin Kearns, proposed quantitative analyst, is a researcher at AIR with 10 years of experience in quantitative data analysis and 4 years of experience evaluating K–12 education policies. At AIR, Ms. Kearns has conducted quantitative analysis of survey data for a study of weighted student funding. Her current research uses quasi-experimental methods to examine the effects of school finance and school-choice policies on low-income populations. These include estimates of the home price and neighborhood income effects of school finance reforms, as well as evaluations of pilot high schools and localized school choice in Los Angeles Unified School District. Previously, Ms. Kearns worked as a graduate student researcher at the UC Berkeley Institute of Human Development, the Petris Center for Health Care Markets and Consumer Welfare, and the Haas School of Business. Prior to beginning her doctoral studies, Ms. Kearns worked as a senior associate economist at the Federal Reserve Bank of Chicago, conducting quantitative evaluations of consumer finance and mortgage programs.

Jay Chambers, proposed quality assurance officer, is a senior research fellow and nationally recognized expert in school finance and education cost analysis. Dr. Chambers has conducted numerous resource allocation and cost studies for the U.S. Department of Education, performed analyses of school finance adequacy and equity for state education agencies and legislatures, and worked on studies of resource allocation for and with local school districts. Dr. Chambers also served in 2002 on the President's Commission on Excellence in Special Education (under President Bush), has testified before Congress and state legislatures on issues related to school funding, and has served as the president of the American Education Finance Association (now known as the Association of Education Finance and Policy). His most recent work was directed toward developing tools and processes for improving school finance and governance in local education agencies.

Appendix B contains resumes for each of the proposed staff. Exhibit 4 provides a staff loading chart describing the planned level of effort for each of the proposed study team members.

Exhibit 4. Staff Loading Chart

Study Team Member	Role	Percent of Full-Time-Equivalent*
Jesse Levin	Principal Researcher	[redacted]
Drew Atchison	Project Director/State Cost Function Model Lead	
Caitlin Kearns	Quantitative Analyst	
Bruce Baker	National/Regional Cost Function Model Lead	
Tammy Kolbe	Comparative Funding Systems Analysis Lead	
Jay Chambers	Quality Assurance Officer	

* Percentage of full-time effort is based on an 8-month (May through December) workload of 1,227 hours (equal to two-thirds of an annual workload of 1,840 hours).

Budget

AIR is pleased to submit this budget for the proposed study, *New Hampshire Commission to Study School Funding: Research and Analysis on Behalf of the Commission to Study School Funding*. Consistent with the scope of work provided in the main body of the proposal, our proposed budget is [redacted] All labor rates used in the budget are based on current rates.

Exhibit 5. Proposed Budget

Description	Period of Performance	Contract-Type	Total
Study Tasks Deliverables 1-5	May 1, 2020 to Sept 1, 2020	FFP	[redacted]
Additional Consulting Services	Sept 1, 2020 to Dec 31, 2020	T&M - NTE	[redacted]
		Total:	[redacted]

The budgeted costs for study team labor account for expected hours for the following key activities:

<u>Study Plan</u>—Developing a formal analysis plan that will guide all study data collection and analysis activities.

<u>Data Collection</u>—All activities involved in procuring extant data from New Hampshire and other external sources (see Appendix A for the proposed data framework). Includes consultation through the client liaison (University of New Hampshire Carsey School of Public Policy) with associated data contacts in state departments and other organizations (e.g., New Hampshire School Funding Fairness Project), obtaining school finance formula details from other states, and so on.

<u>Information Processing and Analysis</u>—Cleaning and preparing data from various sources for use in equity and cost analysis investigations, and performing quantitative analyses.

Client Communications—Engaging in regular meetings with the client and collaborating with the client liaison to communicate study progress, discuss key issues concerning data collection and analysis, and report on any challenges and proposed solutions.

Reporting, Dissemination, and Consulting—Compiling analytical results into written form, including developing initial report drafts, providing quality assurance review, performing professional editing and publication services, making presentations to disseminate main study findings, and providing postpublication consulting services in support of the legislative policy debate.

The budgeted figures for non-AIR labor costs, which include communication and consultant costs, are based on past experience with projects of this kind and scale. Exhibit 6 provides the numbers of labor hours and corresponding firm fixed price by project deliverable and a total firm fixed price for the entire study.

Exhibit 6. Firm Fixed Price for the Study – Deliverables 1 to 5

Cost Category	Deliverable 1	Deliverable 2	Deliverable 3	Deliverable 4	Deliverable 5	Total
Labor						
Hours	[redacted]					
Cost	[redacted]					
Communication	[redacted]					
Consultants						
Total Cost	[redacted]					

Per the RFP, for the period September 1, 2020 to December 31, 2020, AIR proposes the following hourly rates and a Not to Exceed (NTE) in the amount of [redacted]. Exhibit 7 provides the hourly rates, estimated hours and material costs for these follow-up services to be billed on a Time & Material basis.

Exhibit 7. Not to Exceed for Additional Consulting Services

Time				
Staff	**Labor Category**	**Hourly Rate**	**Hours**	**Total Cost**
Jesse Levin	Principal Researcher	$ [redacted]	[redacted]	$ [redacted]
Drew Atchison	Project Director/State Cost Function Model Lead	$ [redacted]		$
Caitlin Kearns	Quantitative Analyst	$ [redacted]		$
Total Time				$ [redacted]
Materials				**Total Cost**
Communications				$ [redacted]
Consultants				$
Total Materials				$ [redacted]
Total Time and Materials (T&M) NTE				$ [redacted]

For any additional as-needed consulting services after the contract end date, for the period January 1, 2021 through March 31, 2021, AIR proposes the following labor rates to be billed on a Time & Material basis:

Exhibit 8. As-Needed Consulting Rates

Study Team Member	Labor Category	Hourly Rate
Jesse Levin	Principal Researcher	[redacted]
Drew Atchison	Project Director/State Cost Function Model Lead	[redacted]
Bruce Baker	National/Regional Cost Function Model Lead	[redacted]
Tammy Kolbe	Comparative Funding Systems Analysis Lead	[redacted]
Caitlin Kearns	Quantitative Analyst	[redacted]

Payment Schedule

This section presents a draft payment schedule that is based on the scope of work and deliverables proposed. AIR understands that this schedule is subject to change based on final negotiations with the Commission.

Exhibit 9. Payment Schedule

Deliverable	Proposed Payment Date	Amount
1: Identifying Appropriate Data for Evaluating Educational Opportunities and Outcomes	5/15/2020	[redacted]
2: Identifying Appropriate Methods for Evaluating Educational Opportunities and Outcomes	5/15/2020	
3: Applying Methodologies and Recommending Remedies for Disparities In Educational Opportunities and Outcomes	6/15/2020	
4: Modeling Recommended Options	7/15/2020	
5: Draft and Final Report	8/15/2020	
Total for All Deliverables		

Terms and Conditions

AIR's proposal is predicated upon all the terms, conditions, and provisions of the New Hampshire Commission to Study School Funding RFP titled Research and Analysis on behalf of The Commission to Study School Funding and posted Questions & Answers, dated April 1, 2020. AIR takes no exception to the solicitation requirements. Any award resulting from this proposal, will be subject to mutual terms and conditions agreed to by both parties.

Payment Terms

AIR's standard payment terms are net 30 days from receipt of a valid and accurate invoice. Invoices for firm fixed price services will note the deliverable being billed corresponding to the proposed payment schedule. Invoices for time and material services will be submitted monthly and note the labor hours and labor rate. Materials will be billed as a separate line item at cost and burdened with G&A and fee per AIR's standard accounting practice.

Validity

AIR's proposal will remain valid for 120 days from the official due date April 24, 2020. AIR reserves the right to review its submitted pricing to determine additional period(s) necessary for extension of the offered pricing or to revise its price quote after expiration of 120 days or any subsequent offered validity period(s).

Banking Information

To ensure security of client payments and increase timeliness of deposits, AIR's preferred method of payment is direct electronic deposit via EFT/ACH. AIR's general accounting staff at GeneralAccountingTeam@air.org are responsible for receipt of client payments. They will complete client forms required for direct deposit payments via EFT/ACH and send them directly to the client's designated payments office via secure transmission.

In the unlikely event payment by electronic means is not possible, payments by check may be mailed to AIR's lockbox at the following address:

American Institutes for Research
P.O. Box 28126
New York, NY 10087-8126

Conflict of Interest

AIR understands that it and the individuals assigned to assist the Commission do not have any bias or conflict of interest that would affect the outcome of AIR's report. The assigned individuals and their immediate family members must not be members of the New Hampshire General Court, employees of schools or school districts in New Hampshire, or members of school boards or school governing boards in New Hampshire.

Project References

Company Name:	[redacted]
Contact Person:	[redacted]
Address:	[redacted]
Phone:	[redacted]
Fax #:	[redacted]
E-Mail Address:	[redacted]
Description of Service Provided:	Study of Vermont Education Weights[30] As part of this 2019 study of the funding weights used in Vermont's state finance system, the proposed study team (1) performed a national policy scan of state education funding formulae used across the county, (2) analyzed the impact of the existing formula on fiscal equity across districts in the state, (3) conducted interviews with a broad range of stakeholders throughout the state to better understand strengths and weaknesses of the existing formula, and (4) used a cost-function approach to improve funding equity through the development of new formula weights for students who are economically disadvantaged, English learners, disabled, and attending districts located in sparsely populated areas. This study demonstrates our understanding of both resource allocation, as well as our ability to assess the relationship between resources and student outcomes using administrative data on student outcomes, educational inputs, school characteristics, and student needs. Furthermore, the report deliverable provided concrete recommendations on how the state formula should be revised to provide increased funding equity across Vermont districts. The key study activities for this project that are related to the proposed evaluation include the collection and analysis of administrative data (fiscal, resource allocation, and student outcomes/demographics) from state sources, producing a final report suitable for a wide range of stakeholders and consultation with policymakers at the highest level (e.g., Vermont Agency of Education and Vermont General Assembly) on study findings.
Contract Value:	[redacted]

[30] Note that proposed study team members Tammy Kolbe and Jesse Levin also delivered a study on Vermont special education finance to the Vermont Agency of Education (Kolbe et al., 2018).

Company Name:	[redacted]
Contact Person:	[redacted]
Address:	[redacted]
Phone:	[redacted]
E-Mail Address:	[redacted]
Description of Service Provided:	What Does It Cost to Educate California's Students? A Professional Judgment Approach[31] Conducted in 2019 as part of the Stanford University *Getting Down to Facts* project, this study examined the cost of educating California's students using the "professional judgment" approach. As part of this study, we convened panels of expert educators in northern and southern California. The panels of expert educators identified the resources required to meet California's educational goals in schools that varied by schooling level, student poverty, share of English learners, and school size. Using the resources specified, AIR researchers calculated the cost per student in prototypical schools and extrapolated these costs to determine the cost of providing an adequate education for all of California's students. Underlying the calculations of adequacy was administrative data on school enrollments and demographics, educational spending, teacher salaries, and other types of administrative data. This study demonstrates our ability to convene focus groups and collect and analyze large amounts of administrative data. The key study activities for this project that are related to those required for the proposed evaluation include performing collection and analysis of administrative data (fiscal, student demographics) for the purpose of calculating the costs of providing an equal educational opportunity to all students.
Contract Value:	[redacted]

[31] Note that as part of the Stanford University *Getting Down to Facts* project, proposed study team members Drew Atchison and Jesse Levin also delivered a comparative study of charter and traditional public-school spending in California (Atchison, Levin, & Brodziak, 2018).

Company Name:	[redacted]
Contact Person:	[redacted]
Address:	[redacted]
Phone:	[redacted]
E-Mail Address:	[redacted]
Description of Service Provided:	Study of a New Method of Funding for Public Schools in Nevada Performed a comprehensive evaluation of the Nevada state school finance system used to inform policy debate and precipitate key funding reforms. The main study deliverables relevant to the current proposed study included: • An in-depth overview of the current Nevada Plan for School Finance • Development of an inventory of state finance systems showing how states are addressing the additional costs of serving students with specific needs and other cost factors • An analysis comparing patterns of actual spending across districts within all states across the country • A set of recommendations to improve Nevada's existing school funding model and incorporate best practices for addressing student needs and the challenges of delivering education in smaller rural, remote districts The study activities for this project that are relevant to those required for the proposed evaluation include performing collection and analysis of administrative data (fiscal, student demographics) for the purpose of identifying disparities in educational opportunities that could be improved through funding reforms in the school finance system.
Contract Value:	[redacted]

Sample Work

As samples of previous work relevant to the proposed study, we have included in Appendix C links to the final reports corresponding to the studies performed for each of the three references listed above. In addition, we have attached the reports as stand-alone files to the proposal submission.

References

Atchison, D., Levin, J., & Brodziak, I. (2018). *Study of spending in public charter and traditional schools in California*. San Mateo, CA: American Institutes for Research.

Baker, B. (2005). What will it take to make Kansas school funding “cost-based?” *Kansas Policy Review*, *27*(2), 21–30.

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Chambers, J., Levin, J., & DeLancey, D. (2006). *Efficiency and adequacy in California school finance: A professional judgment approach*. Palo Alto, CA: American Institutes for Research.

Chambers, J., Levin, J., DeLancey, D., & Manship, K. (2008). *An independent comprehensive study of the New Mexico public school funding formula: Volume 1—Final report*. Palo Alto, CA: American Institutes for Research.

Chambers, J., Levin, J., Verstegen, D., Jordan, T., Baker, B., & Wang, A. (2012). *Study of a new method of funding for public schools in Nevada*. San Mateo, CA: American Institutes for Research.

Chingos, M., & Blagg, K. (2017). *Do poor kids get their fair share of school funding?* Washington, DC: Urban Institute.

Kolbe, T., Baker, B., Atchison, D., & Levin, J. (2019). *Study of Pupil Weights in Vermont’s Education Funding Formula*. Burlington, VT: University of Vermont.

Kolbe, T., Killeen, K., Haines, S., Kervick, C., Bahrami, F., & Levin, J. (2018). *Study of Vermont state funding for special education*. Burlington, VT: University of Vermont.

Levin, J. (2018a). *Review of Kansas education cost studies*. San Mateo, CA: American Institutes for Research.

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Levin, J., Baker, B., Atchison, D., Brodziak, I., Boyle, A., Hall, A., & Becker, J. (2016). *Study of funding provided to public schools and public charter schools in Maryland*. San Mateo, CA: American Institutes for Research.

Levin, J., Brodziak, I., Atchison, D., Manship, K., Arellanes, M., & Hu, L. (2018). *What does it cost to educate California's students? A professional judgment approach*. Stanford, CA: Stanford University.

Levin, J., Manship, K., & Chambers, J. (2009). *Analysis of funding shortfall and outcomes in New Mexico public school districts*. Report brief prepared for New Mexico Legislative Council Service. Palo Alto, CA: American Institutes for Research.

Levin, J., Manship, K., Hurlburt, S., Atchison, D., Jain, V., Cinque, A., & Hu, L. (2019). *Districts' use of weighted student funding systems to increase school autonomy and equity: Findings from a national study*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Morgan, I., & Amerikaner, A. (2018). *Funding gaps*. Washington, DC: Education Trust.

New Hampshire Fiscal Policy Institute. (2019). *Education funding in the House Budget*. NHFPI Issue Brief Concord, NH: NHFPI.

Appendices

Appendix A. Comprehensive Data Framework

Category	***Measures***	***Unit***	***Elements / Details***	***Availability (Years / Sources)***
Capacity & Revenue	Tax Base by Components	Local / Municipal	Values of: Residential Property (primary) Commercial Property Industrial Property Utilities Natural Resource	**
	Family & Household Income	Local / Municipal		Census & SFID[32]
	State Revenue (by Source / Program)	District / Municipality	State Revenue by Source (by Tax Source and Program Type)	Census Fiscal Survey 1993-2017[33] & SFID**
	Federal Revenue (by Source / Program)	State District / Municipality		Census Fiscal Survey 1993-2017 & SFID**
Expenditure & Resource	Revenue by Source	District / Municipality		Census Fiscal Survey 1993-2017 & SFID**
	Expenditures	District / Municipality		Census Fiscal Survey 1993-2017 & SFID**
	Expenditures	School		**
	Staffing	Individual Staff (Cert and Non-Cert) by Location (School & District)	Assignments Locations Salaries Benefits	**

**Supplement with state data sources where available

[32] The School Finance Indicators Database is available at http://schoolfinancedata.org/.

[33] The Census Fiscal Survey is available at https://www.census.gov/programs-surveys/school-finances/data/tables html.

Student Need / Risk	*Child Poverty*	*School / District*		*U.S. Census Small Area Income and Poverty Estimates*[34]
	Other / Area Poverty	Geographic Area		EDGE Neighborhood Poverty Index
	Counts / Shares of Children from Low Income Families	School / District		**
	English Language Proficiency	School / District	By Progress/Level on Access for ELLs?	**
	Disability Status	School / District		
School & District "Cost"	Index of Regional Variation in Labor Costs and/or Other Input Prices	Labor Market		Taylor ECWI[35] & Taylor/Edge CWIFT[36]
	School & District Structural Characteristics	School / District	Grade Ranges Served (Distributions of Students by Grade Range) School / District Size	**
	Population Density	School / District Service Area		SFID**
Achievement	Student Achievement	School (and/or Student, Linked to Classroom / Teacher)	State Assessments by Student Characteristics & Grade	**
	Nationally Equated Reading & Math 3 to 8	School & District)	State Assessments by Student Characteristics & Grade, Nationally Equated for Interstate Comparison	Stanford Education Data Archive (2009-2016)
Attainment	Graduation Rates	School	Cohort Graduation Rates by Student Characteristics & Grade	**
	College Matriculation	School / Student		National Student Clearinghouse[37] **
	College Persistence & completion	School / Student		National Student Clearinghouse **

**Supplement with state data sources where available

[34] The SAIPE are available at https://www.census.gov/programs-surveys/saipe/data/datasets.html.

[35] The CWI is available at https://bush.tamu.edu/research/faculty/Taylor_CWI/.

[36] The CWIFT is available at https://nces.ed.gov/programs/edge/Economic/TeacherWage.

[37] The National Student Clearinghouse Data is available at https://www.studentclearinghouse.org/high-schools/studenttracker/.

Appendix B. Résumés

Jesse Levin

Education

Ph.D.	2002, University of Amsterdam and Tinbergen Institute, Economics with specialization in Economics of Education, Labor Economics and Applied Econometrics
M.A.	1995, San Francisco State University, Economics, specialization in Public Finance
B.S.	1991, University of Oregon, Economics, minor in Music

Honors and Awards

E. Robert Stephens Award, Association of Educational Service Agencies, for research study *Similar Students, Different Results: Why Do Some Schools Do Better? A Large-Scale Survey of California Elementary Schools Serving Low-Income Students,* coauthored with the research team from EdSource, Stanford University, University of California–Berkeley, and WestEd, 2007

Honorable Mention, Association for Public Policy Analysis and Management (APPAM) Dissertation Award, 2003–2004.

Present Position

Principal Research Economist, AIR (2002–Present)
Investigate policy-oriented issues in education finance focused on school funding adequacy, equity, resource allocation, and effectiveness resulting in written reports, dissemination of findings through presentation and publication in peer-reviewed journals, and procurement of grant and contract funding.

Professional Experience

Project Director, Study of Vermont State School Funding Formula Weights for Vermont Agency of Education (2019–Present)
Leading study investigating describing school funding under Vermont's current state formula and comparing patterns of funding across districts both within the state and in other peer states. Responsible for leading data collection and the development of within-state and regional statistical cost models, as well as reporting and dissemination efforts.

Principal Investigator, Getting Down to Facts II: Study of Funding in Public Charter and Traditional Schools in Two California Districts for Stanford University (2018)
Leading comparative study of spending and revenues in charter and traditional schools in two California unified school districts. Main duties included overseeing the day-to-day project operations, managing collection of primary and extant data activities, developing

structures to harmonize fiscal data collected from central district offices and charter management organizations, designing and conducting quantitative analysis, drafting results, and working with client to translate findings into a policy brief.

Reviewer Consultant, Review of Kansas Education Cost Studies for Kansas State Legislative Coordinating Council (2018)
Provided scientific review of school finance studies performed for the state of Kansas between 2002 and 2018 with the goal of providing a description of the methodologies used, their rigor and the fidelity with which they were implemented, and an objective assessment of the validity of findings. Deliverables included two detailed reports and provision of in-person testimony to the Kansas State Legislature.

Principal Investigator, Getting Down to Facts II: What Does It Cost to Educate California's Students? A Professional Judgment Approach for Stanford University (2017–2018)
Leading study designed to estimate the cost of providing a sufficient education to all public-school students in California by utilizing elements of the two primary costing-out methodologies (professional judgment and expert/evidence-based approach). The hybrid model developed by AIR was built upon the New York Adequacy Study, the Getting Down to Facts I Study conducted in California, and the New Mexico Adequacy Study. Main duties included overseeing the day-to-day project operations, developing a resource cost model, managing collection of primary and extant data activities, designing and conducting quantitative analysis, drafting results, and working with client to translate findings into a policy brief.

Expert Consultant, Cost-Effectiveness Study of Descubriendo la Lectura (DLL) Evaluation, U.S. Department of Education Institute for Education Sciences Grant (2017–Present)
Directing a study of the costs of implementing Descubriendo la Lectura, a version of Reading Recovery designed for students with Spanish as their native language and applying these costs in a cost-effectiveness framework. Duties include providing conceptual leadership and guidance in implementation of research plan to apply an ingredients approach to cost analysis and combining cost and impact evaluation results to develop cost-effectiveness measures of the intervention.

Project Director, Cost Study of Kentucky Targeted Interventions Program, U.S. Department of Education Institute for Education Sciences Grant (2017–2019)
Directing a study of the costs of implementing the Kentucky Targeted Interventions Program, a program to identify and route struggling middle and high school students into transitional intervention courses to ensure they perform at grade level in English, Reading and Math. Duties include providing conceptual leadership and guidance in implementation of research plan to apply an ingredients approach to cost analysis and reporting of study results.

Project Director, Cost Study of Safe Public Spaces in Schools Program, National Institute of Justice Grant (2017–2019)
Directing a study of the costs of implementing an intervention intended to promote safe and supportive school environments in New York City middle schools. Duties include providing conceptual leadership, developing and implementing research plan for application of cost analysis using the ingredients approach and leading reporting effort.

Project Director, Benefit-Cost Study of Evaluation of Texas Dual Credit Education Programs for Texas Higher Education Coordinating Board (2017–2018)
Directing a study of the costs of providing dual credit (semester credit hours that count towards both high school graduation and college) across districts in Texas. Duties include providing conceptual leadership and guidance in implementation of research plan to apply an ingredients approach to cost analysis and combining cost and impact evaluation results to develop cost-effectiveness measures of the intervention.

Project Director, Cost-Effectiveness Study of Evaluation of Early Colleges, U.S. Department of Education Institute for Education Sciences Grant (2017–2019)
Directing a study of the costs of implementing Early College High School models, where high school students participate in college-level coursework that translates into higher education credits. Duties include providing conceptual leadership and guidance in implementation of research plan to apply an ingredients approach to cost analysis and combining cost and impact evaluation results to develop cost-effectiveness measures of the intervention.

Project Director, Cost Effectiveness Study of Testing the Efficacy of the Academic Language and Literacy in Every Subject (ALLIES) Professional Learning Program, U.S. Department of Education Institute for Education Sciences Grant (2017–Present)
Directing a study of the costs of implementing ALLIES professional learning program, where high school instructors are provided high quality professional development by dedicated mentors to help them meet the needs of English learner students. Duties include providing conceptual leadership and guidance in implementation of research plan to apply an ingredients approach to cost analysis and combining cost and impact evaluation results to develop cost-effectiveness measures of the intervention.

Analyst Consultant, Study of Vermont State Funding for Special Education for Vermont Agency of Education (2017)
Supported the University of Vermont study in developing statistical models of special education incidence in Vermont using data from the U.S. Census. Assisted in analysis of special education funding in Vermont and other comparison states.

Project Director, Study of Weighted Student Funding and School-Based Budgeting Systems for Policy and Program Study Service (PPSS), U.S. Department of Education, (2016–2019)
Currently directing study to investigate implementation of School-Based Budgeting (SBB) and Weighted Student Funding (WSF) systems, intradistrict resource allocation

mechanisms that provide increased school-level discretion over educational resources (funding, staff and non-personnel) and distribute resources to schools according to the needs of the students being served. Duties include providing conceptual leadership over the following key study tasks: collecting and analyzing extant data documenting WSF systems and their effect on funding equity; development and administration of nationally representative district and school leader surveys on district/school discretionary split over resources; and, performing case study site visits including interviews with staff from a purposive sample of WSF district and school sites.

Project Director, Maryland Study of Public School and Charter School Funding for Maryland State Department of Education (2016)
Served as the director for a study of resource allocation and spending on charter and non-charter public schools in Maryland. Responsibilities include directing the research team in collecting quantitative fiscal (expenditure and revenue) data and qualitative interview and survey data from local education agencies and charter organizations; analysis of spending at the school-level and central-level (central district office/charter administrative office); examination of policies governing the allocation of resources from central offices to individual schools; and, drafting of results and study recommendations in report format.

Deputy Project Director, Study of Title I Schoolwide and Targeted Assistance Programs for Policy and Program Study Service (PPSS), U.S. Department of Education (2015–2018)
Currently directing study to investigate resource allocation and expenditures in schools receiving Title I funding that operate schoolwide versus targeted assistance programs. Duties include providing conceptual leadership over the following key study tasks: collecting and analyzing extant data documenting current resource allocation and spending practices in a purposive sample of districts; development and administration of fiscal office and school leader surveys on planning, budgeting and spending practices to a nationally representative sample of district and school sites; and, performing case study site visits including interviews with staff from a purposive sample of district and school sites.

Project Director, Network to Transform Teaching (NT3) Cost Study: A Comprehensive Review of Site-Level Costs for National Board of Professional Teaching Standards (NBPTS) (2015–2017)
Directed a study of the costs of the efforts on the part of five NT3 sites across the county to recruit and support teacher candidates in pursuit of their national board certification. Duties included providing conceptual leadership and guidance in implementation of research plan involving use of the ingredients approach to cost analysis and development of site-specific resource cost models. Oversaw study team in the analysis of candidate recruitment and support costs within and across sites, developing a comprehensive report, and disseminating findings.

Member, American Institutes for Research Institutional Review Board (IRB) (2014–Present)
Provides reviews of research applications and works with project staff to ensure planned research and data collection instruments meet acceptable standards with respect to privacy concerns and potential risks to subjects.

Project Director, Exploring the Quality of School-Level Expenditure Data: Practices and Lessons Learned in Nine Sites for Policy and Program Study Service (PPSS), U.S. Department of Education (2013–2017)
Served as project director for a study investigating the extent to which district and state fiscal data systems track educational expenditures to individual school sites and the methods used to do so in an effort improve the quality school-level expenditure data in new and existing systems. Duties include directing the following three key study tasks: 1) Conducting a panel meeting of expert practitioners and researchers; 2) Recruiting study sample of district and state sites capable of tracking expenditures to school sites; 3) Conducting interviews with fiscal staff from each site; and, 4) Collecting and analyzing school-level expenditure data from each district/school site to check for its comprehensiveness and consistency with data sets collected independently by federal agencies.

Director of Research, Invest for Student Success for Internal AIR Investment Project (2011–2015)
Provide research and development leadership for districtwide core reform strategy consisting of policy, governance structures and software applications that facilitate transparent and equitable funding to schools based on student needs, thoughtful school-level planning and budgeting, and enhanced monitoring and accountability of resource inputs and outcomes.

Quantitative Consultant, Evaluation of Gates Intensive Partnership Sites for Bill and Melinda Gates Foundation (2010–2018)
Provide consulting services on fiscal and resource allocation analyses for study component that estimates the cost of planning and implementing reforms aimed at empowering an effective teaching force in four school districts.

Project Director, Massachusetts Study of Teacher Supply and Demand: Trends and Projections for Massachusetts Department of Elementary and Secondary Education (2015)
Served as the director for a study of educator supply and demand in Massachusetts. Responsibilities include directing the research team in collecting administrative data on certificated educator personnel and staffing assignments, analyzing trends in educator supply and demand trends across public school districts in the state, and drafting of results and recommendations in report format.

Project Director, Oklahoma Educator Supply and Demand Study: Trends and Projections for Oklahoma State Regents of Higher Education (2014)
Served as the director for a study of educator supply and demand in Oklahoma. Responsibilities include directing the research team in collecting administrative data on

certificated educator personnel and staffing assignments, analyzing five-year supply and demand trends across public school districts in the state, drafting of results and recommendations in report format, and making presentations to the client.

Principal Investigator, Evaluation Educational Equity, Adequacy, and Equal Opportunity in Pennsylvania for William Penn Foundation (2014)
Led an evaluation of Pennsylvania's public-school finance system to help support the next wave of reform in that state. Responsibilities included managing the collection and analysis of extant data on district-level revenues, spending, and cost factors (student needs, price levels, scale of operations and other regional factors); drafting results in a final report and recommendations; and providing testimony to the Pennsylvania legislative Basic Education Funding Commission.

Project Director, Research and Evaluation of Financial Industry Regulatory Authority (FINRA) Investor Protection Campaign and Military Financial Readiness Program Initiatives for FINRA (2014)
Served as director for a project providing research and evaluation of initiatives supported by the FINRA Investor Education Foundation to prevent financial fraud and investment crime. Responsibilities included directing a team of researchers to engage in quantitative and qualitative data collection and analysis on FINRA's Investor Protection Campaign and Military Financial Readiness programs. Research activities included developing and administering interview protocols and survey instruments, analyzing data, and drafting a report of results and recommendations.

Principal Analyst, National Evaluation of Magnet Schools for Institute for Educational Sciences, U.S. Department of Education Institute for Education Sciences (2008–2015)
Serve as primary analyst for an investigation of the relative effectiveness of schools that have received a federal Magnet School Assistance Program (MSAP) grant. Main duties include developing analysis plan, data preparation, and analysis using quasi-experimental techniques (comparative interrupted time series framework).

Project Director, Evaluation of Hawaii's Weighted Student Formula for Hawaii Department of Education (2013)
Served as project director for study that investigated Hawaii's 2006 implementation of a Weighted Student Formula (WSF). The purpose of the study was three-fold: 1) to study to what extent the WSF empowered principals and school communities with greater decision-making authority over the use of funds allocated to the school; 2) to evaluate whether Hawaii has achieved its WSF goal of streamlining the allocation of resources to schools; and, 3) to examine if the WSF increased transparency and understanding of how resources are allocated to school sites and the equity with which resources are allocated. In addition to providing the conceptual leadership and managing the day-to-day work of the study, my duties involved overseeing the data collection, the methodological development of statistical models used, and drafting report and final recommendations.

Project Director, Study of a New Method of Funding for Public Schools in Nevada for Nevada Legislative Counsel Bureau (2012)
Directed study that investigates Nevada's existing system of public-school funding and makes recommendations of "best practices" that might be incorporated in order to improve the equity with which resources are allocated according to student and regional needs. In addition to managing the work of three contracting professors and AIR staff, my duties involved overseeing the data collection, the methodological development of statistical models and corresponding tool used to simulate district funding allocations, and drafting report and final recommendations.

Quantitative Consultant, Consultation on Restructured Teacher Professional Development and Talent Management Teacher Incentive for Naperville Community School District Unit 203 (2012)
Develop financial analysis tools that allow district-level users to define professional development units and overlay uptake of these units onto a new salary structure including a simulator that accurately calculates the costs of different assumed scenarios over future years.

Project Director, Developing an Alternative Cost-Adjusted Poverty Measure for Regional Education Lab-Midwest (2011)
Directed study that developed cost-adjusted measures of poverty and evaluated how use of the measures would change the incidence of student poverty and Title I funding allocations across seven Midwestern states. Duties involved overseeing the data collection, methodological development of alternative measures of poverty that take into account regional variations in cost of living across labor markets, and performing an analysis of applying these measures across districts in the seven Midwest region states.

Project Director, Title I Comparability Study for Regional Education Lab-West (2011)
Directed a comparative resource allocation analysis of Title I versus non-Title I schools in three California districts (Los Angeles, Pasadena, and Twin Rivers Unified School Districts). Duties included developing the methodological framework and analysis plan, overseeing the analysis and design of a software tool to evaluate comparability of state/local expenditures between Title I/non-Title schools, and drafting the final report.

Director of Research, Strategic School Funding for Results for Hewlett and Ford Foundations and U.S. Department of Education Institute for Educational Sciences (IES) (2009–2013)
Provide directional leadership and analytical support for an evaluation of the current resource allocation across schools in three California districts and development of weighted student funding systems to promote more equitable distribution of resources.

Project Director, Rural Resource Allocation Study for Regional Education Lab - West (2009–2010)
Provided directional leadership and analytical support to a comparative study investigating patterns of educational resource allocation in rural versus nonrural school districts in the western states. Duties included overseeing day-to-day operations of

project, design of analytical framework (use of multivariate regression analysis to identify characteristics that explain variation in resource allocation), developing methods for data cleaning and creation, report writing, and dissemination of results.

Principal Analyst, Gaining Ground in the Middle Grades: Why Some Schools Do Better and Improving Middle Grades Math Performance: A Closer Look at District and School Policies and Practices, Course Placements, and Student Outcomes in California for EdSource (2009–2011)
Served as primary analyst for an investigation of educational practices conducive to student achievement in California schools serving middle-grade students. Main duties included manipulation and reduction of primary survey data using factor analysis techniques and performing multivariate regression analysis to identify schooling practices conducive to academic achievement of middle-grade students.

Principal Analyst, Understanding the Implementation of Weighted Student Funding in Two California School Districts for Hewlett Foundation (2007–2009)
Evaluated the resource equity implications of district implementation of weighted-student funding (WSF) systems in Oakland and San Francisco Unified School Districts. Duties entailed designing research plan to investigate how school versus district discretion and funding equity across schools changed after implementation of WSF systems, data collection, analysis, and report drafting.

Project Director, An Independent Comprehensive Study of the New Mexico Public School Funding Formula for New Mexico Legislative Council Service (2006–2009)
Conducted study designed to estimate the cost of providing a sufficient education to all public-school students in New Mexico by utilizing elements of the three primary costing-out methodologies (professional judgment, expert/evidence-based, and successful schools). The hybrid model developed by AIR was built upon the New York Adequacy Study and Getting Down to Facts study conducted in California. Main duties included overseeing the day-to-day project operations, developing a resource cost model, managing collection of primary and extant data activities, designing and conducting quantitative analysis, drafting results, and working with client to translate findings into actionable policy and draft legislation.

Project Director, Comprehensive High School Reform Resource Allocation Study for Bill and Melinda Gates Foundation (2005–2008)
Investigation of the cost of successfully implementing and maintaining selected mainstream comprehensive high-school reform models. The study obtained resource allocation data from a purposive sample of high schools that successfully implemented CHSR models along with similar information on high schools that matched the CHSR schools along several dimensions, but offered traditional programs (using propensity score matching methods). Main duties included managing day-to-day project operations, developing study plan, managing site recruitment and data collection, conducting analysis, and reporting results.

Principal Analyst, Efficiency and Adequacy in California School Finance: A Professional Judgment Approach for Stanford University (2005–2006)
Performed analysis of the cost providing an adequate education in the state of California. Main duties included development and application of a resource cost model, facilitating collection of primary data in workshop setting with professional educators, collection and processing of extant data, quantitative analysis, and reporting findings.

Principal Analyst, Similar Students, Different Results: Why Do Some Schools Do Better? A Large-Scale Survey of California Elementary Schools Serving Low-Income Students and Similar English Learner Students, Different Results: Why Do Some Schools Do Better? for EdSource (2004–2007)
Investigated the educational practices of California elementary schools that serve low socioeconomic status and English learner student populations. Main duties included manipulation and reduction of primary survey data using factor analysis techniques and performing multivariate regression analysis to identify schooling practices conducive to academic achievement of elementary-grade students.

Deputy Project Director, The New York Adequacy Study: Determining the Cost of Providing All Children in New York an Adequate Education for Campaign for Fiscal Equity (2002–2004)
Conducted an in-depth investigation the costs of providing an adequate education in the state of New York. Main duties included overseeing the day-to-day operations of the project, development of resource cost model for collecting primary data from professional educators, collecting extant data, designing and conducting quantitative analysis, and drafting results.

Employment History

2002–Present	Research Scientist, Senior Research Scientist, and Principal Research Economist, AIR
1995–2002	Economics Researcher, University of Amsterdam, Amsterdam, The Netherlands
1999–2001	Information Architect, Information Innovation BV, Amsterdam, The Netherlands
1993–1994	Research/Teaching/Graduate Assistant, San Francisco State University
1993–1994	Intern, DRI/McGraw-Hill, Inc.
1991	Lab Consultant, Social Science Instructional Lab, University of Oregon
1984–1987	Administrative Assistant, Stanford University School of Education

Publications

Baker, B. and Levin, J. (2019). Estimating the Real Cost of Community College. In Kahlenberg, R. (Ed.), Restoring the American Dream: Providing Community Colleges with the Resources They Need. New York, NY: Century Foundation Press.

Chambers, J. and Levin, J. (2014). Adequacy: Professional Judgment. In Brewer, D. and Picus, L. (Eds.), International Encyclopedia of Education Economics and Finance. Thousand Oaks, CA: Sage Publications.

Baker, B., Taylor, L., Levin, J., Chambers, J., and Blankenship, C. (2013). Adjusted Poverty Measures and the Distribution of Title I Aid: Does Title I Really Make the Rich States Richer? *Education Finance and Policy*, 8(3), pp. 394-417.

Chambers, J., Levin, J., and Shambaugh, L. (2010). Exploring weighted student formulas as a policy for improving equity for distributing resources to schools: A case study of two California school districts. *Economics of Education Review, 29*(2), 283–300.

Chambers, J., Brown, J., Levin, J., Jubb, S., Harper, D., Tolleson, R., and Manship, K. (March 2010). Strategic School Funding for Improved Student Achievement. *School Business Affairs.*

Hebbler, K., Levin, J., Perez, M., Lam, I., and Chambers, J. (2009). Expenditures for early intervention services. *Infants and Young Children*, *22*(2), 76–86.

Chambers, J. and Levin, J. (2006). Funding California schools, Part II: Resource adequacy and efficiency. In H. Hatami (Ed.), *Crucial issues in California education 2006* .Berkeley, CA: University of California and Stanford University, Policy Analysis for California Education.

Chambers, J., Levin, J., and Parrish, T. (2006). Examining the relationship between educational outcomes and gaps in funding: An extension of the New York adequacy study. *Peabody Journal of Education*, *81*(2), 1–32.

Chambers, J., Levin, J., Parrish, T., and Esra, P. (2005). Educational adequacy in New York: A costing-out study. *School Business Affairs, 71*(9), 16–19.

Dobbelsteen, S., Levin, J., and Oosterbeek, H. (2002). The causal effect of class size on scholastic achievement: Distinguishing the pure class size effect from the effect of changes in class composition. *Oxford Bulletin of Economics and Statistics, 64,* 17–38.

Levin, J. (2002). For whom the reductions count: A quantile regression analysis of the effect of class size and peer effects on scholastic achievement. In B. Fitzenberger (Ed.), Economic Applications of Quantile Regression. Heidelberg, Germany: Physica-Verlag Company.

Levin, J. (2001). For whom the reductions count: A quantile regression analysis of the effect of class size and peer effects on scholastic achievement, *Empirical Economics, 26,* 221–246.

Levin, J. and Plug, E. (1999). Instrumenting education and the returns to schooling in the Netherlands. *Labour Economics, 6,* 521–534.

Levin, J. with Dobbelsteen, S., and Oosterbeek, H. (1999). Waarom klassenverkleining niet helpt. *Economisch Statistische Berichten (Economic Statistical Messages), nr. 4197*, 250–253.

Professional Reports, Working Papers, and Unpublished Works

Kolbe, T., Baker, B., Atchison, D. and Levin, J. (2019). *Pupil Weighting Factors Report*. Burlington, VT: University of Vermont.

Levin, J., Carbuccia-Abbott, M., Adelman-Sil, E. and Danks, A. (2019). *Kentucky Targeted Intervention Program Cost Study*. San Mateo, CA: American Institutes for Research.

Levin, J., Hu, L. and Danks, A. (2019). *Safe Public Spaces in Schools Program (SPSSP) – Cost Study Report*. San Mateo, CA: American Institutes for Research.

Levin, J., Manship, K., Hurlburt, S., Atchison, D., Jain, V., Cinque, A and Hu, L. (2019). *Districts' Use of Weighted Student Funding Systems to Increase School Autonomy and Equity: Findings from a National Study*. Washington, D.C.: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Atchison, D., Levin, J., and Brodziak, I. (2018). *Study of Spending in Public Charter and Traditional Schools in California*. San Mateo, CA: American Institutes for Research.

Levin, J., Brodziak, I., Atchison, D., Manship, K., Arellanes, M., and Hu, L. (2018). *What Does It Cost to Educate California's Students? A Professional Judgment Approach*. Stanford, CA: Stanford University.

LeFloch, K., Levin, J., Atchison, D., Tannenbaum, C., Hurlburt, S. and Manship, K., (2018). *Study of Title I Schoolwide and Targeted Assistance Programs: Final Report*. Washington, D.C.: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Levin, J. (2018). *Review of Kansas Education Cost Studies*. San Mateo, CA: American Institutes for Research.

Levin, J. (2018). *Review of Kansas Education Cost Studies – Second Report*. San Mateo, CA: American Institutes for Research.

Miller, T., Kosiewicz, H., Tanenbaum, C., Atchison, D., Knight, D., Ratway, B., Delhommer, S., & Levin, J. (2018). *Dual Credit Education Programs in Texas*. Washington, DC: American Institutes for Research.

Levin, J., Manship, K., Atchison, D., and Boyle, A., (2017). *Exploring the Quality of School-Level Expenditure Data: Practices and Lessons Learned in Nine Sites*. Washington, D.C.: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Levin, J., Brodziak de los Reyes, I., Berg-Jacobson, A., Rein, E., Vontsolos, E., Chambers, J., Gnedko-Berry, N., and Borman, T. (2017). *Network to Transform Teaching Cost Study: A Comprehensive Review of Site-Level Costs*. San Mateo, CA: American Institutes for Research.

Levin, J., Baker, B., Atchison, D., Brodziak, I., Boyle, A., Hall, A., and Becker, J. (2016). *Study of Funding Provided to Public Schools and Public Charter Schools in Maryland*. San Mateo, CA: American Institutes for Research.

Levin, J., Berg-Jacobson, A., Atchison, D., Lee, K., and Vontsolos, E. (2015). *Massachusetts Study of Teacher Supply and Demand: Trends and Projections.* San Mateo, CA: American Institutes for Research.

Betts, J., Kitmitto, S., Levin, J., Bos, J., and Eaton, M. (2015). *What Happens When Schools Become Magnet Schools? A Longitudinal Study of Diversity and Achievement*. San Mateo, CA: American Institutes for Research.

Berg-Jacobson, A. and Levin, J. (2015). *Oklahoma Study of Educator Supply and Demand: Trends and Projections.* San Mateo, CA: American Institutes for Research.

Baker, B. and Levin, J. (2014). *Educational Equity, Adequacy, and Equal Opportunity in the Commonwealth: An Evaluation of Pennsylvania's School Finance System*. San Mateo, CA: American Institutes for Research.

Levin, J., Chambers, J., Epstein, D., Mills, N., Archer, M., Lane, K., and Wang, A. (2013). *Evaluation of Hawaii's Weighted Student Formula*. San Mateo, CA: American Institutes for Research.

Chambers, J., Levin, J., Estrada, J., Epstein, D., Mills, N., Wang, A., Jubb, S., Vargo, M., Hollis, J., Brown, B., Ensign, V. and Quealy, C. (2013). *Strategic School Funding for Results: A Model to Promote Equity, Autonomy, Transparency, and Accountability in Local Public Schools - Final Report*. San Mateo, CA: American Institutes for Research.

Chambers, J., Levin, J., Verstegen, D., Jordan, T., Baker, B., and Wang, A. (2012). *Study of a New Method of Funding for Public Schools in Nevada*. San Mateo, CA: American Institutes for Research.

Haxton, C., Brodziak, I., Chambers, J., Levin, J., and Cruz, L. (2012). *A Case Study of Title I Comparability in Three California School Districts*. San Mateo, CA: American Institutes for Research.

Stecher, B., Garet, M.S., Hamilton, L.S., Holtzman, D., Engberg, J. Chambers, J., McCombs, J., and Levin, J. (2012). *Interim report on the evaluation of the intensive partnership for effective teaching, 2010-11*. PM-3977-BMGF. Santa Monica: RAND.

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Williams, T.; Haertel, E.; Kirst, M.W., Rosin, M., Perry, M., Levin, J., and Webman, B. (2011). *Improving Middle Grades Math Performance: A closer look at district and school policies and practices, course placements, and student outcomes in California.* Mountain View, CA: EdSource.

Williams, T., Kirst, M. W., Haertel, E., Rosin, M., Perry, M., Levin, J., Webman, B., Wilson, K., Payne, R., and Woodward, K. (2010). *Gaining ground in the middle grades: Why some schools do better*. Mountain View, CA: EdSource.

Somers, M.-A., Corrin, W., Sepanik, S., Salinger T., Levin, J., and Zmach, C. (2010). *The Enhanced Reading Opportunities Study Final Report: The Impact of Supplemental Literacy Courses for Struggling Ninth-Grade Readers* (NCEE 2010-4021). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Betts, J., Levin, J., Miranda, A., Christenson, B., Eaton, M. and Bos, H. (2010) An Evaluation of Alternative Matching Techniques for Use in Comparative Interrupted Time Series Analyses: An Application to Elementary Education. Unpublished manuscript. San Mateo, CA: American Institutes for Research.

Chambers, J. and Levin, J. (2009). *Determining the cost of providing an adequate education for all students.* Washington, DC: National Education Association.

Levin, J., Manship, K. and Chambers, J. (2009). *Analysis of Funding Shortfall and Outcomes in New Mexico Public School Districts*. Report Brief Prepared for New Mexico Legislative Council Service.

Chambers, J., Shambaugh, L., Levin, J., Muraki, M., and Poland, L. (2008). *A Tale of Two Districts: A Comparative Study of Student-Based Funding and Decentralized Decision Making in San Francisco and Oakland Unified School Districts.* Palo Alto, CA: American Institutes for Research.

Chambers, J., Levin, J., Delancey, D., and Manship, K. (2008). *An independent comprehensive study of the New Mexico public school funding formula: Volume 1—Final report*. Palo Alto, CA: American Institutes for Research.

Chambers, J., Levin, J., Delancey, D., and Manship, K. (2008). *An independent comprehensive study of the New Mexico public school funding formula: Volume 2—Technical appendices*. Palo Alto, CA: American Institutes for Research.

Levin, J., Chambers, J., Stapleton, J., DeLancey, D., and Segarra, M. (2008). *Comprehensive high school reform resource allocation study*. Palo Alto, CA: American Institutes for Research.

Williams, T., Hakuta, K., Haertel, E., Kirst, M., Levin, J., Brazil, N., and Oregon, I. (2007). *Similar English learner students, different results: Why do some schools do better?* Mountain View, CA: EdSource.

Chambers, J., Levin, J., and DeLancey, D. (2006). *Efficiency and adequacy in California school finance: A professional judgment approach.* Palo Alto, CA: American Institutes for Research.

Harr, J., Parrish, T., Chambers, J., Levin, J., and Segarra, M. (2006). *Considering Special Education Adequacy in California.* Palo Alto, CA: American Institutes for Research.

Levin, J. and Haertel, E. (2006) *Elementary School Curriculum Program and API: A More Detailed Examination.* Mountain View, CA: EdSource.

Williams, T., Kirst, M., Haertel, E., Perry, M., Levin, J., and Reardon, S. (2005). *Similar students, different results: Why do some schools do better? A large-scale survey of California elementary schools serving low-income students*. Mountain View, CA: EdSource.

Levin, J. (2004). *Differences in educational production between Dutch public and religious schools.* National Center for the Study of Privatization in Education Occasional Paper 93. New York: Teacher's College, Columbia University.

Levin, J. (2004). *MALDEF adequacy study: A preliminary determination of the costs of providing an adequate education in the Edgewood Intervenor districts.* American Institutes for Research report prepared for the Mexican American Legal Defense and Education Fund.

Chambers, J., Parrish, T., Levin, J., Smith, J., Guthrie, J., Seder, R., and Taylor, L. (2004). *The New York adequacy study: Determining the cost of providing all children in New York an adequate education.* Palo Alto, CA: American Institutes for Research.

Levin, J., Perez, M., Lam, I., Chambers, J., and Hebbler, K. (2004). *National Early Intervention Longitudinal Study (NEILS) expenditure analysis.* American Institutes for Research report prepared in cooperation with Stanford Research International for US Department of Education Office of Special Education Programs (OSEP).

Levin, J. and Plug, E. (1998). Instrumenting education and the returns to schooling in the Netherlands. European Commission Targeted Socio-Economic Research (TSER) Working Paper 12/98.

Levin, J. (1998). *When education doesn't pay? Returns to intermediate vocational education in the Netherlands*. Max Goote Foundation for Vocational Education Report No. 44.

Professional Presentations

Levin, J. (2019, November). *What Does It Cost to Educate California's Students? Examining the Relationship Between Educational Outcomes and Funding Gaps in California*. Presented at the annual meeting of the California Educational Research Association, Sacramento, CA.

Levin, J. (2019, November). *Not Enough Adults to Go Around: Underfunded Schools Provide Less Support for Kids*. Presented in webinar on funding adequacy and equity of California public schools hosted by Children Now.

Levin, J. (2019, November). *What Does It Cost to Educate California's Students? A Professional Judgment Approach*. Presented at the annual meeting of the Association for Public Policy Analysis and Management, Denver, CO.

Levin, J. (2019, October). *Districts' Use of Weighted Student Funding Systems to Increase School Autonomy and Equity: Findings from a National Study*. Presented at the Allovue Future of Education Finance Summit, Baltimore, MD.

Levin, J. (2019, April). *What Does It Cost to Educate California's Students? A Professional Judgment Approach*. Presented at Policy Analysis for California Education (PACE) seminar, Sacramento, CO.

Levin, J. (2019, April). *Cutting Through the Clutter of School Finance Data and Research*. Panel presentation on best practices in education finance research, Washington, DC.

Levin, J. (2019, March). Senate Education Subcommittee presentation of California Adequacy Study results at California State Capitol, Sacramento, CA.

Levin, J. (2019, March). *Do Public Charter Schools Spend More Than Traditional Public Schools in California?* Presented at the annual meeting of the Association for Education Finance and Policy, Kansas City, MO.

Levin, J. (2019, March). *What's Not the Matter with Kansas?* Panel discussion on Kansas school finance at the annual meeting of the Association for Education Finance and Policy, Kansas City, MO.

Levin, J. (2019, March). *Convening on Improving the Use of Evidence From School Finance Research*. Discussion on leveraging school finance research findings hosted by W.T. Grant Foundation, New York, NY.

Levin, J. (2018, November). *Decision Making and Resource Allocation in California Title I Schools*. Presented at the annual meeting of the California Educational Research Association, Anaheim, CA.

Levin, J. (2018, October). *What Does It Cost to Educate California's Students? A Professional Judgment Approach*. Presented at Getting Down to Facts II Conference, Sacramento, CA.

Levin, J. (2018, October). *Study of Spending in Public Charter and Traditional Schools in Two California Districts*. Presented at Getting Down to Facts II Conference, Sacramento, CA.

Levin, J. (2018, October). *Successes and Challenges Implementing WSF Systems: Perspectives from Research, Policy, and Practice*. Panel discussion on district implementation of weighted student funding systems at the Allovue Future of Education Finance Summit, Baltimore, MD.

Levin, J. (2018, October). *Getting Down to Facts II and the Role of Community Voices*. Panel discussion on issues of finance, teacher diversity and equity in California public schools at the California Advancement Project Birth to Twelfth Grade Water Cooler Conference, Sacramento, CA.

Levin, J. (2018, September). Webinar discussion on finding from Getting Down to Facts II studies hosted by the Opportunity Institute.

Levin, J. (2018, September). *What Does It Cost to Educate California's Students? A Professional Judgment Approach*. Presented to EdSource Board of Directors, Oakland, CA.

Levin, J. (2018, March). *Study of Funding Provided to Public Schools and Public Charter Schools in Maryland*. Presented at the annual meeting of the Association for Education Finance and Policy, Portland, OR.

Levin, J. (2017, November). *Network to Transform Teaching Cost Study: A Comprehensive Review of Site-Level Costs*. Presented at the annual meeting of the Association for Public Policy Analysis and Management, Chicago, IL.

Levin, J. (2017, April). *Teacher Shortages, Fact or Fiction? New Perspectives on Tracking Trends in the Teacher Workforce*. Presented at the annual meeting of the American Education Research Association, San Antonio, TX.

Levin, J. (2017, March). *Exploring the Quality of School-Level Expenditure Data: Practices and Lessons Learned in Nine Sites*. Presented at the annual meeting of the Association for Education Finance and Policy, Washington, D.C.

Levin, J. (2016, March). *Improving School Finance Equity through Cost Adjusted Poverty Measures*. Presented at the annual meeting of the Association for Education Finance and Policy, Denver, CO.

Levin, J. (2016, March). *Oklahoma Study of Educator Supply and Demand.* Presented at the annual meeting of the Association for Education Finance and Policy, Denver, CO.

Levin, J. (2016, January). *A National Perspective of Teacher Shortages.* Presented at the Learning Policy Institute convening California's Emerging Teacher Shortage: New Evidence and Policy Responses, Sacramento, CA.

Levin, J. (2015, March). *Feasibility Study for Improving the Quality of School-Level Expenditure Data*. Presented at the annual meeting of the Association for Education Finance and Policy, Washington, D.C.

Levin, J. (2014, March). *Evaluation of Hawaii's weighted student formula.* Presented at the annual meeting of the Association for Education Finance and Policy, San Antonio, TX.

Levin, J. (2013, March). *Strategic school funding for results.* Presented at the annual meeting of the Association for Education Finance and Policy, New Orleans, LA.

Levin, J. (2013, March). *Study of a new method of funding for Nevada public schools.* Presented at the annual meeting of the Association for Education Finance and Policy, New Orleans, LA.

Levin, J. (2012, April). *A case study of the school spending and the Title I comparability provisions.* Presented at the annual meeting of the American Educational Research Association, Vancouver, British Columbia, Canada.

Levin, J. (2012, March). *A case study of the school spending and the Title I comparability provisions.* Presented at the annual meeting of Association for Education Finance and Policy, Boston, MA.

Levin, J. (2012, April). *Improving the metric for student poverty: Methodology, empirical estimation, and policy implications.* Presented at the annual meeting of the American Educational Research Association, Vancouver, British Columbia, Canada.

Levin, J. (2012, March). *Improving the metric for student poverty: Methodology, empirical estimation, and policy implications.* Presented at the annual meeting of the Association for Education Finance and Policy, Boston, MA.

Levin, J. (2011, November). *Strategic school funding for results.* Presented at the Policy Analysis for California Education Seminar for Education Policymakers and Scholars, Sacramento, CA.

Levin, J. (2011, October). *Approaches to adequately and equitably funding our schools.* Presented at the Colorado Children's Association Meeting, Denver, CO.

Levin, J. (2011, March). *Strategic school funding for results.* Presented at the annual meeting of the Association for Education Finance and Policy, Seattle, WA.

Levin, J. (2009, October). *Analysis of spending and staffing patterns in rural and non-rural western region school districts.* Presented at the annual meeting of the National Rural Education Association, Cincinnati, OH.

Levin, J. (2009, April). *Understanding student-based funding policies in California school districts.* Presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Levin, J. (2009, March). *Understanding student-based funding policies in California school districts.* Presented at the annual meeting of the American Education Finance Association, Nashville, TN.

Levin, J. (2009, February). *Understanding student-based funding policies in California school districts.* Presented at the Policy Analysis for California Education Seminar for Education Policymakers and Scholars, Sacramento, CA.

Levin, J. (2008, June). *Calculating sufficient funding for New Mexico.* Presented to the New Mexico Legislative Finance Committee, Santa Fe, New Mexico.

Levin, J. (2008, January). *Determining educational sufficiency in New Mexico.* Presented to New Mexico State Legislature, Santa Fe, NM.

Levin, J. (2008, March). *Determining educational sufficiency in New Mexico.* Presented at the annual meeting of the American Educational Research Association, New York, NY.

Levin, J. (2007, March). *The effects of comprehensive high school reform (CHSR) on the allocation of educational resources.* Presented at the annual meeting of the American Education Finance Association, Baltimore, MD.

Levin, J. (2006, November). *Policy Analysis for California Education (PACE) crucial issues: Overview of chapter on education finance.* Presented at the Policy Analysis for California Education Seminar for Education Policymakers and Scholars, Sacramento, CA.

Levin, J. (2006, April). *Similar students, different results: Why do some schools do better? A large-scale survey of California elementary schools serving low-income students*. Presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Levin, J. (2006, March). *Differences in educational production between Dutch public and religious schools.* Presented at the Conference on Educational Vouchers in Comparative Perspective, Princeton Institute for International and Regional Studies, Princeton University, NJ.

Levin, J. (2006, March). *The effects of comprehensive high school reform (CHSR) on the allocation of educational resources.* Presented at the annual meeting of the American Education Finance Association in Denver, CO.

Levin, J. (2005, April). *The New York Adequacy Study: The cost of providing New York children an adequate education.* Presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.

Levin, J. (2005, March). *Measuring the relationship between school finance adequacy and state outcome standards: A case study of New York and Texas.* Presented at the annual meeting of the American Education Finance Association, Louisville, KY.

Levin, J. (2004, March). *National Early Intervention Longitudinal Study (NEILS) expenditure report.* Presented at the annual meeting of the American Education Finance Association, Salt Lake City, UT.

Levin, J. (2003, November). *National Early Intervention Longitudinal Study (NEILS) expenditure report.* Presented at the annual meeting of the American Public Health Association, San Francisco, CA.

Levin, J. (2003, October). *National Early Intervention Longitudinal Study (NEILS) expenditure report.* Presented at the annual conference of the Division for Early Childhood, Washington, DC.

Levin, J. (2003, March). *For whom the reductions count: A quantile regression analysis of class size and peer effects on scholastic achievement.* Presented at the annual meeting of the American Education Finance Association, Orlando, FL.

Levin, J. (2002, June). *Do Dutch Catholic schools really perform better?* Presented at the annual meeting of the European Society for Population Economics, Bilbao, Spain.

Levin, J. (2002, May). *Do Dutch Catholic schools really perform better?* Presented at the ZEW (Zentrum für Europäische Wirtschaftsforschung) Summer Workshop on Human Capital at Center for European Economic Research, Mannheim, Germany.

Levin, J. (2000, June). *For whom the reductions count: A quantile regression analysis of class size and peer effects on scholastic achievement.* Presented at first world meeting of the Society of Labor Economists/European Association of Labor Economists, Milan, Italy.

Levin, J. (2000, June). *For whom the reductions count: A quantile regression analysis of class size and peer effects on scholastic achievement.* Presented at the "Economic Applications of Quantile Regression" International Conference, Konstanz, Germany.

Levin, J. (1998, June). *Instrumenting education and the returns to schooling in the Netherlands.* Presented at the annual meeting of the European Society for Population Economics, Amsterdam, Netherlands.

Levin, J. (1997, October). *Instrumenting education and the returns to schooling in the Netherlands.* Presented at the "Rates of Return to Education: New Evidence" Workshop at Tinbergen Institute, Amsterdam, Netherlands.

Levin, J. (1996, September). *Returns to intermediate vocational education in The Netherlands.* Presented at the annual meeting of the European Association of Labor Economists, Chania, Crete, Greece.

Additional Professional Activities

Member (2018-Present) – Technical Design Group, California Department of Education.

Member (2017-Present) – California Practitioner Advisory Group, California Department of Education.

Member (2017-Present) – Board of Directors, San Mateo County School Boards Association.

Trustee (2016-Present) – School Board, Pacifica School District, Pacifica, California.

Member (2016-Present) – Advisory Board, EdBuild.

Member (2014) – Nevada Task Force on K-12 Public Education Funding Technical Advisory Committee.

Expert Panelist (2012) - Return on Investment Task Force, Communities in Schools.

Member (2011-2012) - Advisory Board, Family Committee and Research Committee, San Francisco State University Children's Campus.

Journal Referee (Ongoing) – *Economics of Education Review*, *Education Finance and Policy*, *Educational Policy*, *Empirical Economics*, and *Journal of Research on Educational Effectiveness*.

Professional Affiliations

American Educational Research Association
Association of Education Finance and Policy
Association of Public Policy Analysis and Management
California School Boards Association
San Mateo County School Boards Association

Drew Atchison

Education

EdD	2017, The George Washington University, Education Policy
MAEd	2009, The College of William and Mary, Secondary Education
BS	2007, The College of William and Mary, Biology

Honors and Awards

Jean Flanigan Outstanding Dissertation Award, Association of Education Finance and Policy, 2018

Vest Graduate Endowment Fellowship, The George Washington University, 2015

Present Position

Senior Researcher, American Institutes for Research (AIR) (2020–Present)
Conduct research on topics related to education finance, federal education policy, school choice, and education technology.

Professional Experience

Task Leader, Study of Pupil Weights in Vermont's Education Funding Formula, AIR (2019)
Worked with professors from the University of Vermont and Rutgers University to conduct a study examining variation in the cost of education across Vermont's schools and school districts for the State of Vermont. The goal of the study was to update the education funding formula to ensure that funding is distributed to schools in a manner that appropriately accounts for the differences in students' needs across schools and districts. Created a tool to simulate how changes to pupil weights would impact tax rates and funding for Vermont's school districts.

Task Leader, Study of Station Rotation (2018–2020)
Led the analysis of quantitative data to examine the implementation and effects of station rotation (an instructional approach where teachers place students into groups, and rotate students through stations, one of which uses instructional technology). The quantitative analysis included teacher surveys, student surveys, and administrative data on student achievement. Also led the writing of a report to disseminate the findings of the study. The study was funded by the Overdeck Family Foundation.

Task Leader, Assessing the Efficacy of Online Credit Recovery on Student Learning and High School Graduation (2018–2020)
Led the cost analysis portion of the project, determining the additional cost of an online learning credit recovery course compared with a traditional teacher-directed credit

recovery course. Developed survey items, teacher log items, and administrator interview questions related to the cost analysis.

Project Director, Study of Funding in Public Charter and Traditional Schools in California, AIR (2018)
Directed a study analyzing and comparing school funding of charter and traditional public schools in California. This included writing the research proposal, developing the analysis plan, recruiting district and charter management organization participants, developing a project timeline, managing the research team, setting up subcontracts with partnering research organizations, collecting and analyzing fiscal data, conducting interviews with leadership at school districts and charter management organizations, and presenting key findings. This project is part of Getting Down to Facts, a series of studies examining K–12 education in California.

Task Leader, What Does It Cost to Education California's Students? A Professional Judgement Approach (2018)
Led the analysis portion of an adequacy study examining the cost of providing an adequate education in California. Duties included determining the analytical methods used in the study, delegating analytical tasks to other team members, conducting portions of the analysis, and reviewing work to ensure quality. Additionally, participated in the writing of the report.

Task Leader, Study of Weighted Student Funding (2017–2019)
Led the quantitative analysis for a national study of weighted student funding. Also, led a site visit to one of the case study districts and conducted interviews with district and school staff. Key duties involved assisting with development of a nationally representative survey examining resource allocation to schools, analysis of survey data, analysis of expenditure data in nine large school district implementing weighted student funding, and writing key sections of the final report.

Task Leader, Texas Dual Credit Study, AIR (2017–2018)
Led the cost component of the Texas Dual Credit Study, examining the cost of providing dual credit for high school students in Texas. This study used an ingredients approach to identify the types of resources used in the provision of dual credit, and who bears the cost for those resources – the community college, the school district, or the student. Managed a team of researchers who recruited community colleges and school districts to participate in the cost component of the study, led regularly occurring client check-ins, conducted interviews with individuals from community colleges and school districts, developed the template for the resource cost model used in the analysis, and reviewed work of other staff involved in the cost analysis portion.

Lead Analyst, Transforming the University of Arkansas: Estimating the Impact of the Walton Family Charitable Support Foundation's 1998 and 2002 Gifts to the University of Arkansas, AIR (2017–2018)
Analyzed data examining the impact of several large gifts to the University of Arkansas by the Walton Family Charitable Support Foundation. Key indicators include enrollment

levels, numbers and types of degrees awarded, competitiveness of the student body, diversity of the student body, quality of faculty, and economic impact. Communicated key findings to the client and helped develop key deliverables.

Lead Analyst, Looking Back to Move Forward: Progress and Opportunity in District of Columbia Public Schools, AIR (2017)
Led the analysis of student level data examining the progress of students in DC Public Schools over the past five years across a number of indicators including student test scores, graduation rates, attendance rates, AP participation and scores, college enrollment and persistence, and student satisfaction. Worked with DC Public School leadership to create a report that met the needs of district leadership and stakeholders.

Lead Quantitative Analyst, Study of Title I Schoolwide and Targeted Assistance Programs, AIR (2016–2018)
Led the analysis of a nationally representative survey of districts and Title I school principals comparing use of Title I funds in schoolwide and targeted assistance Title I programs and how decisions regarding use of funds are made in such schools. Conducted case study visits to three Title I schools in two districts and assisted with conducting interviews with school and district officials. Cleaned and coded qualitative notes for those sites.

Task Leader, Study of Longer-Term Impacts of Early College High Schools, AIR (2016–2019)
Led the benefit-cost analysis portion of a study examining impacts of Early College High Schools six years after expected high school graduation. Calculated the costs of Early Colleges using extant school spending data as well as interviews of Early College coordinators at school districts and colleges. This is a follow-up study of a prior study of Early Colleges conducted by AIR and is funded by IES. Led the writing of a report and journal article on the benefit-cost study.

Lead Quantitative Analyst, Study of Funding Provided to Public Schools and Public Charter Schools in Maryland, AIR (2016)
Led the analysis of quantitative fiscal data examining levels of spending on traditional and charter public schools in the state of Maryland. Participated in all phases of this project, from study design and data collection, to report writing.

Lead Quantitative Analyst, Feasibility Study on Improving the Quality of School-Level Expenditure Data, AIR (2015–2016)
Conducted quantitative analysis examining school-level fiscal data in order to understand the comprehensiveness of the data that is attributed to schools, the consistency of school-level fiscal data provided by study sites to other sources of fiscal data, and the accuracy of expenditures that are linked to schools through allocation formulas rather than tracked directly. Also contributed substantially to the writing of the final report, along with other deliverables.

Quantitative Analyst, Massachusetts Educator Supply and Demand, AIR (2015)
Contributed to refining analytical methods and analyzed quantitative data using various regression models in order to develop predictions of teacher supply and demand for the next 10 years in the state of Massachusetts. Also contributed significantly to the presentation of results and report writing.

Employment History

2020–Present	Senior Researcher, AIR
2016–2020	Researcher, AIR
2017–2019	Professorial Lecturer, The George Washington University
2015–2016	Research Associate, AIR
2012–2015	Research Assistant, The George Washington University
2015	Research and Communications Intern, Digital Promise
2014	Education Pioneer Fellow, DC Office of the State Superintendent of Education
2009–2012	Teacher, District of Columbia Public Schools

Professional Affiliations

American Educational Research Association (AERA)

Association of Education Finance and Policy (AEFP)

Professional Presentations

Atchison, D. (2019, March). *The Costs and Benefits of Early College High Schools.* Presented at the annual conference of the Association of Education Finance and Policy, Kansas City, MO.

Atchison, D. (2017, October). *School Expenditure Data: Equity and Adequacy.* Presented at the South Carolina state conference of the National Association for the Advancement of Colored People (NAACP), Baltimore, MD.

Atchison, D. (2017, July). *School Expenditure Data: Equity and Adequacy.* Presented at the annual conference of the National Association for the Advancement of Colored People (NAACP), Baltimore, MD.

Atchison, D. (2017, March). *The Impact of School Finance Reform on Equity in the State of New York.* Presented at the annual conference of the Association of Education Finance and Policy, Washington, DC.

Selected Publications

Atchison, D. (2020). The impact of priority school designation under ESEA flexibility in New York State. *Journal of Research on Educational Effectiveness, 13*(1), 121-146, DOI: 10.1080/19345747.2019.1679930.

Atchison, D. (2019). Forgotten equity: The promise and subsequent dismantling of education finance reform in New York State. *Education Policy Analysis Archives, 27*(143), 1-32.

Kolbe, T., Baker, B., Atchison, D., & Levin, J. (2019). *Study of Pupil Weights in Vermont's Education Funding Formula.* Burlington, VT: University of Vermont.

Atchison, D., Levin, J., & Butler, A. (2019). *Using ESSA to Improve the Fairness of School Funding.* Washington, DC: American Institutes for Research.

Miller, T., Kosiewicz, H., Tanenbaum, C., Atchison, D., Knight, D., Ratway, B., Delhommer, S., & Levin, J. (2018). *Dual Credit Education Programs in Texas*. Washington, DC: American Institutes for Research.

Atchison, D., Levin, J., & Brodziak de los Reyes, I. (2018). *Study of Spending in Public Charter and Traditional Schools in California.* Washington, DC: American Institutes for Research.

Levin, J., Brodziak de los Reyes, I., Atchison, D., Manship, K., Arellanes, M., & Hu, L. (2018). *What Does It Cost to Educate California's Students? A Professional Judgement Approach.* Palo Alto, CA: Stanford University.

Carlson LeFloch, K., Levin, J., Atchison, D., Tanenbaum, C., Hurlburt, S., Manship., K., & Stullich, S. (2018). *Study of Title I Schoolwide and Targeted Assistance Programs: Final Report*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Atchison, D., Baker, B., Boyle, A., Levin, J., & Manship, K. (2017). *Exploring the Quality of School-Level Expenditure Data: Practices and Lessons Learned in Nine Sites.* Washington, DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Levin, J. Baker, B., Atchison, D. Brodziak, I., Boyle, A., Hall, A., & Becker, J. (2016). *Study of Funding Provided to Public Schools and Public Charter Schools in Maryland.* Washington, DC: American Institutes for Research.

Bruce D. Baker

Professor

Educational Theory, Policy and Administration

Graduate School of Education

Rutgers, The State University of New Jersey

10 Seminary Place

New Brunswick, NJ 08901-1183

bruce.baker@gse.rutgers.edu

educpolicy@gmail.com

Twitter: @schlfinance101

schoolfinance101@wordpress.com

A. EDUCATION

1997, Doctor of Education
Teachers College, Columbia University
Department of Organization and Leadership
Dissertation: *A Comparison of Statistical and Neural Network Models for Forecasting Educational Spending*
Advisor: Craig E. Richards

1989, Master of Arts
University of Connecticut
Department of Educational Psychology
Program in Teaching the Talented
Advisor: Joseph S. Renzulli

1987, Bachelor of Arts
Lafayette College
Biology

B. ACADEMIC APPOINTMENTS

2011 – Present: Rutgers, The State University of New Jersey
Professor I
Educational Theory, Policy and Administration

2008 – Present: Rutgers, The State University of New Jersey
Associate Professor
Educational Theory, Policy and Administration

2002 – 2008: University of Kansas, Lawrence
Associate Professor, Teaching and Leadership
Program in Educational Administration

1997 – 2002: University of Kansas, Lawrence
Assistant Professor, Teaching and Leadership
Program in Educational Administration
Research Associate: Policy Research Institute

1996 - 1997: Teachers College, Columbia University
Instructor, Organization and Leadership
Program in Educational Administration

C. RELATED TEACHING & ADMINISTRATIVE EXPERIENCE

1993 – 1997, The Ethical Culture Fieldston Schools, NY
Instructor of Science
1992 – 1993, Pocantico Hills Central School, NY
Coordinator of Gifted and Talented Programs
1989 – 1992, Mastricola Middle School, NH
Coordinator of Gifted and Talented Programs
1987 – 1988, Randolph-Macon Academy, VA
Instructor of Biology
1994 – 1997, College Gifted Programs, Summer Institute for the Gifted, NJ/PA/NY
Site Director

D. HONORS

2020 Distinguished Research and Practice Award: National Education Finance Academy

2020 Ranked 30th in RHSU Education Week Edu-Scholar Public Influence

2019 Ranked 99th in RHSU Education Week Edu-Scholar Public Influence

2018 Ranked 118th in RHSU Education Week Edu-Scholar Public Influence

2017 Ranked 92nd in RHSU Education Week Edu-Scholar Public Influence.

2016 Ranked 81st in RHSU Education Week Edu-Scholar Public Influence.

2015 Rutgers Graduate School of Education Distinguished Faculty Lecture. Invited by GSE Alumni Association

2015 Ranked 64th in RHSU Education Week Edu-Scholar Public Influence.

2014 Askwith Forum Presenter, *Is School Funding Fair?* Harvard Graduate School of Education

2014 Ranked 64th in RHSU Education Week Edu-Scholar Public Influence.

2013 – AERA Division L Policy Report Award for Baker, B. D., Sciarra, D. G., & Farrie, D. (2010). Is School Funding Fair?: A National Report Card. Education Law Center.

2013 – Ranked 40th in RHSU Education Week Edu-Scholar Public Presence.

2012 – School Finance 101 Blog nominated for Bammy Award, Education Commentators Category, Academy of Education Arts & Sciences, http://www.bammyawards.com/

2011 – Outstanding Faculty Research Award, Rutgers Graduate School of Education Alumni Association

2011 – Journal of Education Finance Scholarly Paper Award, National Education Finance Conference (Co-author, Matthew J. Ramsey)

2010 – Invited Lecturer: Jerry Miner Lecture Series. Maxwell School, Syracuse University. Center for Policy Research. http://www-cpr.maxwell.syr.edu/efap/Jerry_Miner/Lecture_Series.htm

2007 – Present: Appointed Research Fellow, Education Policy Research Unit/Education and the Public Interest Center (EPRU/EPIC)

2001, National Center for Education Statistics/American Education Finance Association

New Scholars Program

1998, National Center for Education Statistics/American Educational Research Association

Institute on Statistics for Policy Analysis

1996, University Council on Educational Administration

Graduate Student Research Seminar

E. SELECTED RECENT EXTERNALLY FUNDED RESEARCH (RECENT GRANTS & CONTRACTS)[38]

2018-19

1. Baker, B.D. (2019-20) Redesigning Federal Aid to Schools. Century Foundation ($45,000)
2. Kolbe, T., Levin, J., Atchison, D., Baker, B. (2019-) Study of Pupil Weights in Vermont's Education Funding Formula. State of Vermont, Agency of Education. ($247,599)
3. Baker, B.D. (2018-2019) Policy Paper: What's Not the Matter with Kansas? Lessons from Kansas for the Future of State School Finance Reform. William T. Grant Foundation. Officers Grant ($35,000)

2017

4. Kahlenberg, R., Baker, B., Levin, J., Carnevale, A., Zuckerman, M., Shireman, R. (2017) Making Community Colleges Engines for Social Mobility: A Century Foundation Working Group on Financial Resources. William T. Grant Foundation ($30k subcontract)
5. Kim, B., Baker, B. (2017) Leveraging School Finance Research to Increase Education Equity and Opportunity for All Students. William T. Grant Foundation ($200,000)

2016

6. Levin, J., Baker, B.D. et al. (2016) Evaluation of "Commensurate Funding" for Maryland Charter Schools. Maryland Department of Education ($36k subcontract)

2015

7. Baker, B.D. (2015-2016) Indicators of Educational Inequality in the U.S. William T. Grant Foundation ($257,039)

2014

8. Baker, B.D., Levin, J. Research to Inform the Development of a Pennsylvania Basic Education Funding Formula. William Penn Foundation ($60k)
9. Levin, J., Chambers, J., Manship, K., Baker, B.D., Goertz, M. Feasibility Study on Improving the Quality of School Level Expenditure Data. Institute for Education Sciences, U.S. Dept. of Education [RFTO No. PEPP130018]

[38] Does not include reports written as expert testimony for litigation or other support (testimony, etc.) for state constitutional or federal litigation.

2013

10. Baker, B.D. Poverty, Children's Health and Public School Funding. With *ChangeLab Solutions* (Oakland, CA) Funded by Robert Wood Johnson Foundation [Grant I.D. 70352] ($20,000)
11. Baker, B.D., Miron, G. Organization for Economic Cooperation and Development. Education Indicators at a Glance. (€5,000)
12. Baker, B.D., Coley, R. Understanding Child Poverty: Implications for Education Policy. Educational Testing Service ($20,000)

2011

13. Baker, B.D., DiCarlo, M. Revisiting the Age Old Question: Does Money Matter in Education? (Shanker Institute, $6000)
14. Baker, B.D., Libby, K., Wiley, K. Evaluating Financial Resources and Equity Implications of *High Flying Charter School Networks.* (National Education Policy Center & Shanker Institute, $6000)
15. Stealth Inequities: Hidden Disparities in State School Finance Systems. Center for American Progress ($17,500). With Sean Corcoran of NYU.
16. Alternative Measures of Poverty. With Jay Chambers & Jesse Levin (American Institutes for Research) and Lori Taylor (Texas A&M University). West & Midwest Regional Labs. (approx. $200k total)

2009

17. Evaluation of Undergraduate Student Degree Completion Pathways and "Cost of Attainment". University of Texas at Austin. Co-Pi with Christopher Morphew, University of Iowa, Scott L. Thomas, Claremont Graduate School & Harrison Keller, University of Texas at Austin.
18. Evaluation of Spending Patterns and Philanthropic Contributions to New York City Charter Schools. Education and the Public Interest Center. $6,000
19. Evaluation of teacher workforce and labor markets in Newark New Jersey. Funded by the Ford Foundation in collaboration with Rutgers University at Newark. Alan Sadovnik, Project Director. ($18k subcontract on $125k grant)
20. Development of an alternative indicator system for evaluating state school funding systems. *Education Law Center of New Jersey & Educational Testing Service.* Funded by the Ford Foundation. ($25k subcontract)
21. Evaluating the principal preparation pipeline for Wisconsin public schools. With Matthew Clifford (Learning Point Associates) and Carolyn Brown (Fordham University). Midwest Regional Education Lab

F. BOOKS

2019

1. Kahlenberg, R.D. et al. (2019) Restoring the American Dream: Providing Community Colleges with the Resources they Need. The report of the Century Foundation Working Group on Community College Financial Resources. New York: Century Foundation

2018

2. Baker, B.D. (2018 - October) Educational Inequality and School Finance: Why Money Matters for America's Students. Harvard Education Press.

2008

3. Baker, B.D., Green, P.C., Richards, C.E. (2008) *Financing Education Systems*. Upper Saddle River, NJ: Merrill/Prentice-Hall, 448 pages

2004

4. Baker, B.D., Richards, C.E. (2004) *The Ecology of Educational Systems: Data and Models for Improvisational Leading and Learning*. Upper Saddle River, NJ: Merrill/Prentice-Hall. 280 pages.

G. JOURNAL[39] & LAW REVIEW[40] ARTICLES

[i] invited, [lr] law review

2020

1. Baker. B.D., Cotto, R. (2020) School Funding's Latinx Second Cities Problem. *Phi Delta Kappan*

2019

2. Baker, B.D., Chingos, M. (eds). Causes and Consequences of School Funding Equity and Adequacy: Using New Longitudinal Data Sources to Inform Policy. *Special Issue: AERA Open*

2018

3. Kolbe, T., & Baker, B. D. (2018). Fiscal Equity and America's Community Colleges. *The Journal of Higher Education,* 1-39.

2017

4. Green, P. C., Baker, B. D., & Oluwole, J. (2017). Are Charter Schools the Second Coming of Enron? An Examination of the Gatekeepers That Protect against Dangerous Related-Party Transactions in the Charter School Sector. *Indiana Law Journal, Volume 93*
5. Weber, M., Baker, B.D. (2017) Do For-Profit Managers Spend Less on Schools and Instruction? A national analysis of charter school staffing expenditures. *Educational Policy*

2016

6. Baker, B.D. (2016) School Finance and the Distribution of Equal Educational Opportunity in the Post-Recession U.S. *Journal of Social Issues 72 (4), 629-655*
7. Baker, B.D., Weber, M. (2016) Beyond the Echo-Chamber: State Investments and Student Outcomes in U.S. Elementary and Secondary Education. *Journal of Education Finance* 42 (1) 1-27
8. Green, P.C., Baker, B.D., Oluwole, J., Mead, J.F. (2016) Are We Heading Toward a Charter School 'Bubble'? Lessons from the Subprime Mortgage Crisis. *University of Richmond Law Review* 50 (3) 783-808.
9. Baker, B. D., & Weber, M. (2016). State school finance inequities and the limits of pursuing teacher equity through departmental regulation. *Education Policy Analysis Archives*, 24(47). http://dx.doi.org/10.14507/epaa.v24.2230

2015

10. Green, P.C., Baker, B.D., Oluwole, J. (2015) The Legal Status of Charter Schools in State Statutory Law. *University of Massachusetts Law Review*
11. Baker, B.D., Libby, K., Wiley, K. (2015) Charter School Expansion & Within District Equity: Confluence or Conflict? *Education Finance and Policy*

[39] Peer reviewed
[40] Editorial board reviewed, competitively accepted

2014

12. Baker, B.D. (2014) America's Most Financially Disadvantaged Local Public School Districts. *Journal of School Business Management.* 26 (2) 10-19*[i]*
13. Baker, B. D. (2014). Evaluating the recession's impact on equity & adequacy of state school finance systems. Education Policy Analysis Archives, 22 (91) Retrieved [date], from http://epaa.asu.edu/ojs/article/view/1590
14. Green, P.C., Baker, B.D., Oluwole, J. (2014) How the Kansas Courts Have Permitted and May Remedy Racial Funding Disparities in the Aftermath of Brown. *Washburn Law Journal*
15. Green, P.C., Baker, B.C., Oluwole, J. (2014) Having it Both Ways: How Charter Schools try to Obtain Funding of Public Schools and the Autonomy of Private Schools. *Emory Law Journal 63 (2) 303-338*

2013

16. Baker, B.D., Taylor, L., Chambers, J., Levin, J., Blankenship, C. (2013) Adjusted Poverty Measures and the Distribution of Title I Aid: Does Title I Really Make the Rich States Richer? *Education Finance and Policy 8(3) 394-417*
17. Baker, B.D., Green, P.C., Oluwole, J. (2013) The legal consequences of mandating high stakes decisions based on low quality information: Teacher Evaluation in the Race-to-the-Top Era. *Education Policy Analysis Archives*

2012

18. Baker, B.D., Welner, K.G. (2012) Evidence and Rigor: Scrutinizing the Rhetorical Embrace of Evidence-based Decision-making. *Educational Researcher* 41 (3) 98-101
19. Green, P.C., Baker, B.D., Oluwole, J. (2012) Legal implications of dismissing teachers on the basis of value-added measures based on student test scores. *BYU Education and Law Journal* 2012 (1)
20. Baker, B.D. (2012) Re-arranging deck chairs in Dallas: Contextual constraints on within district resource allocation in large urban Texas school districts. *Journal of Education Finance* 37 (3) 287-315

2011

21. Baker, B.D. (2011) Exploring the Sensitivity of Education Costs to Racial Composition of Missouri School Districts. *Peabody Journal of Education (special issue)*
22. Baker, B.D., Welner, K. (2011) School Finance and Courts: Does Reform Matter, and How Can We Tell? *Teachers College Record* 113 (11) p. –
23. Fuller, E., Young, M.D., Baker, B.D. (2011) Do Principal Preparation Programs Influence Student Achievement through the Building of Teacher Team Qualifications by the Principal? An Exploratory Analysis. *Educational Administration Quarterly* 46 (5)

2010

24. Baker, B.D., Punswick, E., Belt, C. (2010) School Leadership Stability, Principal Moves, and Departures: Evidence From Missouri *Educational Administration Quarterly* 46 (4) 523-55
25. Baker, B.D., Welner, K.G. (2010) Premature celebrations: The persistence of inter-district funding disparities. *Education Policy Analysis Archives.* http://epaa.asu.edu/ojs/article/viewFile/718/831
26. Baker, B.D., Ramsey, M.J. (2010) What we don't know can't hurt us? Evaluating the equity consequences of the assumption of uniform distribution of needs in Census Based special education funding. *Journal of Education Finance* 35 (3) 245-275
27. Green, P.C., Oluwole, J., Baker, B.D. (2010) Getting their hands dirty: How Alabama's public officials may have maintained separate and unequal education. *West's Education Law Reporter* 253 (2) 503-520

2009

28. Green, P.C. Oluwole, J., Baker, B.D. (2009) No Child Left Behind: Racial Equal Educational Opportunity through School Finance Litigation. *Journal of Gender, Race and Justice* 12 (2) 285-310
29. Baker, B.D. (2009) Evaluating Marginal Costs with School Level Data: Implications for the Design of Weighted Student Allocation Formulas. *Education Policy Analysis Archives* 17 (3)
30. Baker, B.D., Green, P.C. (2009) Equal Educational Opportunity and the Distribution to State Aid to Schools: Can or should racial composition be a factor? *Journal of Education Finance* 34 (3) 289-323
31. Baker, B.D., Elmer, D.R. (2009) The Politics of Off-the-Shelf School Finance Reform. *Educational Policy* 23 (1) 66-105[i]

2008

32. Green, P.C., Baker, B.D., Oluwole, J. (2008) Obtaining racial equal educational opportunity through school finance litigation. *Stanford Journal of Civil Rights and Civil Liberties* IV (2) 283-338
33. Baker, B.D. (2008) Doing more harm than good? A commentary on the politics of cost adjustments for wage variation in state school finance formulas. *Journal of Education Finance* 33 (4) 406-440

2007

34. Morphew, C., Baker, B.D. (2007) On the Utility of National Data for Estimating Generalizable Price and Cost Indices in Higher Education. *Journal of Education Finance* 33 (1) 20-49
35. Baker, B.D, Orr, M.T., Young, M.D. (2007) Academic Drift, Institutional Production and Professional Distribution of Graduate Degrees in Educational Administration. *Educational Administration Quarterly* 43 (3) 279-318
36. Baker, B.D., Wolf-Wendel, L.E., Twombly, S.B. (2007) Exploring the Faculty Pipeline in Educational Administration: Evidence from the Survey of Earned Doctorates 1990 to 2000. *Educational Administration Quarterly* 43 (2) 189-220

2006

37. Green, P.C., Baker, B.D., Oluwole, J. (2006) Race Conscious Funding Strategies in School Finance. *Boston University Public Interest Law Journal 16* (1) 39-72**LR**
38. Baker, B.D. (2006) Evaluating the Reliability, Validity and Usefulness of Education Cost Studies. *Journal of Education Finance* 32 (2) 170-201 **[i]**
39. Green, P.C., Baker, B.D. (2006) Urban Legends, Desegregation and School Finance: Did Kansas City really prove that money doesn't matter? *Michigan Journal of Race and Law* 12 (1) 57-105 **[LR]**[41]
40. Baker, B.D., Dickerson, J. (2006) Charter Schools, Teacher Labor Market Regulation and Teacher Quality: Evidence from the Schools and Staffing Survey. *Educational Policy* 20 (5) 752-779
41. Wolf-Wendel, L, Baker, B.D., Twombly, S., Tollefson, N., & Mahlios, M. (2006) Who's Teaching the Teachers? Evidence from the National Survey of Postsecondary Faculty and Survey of Earned Doctorates. *American Journal of Education* 112 (2) 273-300 (GS 7)

[41] Ranked #1 Law Review on *impact factor* for minority, race & ethnic issues. Ranked #78 overall.

2005 42. Baker, B.D., Cooper, B.S. (2005) Do Principals with Stronger Academic Backgrounds Hire Better Teachers? Policy Implications for High Poverty Schools. *Educational Administration Quarterly* 41 (3) 449-479

43. Baker, B.D., Green, P.C. (2005) Tricks of the Trade: Legislative Actions in School Finance that Disadvantage Minorities in the Post-Brown Era *American Journal of Education* 111 (May) 372-413

44. Baker, B.D. (2005) The Emerging Shape of Educational Adequacy: From Theoretical Assumptions to Empirical Evidence. *Journal of Education Finance* 30 (3) 277-305

45. Green, P.C., Baker, B.D. (2005) Montoy v. Kansas and Racial Disparities in School Funding: Will the Kansas Courts Get it Right this Time? *West's Education Law Reporter* April, 21 681-696

46. Baker, B.D. (2005) What will it take to make Kansas School Funding "Cost-Based?" *Kansas Policy Review* 27 (2) 21-30 [i]

47. Green, P.C., Baker, B.D. (2005) History of School Finance Reform and Litigation in Kansas. *Kansas Policy Review* 27 (2) 2-6[i]

2004 48. Baker, B.D., Friedman-Nimz, R.C. (2004) State Policy Influences Governing Equal Opportunity: The Example of Gifted Education. *Educational Evaluation and Policy Analysis* 26 (1) 39-64

49. Morphew, C.C., Baker, B.D. (2004) The Cost of Prestige: Do New Research I Universities Incur Higher Administrative Costs? *Review of Higher Education* 27 (3) 365-384

50. Wood, R.C., Baker, B.D. (2004) An examination and analysis of the equity and adequacy concepts of constitutional challenges to state education finance distribution formulas. *University of Arkansas at Little Rock Law Review* 27 125 [lr]

51. Baker, B.D., Duncombe, W.D. (2004) Balancing District Needs and Student Needs: The Role of Economies of Scale Adjustments and Pupil Need Weights in School Finance Formulas. *Journal of Education Finance* 29 (2) 97-124 [i]

52. Baker, B.D. (2004) A Closer Look at the Costs of Serving Children Living on the Edges: At Risk, Limited English Proficient & Gifted Children. *Educational Considerations* 32 (1) 42-54 [i]

2003 53. Baker, B.D. (2003) State policy influences on the internal allocation of school district resources: Evidence from the Common Core of Data. *Journal of Education Finance* 29 (1) 1-24

54. Baker, B.D. McIntire, J. (2003) Evaluating State School Funding for Gifted Education Programs. *Roeper Review* 26 (3) 173-179

55. Baker, B.D., Friedman-Nimz, R.C. (2003) Gifted Children, Vertical Equity and State School Finance Policies and Practices. *Journal of Education Finance* 28 (4) 523-556

56. Baker, B.D., Green, P.C. (2003) Commentary: The Application of Section 1983 to School Finance Litigation. *West's Education Law Reporter*. 173 (3) 679-696

2002

57. Baker, B.D., Richards, C.E. (2002) Exploratory Application of Systems Dynamics Modeling to School Finance Policy. *Journal of Education Finance* 27 (3) 857-884
58. Baker, B.D., Friedman-Nimz, R.C. (2002) Determinants of the Availability of Opportunities for Gifted Children: Evidence from NELS '88. *Leadership and Policy in Schools* 1 (1) 52-71
59. Baker, B.D., Markham, P. (2002) State School Funding Policies and Limited English Proficient Children. *Bilingual Research Journal* 26 (3) 659-680
60. Baker, B.D., Friedman-Nimz, R.C. (2002) Is a Federal Mandate the Answer? If so, what was the question? *Roeper Review* 25 (1) 5-10
61. Green, P.C., Baker, B.D. (2002) Circumventing Rodriguez: Can plaintiffs use the Equal Protection Clause to challenge school finance disparities caused by inequitable state distribution policies? *Texas Forum on Civil Liberties and Civil Rights* 7 (2) 141 – 165 [lr]

2001

62. Baker, B.D. (2001) Gifted Children in the Current Policy and Fiscal Context of Public Education: A National Snapshot & Case Analysis of the State of Texas. *Educational Evaluation and Policy Analysis* 23 (3) 229-250
63. Baker, B.D. (2001) Can Flexible Non-linear Modeling Tell Us Anything New About Educational Productivity? *Economics of Education Review* 20 (1) 81-92
64. Baker, B.D. (2001) Living on the Edges of School Funding Policy: The Plight of At-Risk, Limited English Proficient and Gifted Children. *Educational Policy* 15 (5) 699-723
65. Baker, B.D. (2001) Balancing Equity for Students and Taxpayers: Evaluating School Finance Reform in Vermont. *Journal of Education Finance* 26 (4) 437-462
66. Baker, B.D. (2001) Measuring the Outcomes of State Policies for Gifted Education: An Equity Analysis of Texas School Districts. *Gifted Child Quarterly* 45 (1) 4-15

2000

67. Baker, B.D., Keller-Wolf, C., Wolf-Wendel, L. (2000) Two Steps Forward, One Step Back: Race, Ethnicity and Academic Achievement in Education Policy Research. *Educational Policy* 14 (4) 511-529 [GS 15]
68. Wolf-Wendel, L., Baker, B.D., Morphew, C. (2000) Dollars & $ense: Resources and the Baccalaureate Origins of Women Doctorates. *Journal of Higher Education* 71 (2) 165-186

1999

69. Baker, B.D., Richards, C.E. (1999) A Comparison of Conventional Linear Regression Methods and Neural Networks for Forecasting Educational Spending. *Economics of Education Review* 18 (4) 405 – 416
70. Baker, B.D., Imber, M. (1999) "Rational Educational Explanation" or Politics as Usual? Evaluating the Outcome of Educational Finance Litigation in Kansas. *Journal of Education Finance* 25 (1) 121-139
71. Baker, B.D. (1999) Politics of the Production Function: The Influence of Political Bias on the Deductive Process. *Educational Policy* 13 (1&2) 123-135 [i]

1998

72. Baker, B.D., Richards, C.E. (1998) Equity through Vouchers: The Special Case of Gifted Children. *Educational Policy* 12 (4) 363-379

H. BOOK CHAPTERS

Research Compilations[42]

2020

1. Srikanth, A., Baker, B.D., Weber, M., Atzbi, M. (2021) How States Fund Education. Oxford Handbook of U.S. Education Law.

2019

2. Baker, B.D., Kolbe, T., Levin, J. Toward Equitable and Adequate Public Financing of Community Colleges: Lessons from K-12 Schooling. In JK Rice & C Roellke (2019) Financing Higher Education. Information Age Publishing

2015

3. Baker, B.D., Farrie, D., Sciarra, D. (2015) The Changing Distribution of Educational Opportunities. In Opportunity in America. Princeton, NJ, Educational Testing Service.
4. Baker, B.D., Green, P.C. (2015) Conceptions of Equity and Adequacy in School Finance. *Handbook of Research in Education Finance & Policy*
5. Baker, B.D., Green, P.C. (2015) The Politics of School Finance in the New Normal Era. *Handbook of the Politics of Education Association.* p.166-187

2012

6. Baker, B.D., Ramsey, M.J, Green, P.C. (2012) Financing equal educational opportunity for children with disabilities. In M.L. Boscardin (ed) *Handbook of Research on Special Education Leadership*

2010

7. Baker, B.D. (2010) Review of Susan Aud's "School Choice by the Numbers: The Fiscal Effect of School Choice Programs 1990 – 2006," published by the Friedman Foundation for Educational Choice. In K.G Welner, P.H Hinchey, A. Molnar & D. Weitzman *Think Tank Research Quality* Information Age Publishing pp.97-108
8. Baker, B.D. (2010) Review of Lisa Snell's "Weighted Student Formula Yearbook 2009," published by the Reason Foundation. In K.G Welner, P.H Hinchey, A. Molnar & D. Weitzman *Think Tank Research Quality* Information Age Publishing pp.183-200

2009

9. Baker, B.D., Green, P.C. (2009) Conceptions, Measurement and Application of Educational Adequacy Standards. In D.N. Plank (ed) *AERA Handbook on Education Policy.* New York: Routledge
10. Baker, B.D., Green, P.C., (2009) Separate and Unequal by Design: What's the Matter with the Rising State Role in Kansas? *The Rising State in Education.* Bruce S. Cooper, Lance Fusarelli, Bonnie Fusarelli, Editors. State University of New York Press.

2008

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2001

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2. Baker, B.D. (2001) Back to School: Systems Modeling and the Educational Setting. In G. Ivory, *What Works in Computing for School Administrators*? Scarecrow Press

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I. POLICY BRIEFS/REPORTS

2020

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2. Baker, B.D., Di Carlo, M., Weber, M. (2019) The Adequacy and Fairness of State School Finance Systems. http://www.schoolfinancedata.org
3. Baker, B.D. (2019) New Jersey's School Funding Reform Act at 10 Years. New Jersey Policy Perspective. https://www.njpp.org/reports/in-brief-new-jerseys-school-funding-reform-act-at-10-years

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J. COMMENTARY/EDITORIALS/REVIEWS

2020

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2019

2. Black, D., Baker, B.D., Green, P.C. (2019) Charter Schools Exploit Lucrative Loophole that Would Be Easy to Close. *The Conversation.* https://theconversation.com/charter-schools-exploit-lucrative-loophole-that-would-be-easy-to-close-111792

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14. Rebell, M.R., Baker, B.D. (2009) Assessing Success in School Finance Litigations. *Education Week*
15. Baker, B. (2009). *Review of "Weighted Student Formula Yearbook 2009."* Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit. http://epicpolicy.org/thinktank/review-Weighted-Student-Formula-Yearbook

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18. Baker, B.D. (2007) Review of the Buckeye Institute Report *Shortchanging Disadvantaged Students: An analysis of intra-district spending patterns in Ohio.* Education Policy Research Unit. Think Tank Review Project.
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K. UNDER REVIEW

Books

Journal Articles

Srikanth, A., Cotto, R., Baker, B., Green, P. Unpacking Racial Disparities in School Funding

Baker, B.D. Informing Federal School Finance Policy with Empirical Evidence

Grant Proposals

Estimating the costs of community college (Full proposal invited by William T. Grant Foundation)

L. MANUSCRIPTS IN PREPARATION

Books

Baker, B.D. That Dog Won't Hunt in Dodge City: Unlikely Lessons from the Kansas School Funding Saga. Harvard Education Press (under contract)

Journal Articles

Oberfield, Z., Baker, B.D. The Politics of Fair Funding: Analyzing the Redistribution of U.S. Education Spending

Baker, B.D., Srikanth, A., Weber, M. School Funding, Charter Expansion and Student Outcomes: Evidence from State Panel Data 2000 to 2017

Baker, B.D., Atchison, D., Levin, J. Informing State School Finance Formulas with Empirical Evidence

Book Chapters & Policy Reports

M. MONOGRAPHS & OTHER MANUSCRIPTS

Edited Compilations[45]

Baker, B.D. (ed.) State of the States and Provinces. Annual publication of the American Educational Research Association, Special Interest Group on Fiscal Issues

Commissioned Reports & Papers

Baker, B.D. (2012) The Texas School Finance System Fails to Provide Equal Educational Opportunity to Texas Schoolchildren

Baker, B.D. (2011) Still Wide of any Reasonable Mark: An evaluation of the Kansas School District Finance act 2011-12. *Schools for Fair Funding*

Baker, B.D. (2011) Basically Unsound: An Evaluation of New York State's Public School Finance Formula. *New York State Coalition of Small City School Districts.*

Baker, B.D., Bifulco, R. (2011) Evaluating Connecticut's Education Cost Sharing Program. *Connecticut Coalition for Justice in Education Funding*

Baker, B.D. (2011) Evaluation of Colorado State School Finance System. Lobato v. State of Colorado

Baker, B.D. (2010) Evaluation of Illinois State School Finance System. CUL v. State of Illinois

Baker, B.D. (2010) Evaluation of New York State School Finance System. NY Small City Schools v. State

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Baker, B.D. (2009) Evaluation of New Jersey's School Finance Reform Act. Education Law Center.

Burzichelli, C., Barnett, W.S. et al. (2008) NJDOE Resource Allocation Study.

Baker, B.D. (2007) Arizona's State School Finance Formula Fails to Guarantee Equal Educational Opportunity. *Arizona Center for Law in the Public Interest*

Baker, B.D. (2006) Estimating the Costs of Meeting Educational Outcome Standards in Illinois: A Cost Function Approach. *The Chicago Reporter: Chicago Matters*

Baker, B.D. (2006) Missouri's State School Finance Formula Fails to Guarantee Equal or Minimally Adequate Educational Opportunity to Missouri Schoolchildren. Prepared for plaintiff districts in *Committee for Educational Equality v. State*

Baker, B.D., Thomas, S.L. (2006) Review of Hawaii's Weighted Student Formula. Hawaii State Board of Education.

Baker, B.D. (2005 - Fall) Nebraska's State School Finance Policy Fails to Provide Equal Opportunity for Nebraska School Children.

Baker, B.D. (2005 – Fall) Using Econometric Methods to Reconcile School-Level Economies of Scale Adjustments in the Wyoming School Funding Model. Lawrence O. Picus & Associates, North Hollywood, CA.

Baker, B.D. (2005 – Fall) Development of an Hedonic Wage Index for the Wyoming School Funding Model. Lawrence O. Picus & Associates, North Hollywood, CA.

Baker, B.D. (2005 – Fall) Commentary on the Kansas "Cost of Living Adjustment." Prepared on behalf of plaintiff districts in the case of *Montoy v. Kansas.*

Wood, C.R., Baker, B.D. (2004) Evaluation of Texas School Finance Policy. Prepared for the Attorney General of the State of Texas in the Case of *West Orange Cove v. State*

Wood, C.R, Baker, B.D. (2004) Evaluation of Missouri School Finance Policy. Report to the Missouri State Legislature.

Baker, B.D., Taylor, L., Vedlitz, A. (2003) *Measuring Educational Adequacy in Public Schools.* Report to the Texas Select Joint Committee on Education Finance.

Baker, B.D. (2003) *Evaluation of the Suitability of the Kansas School District Finance Act. Expert Testimony in the Case of Montoy v. Kansas.* Report commissioned by Husch and Eppenberger (Wichita), Somers, Robb and Robb (Newton) and Schools for Fair Funding, Inc.

Baker, B.D. (2003) *Favoring District Needs over Student Needs: The Adverse Effects of the Kansas School District Finance Act on Minority Children and Children with Disabilities.* Expert Witness Testimony in the Case of Robinson v. Kansas. Report commissioned by Husch and Eppenberger (Wichita), Somers, Robb and Robb (Newton) and Schools for Fair Funding, Inc.

Baker, B.D. (2002) *Evaluating the Performance of Private Schools Receiving Scholarship Students from the Educational Choice Charitable Trust.* Indianapolis, IN.

Baker, B.D. (2002) *The Allocation of Fiscal and Human Resources in Kansas School Districts.* Prepared under contract for United School Administrators of Kansas. Topeka, KS.

Baker, B.D. (2001) *Living on the Edges of School Funding Policy: The Plight of At-Risk, Limited English Proficient and Gifted Children.* National Center for Education Statistics, U.S. Department of Education, Washington, DC.

Baker, B.D. (2001) Expert Witness Report. Analysis and Opinions on the Suitability of the School District Finance Act. *Montoy v. State of Kansas*, No. 99-C-1788 (Shawnee County Dist. Ct.)

Invited Reports

Brant, D. (Chair), Baker, B., Ballard, B., Ferguson, L., Jones, D., Vratil, J. (Drafting Team) (2000) Final Report of the Governor's 21st Century Vision Task Force. K-12 Education: Financing for Results. Presented to Governor Bill Graves, December 1, 2000.

Other Reports/Monographs

Baker, B.D. (1997) *A Comparison of Statistical and Neural Network Models for Forecasting Educational Spending.* Doctoral Dissertation. Teachers College, Columbia University. Sponsor: Craig E. Richards.

Baker, B.D. (1995) *The Economic Health of Gifted Education in Three Northeastern States: an analysis of public school opportunities and private programs in New York, Connecticut and New Jersey.* Unpublished Manuscript. Teachers College, Columbia University (Department of Organization and Leadership). ERIC Clearinghouse on Disabilities and Gifted Education. ED 419 321.

Baker, B.D. (1995) *The Economics of Privatized Management of Public Schools: The Case of Education Alternatives and the Baltimore City Public Schools.* Unpublished Manuscript. Teachers College, Columbia University (Department of Organization and Leadership). Data analyses eventually published in "Risky Business: The Private Management of Public Schools." Economic Policy Institute. 1996.

Policy Briefs

Baker, B.D. (2002) Financing "Adequate" Educational Services in Kansas. Prepared for the Kansas Economic Policy Conference. Policy Research Institute. University of Kansas. www.pri.ku.edu

Baker, B.D. (2002) Policy Brief on State Funding for Programs for the Gifted and Talented. Prepared for the State Legislative Policy Task Force of the National Association for Gifted Children. James Gallagher, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: School Performance-Based Incentive Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: Estimating and Funding an "Adequate" Education in Kansas. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: At Risk Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: Policy Options for Special Education Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (1999) Policy proposals for the future of gifted education. *Brief solicited by Council for Exceptional Children (CEC).* Prepared for Jay McIntire, Policy Specialist for Governmental Relations.

Baker, B.D. & Richards, C.E. (1998) Equal Opportunity for Gifted Urban Kids: How Vouchers Can Help.

Baker, B.D. (1997) *Chain Reaction: Bad Research, Bad Policy, Implications for the Gifted.* New York State Association for Gifted and Talented Education (AGATE). ERIC Clearinghouse on Disabilities and Gifted Education.

N. NATIONAL & INTERNATIONAL CONFERENCE PRESENTATIONS

Keynotes

(2020-March) Missouri Association of School Administrators. Lake of the Ozarks, MO.

(2019-Feburary) Annual Meeting of AASA (School Superintendents Association) Los Angeles CA.

(2019 – May) Meeting of the AASA. San Diego, CA.

(2019 – July) Meeting of the AASA. Washington, DC.

Master Classes

Baker, B.D., Friedman-Nimz, R.C. (2002 – Spring) *Designing and Evaluating State Policies for Meeting the Needs of Gifted Children.* Annual Meeting of The Council for Exceptional Children. New York, NY.

Baker, B.D., Friedman-Nimz, R.C. (2001 – Fall) *Designing and Evaluating State Policies for Meeting the Needs of Gifted Children.* Annual Meeting of The National Association for Gifted Children. Cincinnati, OH.

Symposia[46]

(2019-Fall) Methods for measuring fiscal equity within and between districts. With Jason Becker. Future of Education Finance Summit. Baltimore, MD

(2019-Spring) Symposium on Kansas School Finance. Association for Education Finance and Policy. Kansas City, MO.

(2018 – Fall) Long-Run Cycles in Education Finance. With Jason Becker. Future of Education Finance Summit. Baltimore, MD

(2018 – spring) Rethinking "Costing Out" and the Design of State School Finance Systems: Lessons from the Empirical Era in School Finance. With Jesse Levin. American Education Research Association.

(2018-Spring) Symposium on using new longitudinal data in school finance with Matthew Chingos, Urban Institute. Association for Education Finance and Policy. Portland, OR

(2009-Spring) Symposium on Litigation. With Kevin Welner (U. Colo.), Michael Rebell (Teachers College), Bill Koski (Stanford U.), Anne Newman (Wash. U.). American Education Research Association. San Diego, CA.

(2009-Spring) Symposium on the Distribution of Title I Funding. With Kevin Welner, Kevin Carey, Marguerite Roza and Goodwin Liu. American Education Research Association. San Diego, CA.

(2009-Spring) Symposium on Within District Resource Allocation. With Ross Rubenstein and Larry Miller (Syracuse U.), Jesse Levin (AIR)

(2008-Spring) Presidential Session: Think Tanks and Educational Research. With David Berliner, W. Steven Barnett, Walter Farrell, Alex Molar and Kevin Welner.

Baker, B.D., Fuller, E., Young, M.D., Punswick, E., Belt, C., Liu, E. (2007-Fall) Understanding Principal Labor Markets. University Council on Educational Administration. Alexandria, VA.

Baker, B.D., Elmer, D., Slagle, M., Arbuckle, L. (2007-Fall) Racial Isolation and the Costs of Providing Equal Educational Opportunity. University Council on Educational Administration. Alexandria, VA.

Baker, B.D., Oluwole, J., Ramsey, M. (2007-Fall) Legal, Conceptual and Empirical Foundations of Vertical Equity. University Council on Educational Administration. Alexandria, VA.

Ed Fuller (U.T. Austin), Bruce Baker (U. of Kansas), Michelle Young (U.T. Austin), Margaret Terry Orr (Bank Street College) (2006-Fall) Examining the Impact of Principals and Principal Preparation Programs. University Council on Educational Administration. San Antonio, TX.

Margaret Terry Orr (Bank Street College), Bruce D. Baker (U. of Kansas) and others (2006 – Spring). *Leadership Preparation and Development.* Annual Meeting of the American Educational Research Association. San Francisco, CA.

Margaret Terry Orr (Bank Street College), Bruce D. Baker (U. of Kansas) and others (2005 – Fall). *Researching the Big Picture of Leadership Preparation Programs.* Annual Meeting of the University

[46] Entire session proposed by group of authors. Competitive acceptance, but often not blind review.

Council on Educational Administration. Nashville, TN.

Verstegen, D.A., Jordan, T., Jordan, K.F., Cooper, B.S., Addonizio, M. (2005 – Spring) *Adequacy: It's Measurement and Conceptualization.* Annual Meeting of The American Education Finance Association. Louisville, KY.

Picus, L.O., Conley, D., Baker, B., Mathis, W. (2005 – Spring) *Conceptions of Educational Adequacy.* Annual Meeting of the American Educational Research Association. Montreal, QE.

Baker, B.D., Duncombe, W.D., Reschovsky, A., Imazeki, J., Chambers, J.G. (2004 – Spring) *Striking the Right Balance between District and Student Needs in Cost Adjustments to State Aid: Findings from Research and Implications for Policy.* Annual Meeting of The American Education Finance Association. Salt Lake City, UT.

Baker, B.D.[c], Driscoll, L., Salman, R., Huff, B., Picus, L.O. (2001 – Spring) *Unlocking the Potential of Dynamic Systems Modeling*. Annual Meeting of The American Education Finance Association. Cincinnati, OH.

Baker, B.D. (2000 – Fall) *Exploring the Equitable Distribution of Resources for Gifted Children.* In Jenkins, R.C., McIntire, J. "Exploring Directions for G/T Policies: Twenty-first Century Implications." Symposium with Mary Ruth Coleman (UNC Chapel Hill), Davis Hendricks (Pulaski County Special School District, AR), Joseph S. Renzulli (University of Connecticut, National Research Center on the Gifted and Talented). Annual Meeting of the National Association for Gifted Children. Atlanta, GA.

Baker, B.D., Richards, C.E. (2000 – Spring) *Designed to Fail: Static School Funding Formulas in Dynamic Systems.* Interactive Symposium with Allan R. Odden (University of Wisconsin), Lawrence O. Picus (University of Southern California), Scott R. Sweetland (Ohio State University), "Data, Models and Simulations for Research, Practice and Teaching in School Finance." Annual Meeting of the American Education Finance Association. Austin, TX.

Cooper, B.S., Cilo, M.R., Baker, B.D. (2000-Spring) *Applying the Concept of K-16 Education in NYC: Bridging the Methodological Gaps between Schools and Colleges.* Symposium with Michael Kirst (Stanford University), Margaret Terry Orr (Teachers College), Sheri Ranis (Social Science Research Council), Deborah Sullivan (American Institutes for Research), Debra Bragg (University of Illinois), Donna Dare (University of Illinois), David Brennaman (University of Virginia), Richard Hasselbach (CUNY), "Beyond High School: Negotiating the School-to-College Transition into the 21st Century."Annual Meeting of the American Educational Research Association, Division J. New Orleans, LA.

Paper Sessions

Oberfield, Z., Baker, B.D. (2020-March) The Politics of School Funding Fairness. Association for Education Finance and Policy. Fort Worth, TX.

Baker, B.D. (2012 – Spring) Exploring the depth, breadth and drift of curricular offerings across school districts facing varied resource constraints. Association for Education Finance and Policy. Boston, MA. http://aefpweb.org/sites/default/files/webform/Baker.AEFP_.NY_IL.Unpacking.Jan_2012.pdf

Levin, J., Chambers, J., Blankenship, C., Taylor, L., Baker, B. (2012 – Spring) Towards a More Accurate Measure of Student Poverty: An Alternative Method for Calculating Cost-Adjusted Poverty. Association for Education Finance and Policy. Boston, MA.

Baker, B.D. (2011-Spring) Cheerleading, Ceramics and Inefficiency in High Poverty Schools: Are low performing school districts simply squandering resources on "non-essential" services? American Education Research Association. New Orleans

Baker, B.D., Peevely, G., Harrison, R. (2010-Spring) Competitive Wages and the Distribution of Teachers Across Demographically Diverse Micropolitan Schools. American Education Research

Association.

Fuller, E., Young, M., Baker, B. (2009 - Spring) School Leadership, Entrance, Attrition and Migration. American Education Research Association. San Diego, CA.

Clifford, M., Brown, C., Baker, B. (2009 - Spring) The Relationship between Principals Attributes, School Level Teacher Quality and Turnover. American Education Research Association. San Diego, CA.

Peevely, G., Baker, B., Smith. S. (2009- Spring) Education and the Black Belt: The Need for Additional Capacity. American Education Research Association. San Diego, CA.

Baker, B.D., Ramsey, M. (2009-Spring) Census based funding in special education: Can it really provide equity for children with disabilities? American Education Research Association. San Diego, CA.

Baker, B. (2008-Spring) Wage Adjustments in State School Finance Policy: Doing more harm or good? American Educational Research Association. NY, NY.

Killeen, K, Baker, B. (2008-Spring) Addressing the moving target: Should measures of student mobility be included in education cost studies. American Educational Research Association. NY, NY.

Slagle, M., Yan, B., Baker, B.D. (2008-Spring) A Geographically Weighted Regression Approach for Explaining Spatial Variation Among School Districts in Education Demand. American Educational Research Association. NY, NY.

Fuller, E., Baker, B.D., Young, M.D. (2008-Spring) Examining the effect of school leaders and their preparation on teacher quality and student achievement. American Educational Research Association. NY, NY.

Baker, B. (2008-Spring) Within district budgeting policy and the allocation of resources across schools: What do we really know? American Education Finance Association, Denver, CO.

Slagle, M., Yan, B., Baker, B.D. (2008-Spring) A Geographically Weighted Regression Approach for Explaining Spatial Variation Among School Districts in Education Demand. American Education Finance Association, Denver, CO.

Punswick, E., Baker, B. (2008-Spring) Principal Backgrounds and School Leadership Stability: Evidence from Flyover Country. American Education Finance Association, Denver, CO.

Baker, B. (2007-Spring) The Politics of Teacher Wage Adjustments in State School Finance Policies. American Education Finance Association. Baltimore, MD.

Killeen, K, Baker, B. (2007-Spring) On the move: Evaluating the impact of measures of student population transiency on district level costs of improving educational outcomes. American Education Finance Association. Baltimore, MD.

Fuller, E., Young, M.D., Baker, B.D. (2007-Spring) Career Paths and the Influence of School Principals on Teachers. American Educational Research Association Chicago, IL

Baker, B.D. (2007-Spring) Black-White Funding Disparities in America's Major Metropolitan Areas: Implications for Teacher Labor Markets. American Educational Research Association Chicago, IL

Baker, B.D., Green, P.C. (2007-Spring) Evaluating the Effect of Racial Isolation on the Cost of Educational Outcomes in Two Midwestern States. American Educational Research Association Chicago, IL

Baker, B.D., Thomas, S.L. (2007-Spring) Toward what end? Comparing the costs of producing adequate test scores with the costs of improving college matriculation. American Educational Research Association Chicago, IL

Baker, B.D., Green, P.C. (2006-Fall) Black-White Funding Disparities in America's Major Metropolitan Areas. University Council on Educational Administration. San Antonio, TX.

Ng, J.C., Baker, B.D. (2006-Spring) Big Changes in Small Town America: A macro level analysis of

micropolitan schooling. Annual Meeting of the American Educational Research Association. San Francisco, CA.

Slagle, M., Baker, B.D. (2006 – Spring) Application of Local Indicators of Spatial Association Modeling to Missouri Teacher Wages. Annual Meeting of the American Education Finance Association.

Baker, B.D., Green, P.C. Goin' to Kansas City: A critical empirical analysis of the *Urban Legends* of the aftermath of *Missouri v. Jenkins.* (2005 – Fall) Annual Meeting of the University Council on Educational Administration. Nashville, TN.

Morphew, C.C., Baker, B.D. (2005 – Spring) Sibling Rivals: Conceptualizing the Relationship between K-12 and Postsecondary Finance at the State Level. Annual Meeting of the American Educational Research Association. Montreal, QE.

Baker, B.D., Green, P.C. (2005 – Spring) The Re-Measurement of Equity (and Adequacy) in School Finance. Annual Meeting of the American Educational Research Association. Montreal, QE.

Morphew, C.C., Baker, B.D. (2005 – Spring) Sibling Rivals: Conceptualizing the Relationship between K-12 and Postsecondary Finance at the State Level. Annual Meeting of the American Education Finance Association. Louisville, KY.

Baker, B.D., Green, P.C. (2005 – Spring) The Re-Measurement of Equity (and Adequacy) in School Finance. Annual Meeting of the American Education Finance Association. Louisville, KY.Baker,

B.D., Green, P.C. (2004 – Fall) Race as a "Plus Factor" in School Finance Policy. Annual Meeting of the American Education Finance Association. Louisville, KY.

Baker, B.D., Green, P.C. (2004 – Fall) Race as a "Plus Factor" in School Finance Policy. Annual Meeting of the University Council on Educational Administration. Kansas City, MO.

Baker, B.D., Wolf-Wendel, Lisa E. (2004 – Fall) Exploring the Faculty Pipeline in Educational Administration: Evidence from the Survey of Earned Doctorates 1990 to 2000. Annual Meeting of the University Council on Educational Administration. Kansas City, MO.

Baker, B.D., Keller, H. (2004 – Spring) A Systematic Approach to Computer Simulation Development in School Finance: Application to the State of Texas. Annual Meeting of The American Education Finance Association. Salt Lake City, UT.

Wolf-Wendel, L.E., Baker, B.D., Twombly, S., Mahlios, M. (2004 – Spring) Who's Teaching the Teachers? An empirical analysis of predictors of doctoral degree attainment and faculty placement in teacher education. Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D., Markham, P. (2004 – Winter) A Comprehensive Legal and Empirical Framework for Evaluating State Financial Aid for the Provision of Services to English Language Learners. Annual Meeting of the National Association for Bilingual Education (NABE). Albuquerque, NM.

Baker, B.D., Green, P.C., Fusarelli, L. (2003 – Fall) Tricks of the Trade: Legislative Actions in School Finance that Disadvantage Minorities in the Post-Brown Era. Annual Meeting of the University Council on Educational Administration. Portland, OR.

Baker, B.D. (2003 – Fall) Principals' Academic Preparation and Experience and the Distribution of Quality Teachers? Evidence from the Schools and Staffing. Annual Meeting of the University Council on Educational Administration. Portland, OR.

Baker, B.D. (2003 – Spring) *The Collapse of the Kansas School District Finance Act.* Symposium on the Sate of the States and Provinces. Annual Meeting of The American Educational Research Association. Chicago, ILL.

Morphew, C & Baker, B.D. (2003 – Spring) *Measuring the Costs to Baccalaureate Degree Attainment: A Resource Cost Model Approach.* Annual Meeting of The Association for Institutional Research. Tampa, FL.

Baker, B.D. & Morphew, C (2003 – Spring) *Measuring the Costs to Baccalaureate Degree Attainment: A*

Resource Cost Model Approach. Annual Meeting of The American Education Finance Association. Orlando, FL.

Green, P.C. & Baker, B.D. (2002 – Spring) *Circumventing Rodriguez: Alternatives for Seeking Federal Solutions to State School Finance Inequities.* Annual Meeting of The American Educational Research Association. New Orleans, LA.

Baker, B.D. (2002 - Spring) *Living on the Edges of School Funding Policy: The Plight of At-Risk, Limited English Proficient and Gifted Children.* Annual Meeting of The American Educational Research Association. New Orleans, LA.

Baker, B.D. (2002 – Spring) *Estimating the Adequacy and Effects of State Aid Allocations for Gifted, Limited English Proficient and At Risk Students.* Annual Meeting of The American Education Finance Association. Albuquerque, NM.

Baker, B.D. (2002 – Spring) *Determinants of Within and Between State Differences in the Internal Allocation of District Resources: Evidence from the Common Core of Data.* Annual Meeting of The American Education Finance Association. Albuquerque, NM.

Baker, B.D., Richards, C.E. (2001 - Spring) *Unlocking the Potential of Dynamic Systems Modeling in School Finance*. Proposal for a Demonstration/Consultation Session. SIG - Fiscal Issues. Annual Meeting of The American Educational Research Association. Seattle, WA.

Morphew, C.C., Baker, B.D. (2001 - Spring) *The Administrative Lattice and the New Research I Universities.* Division J – Higher Education. Division J. Annual Meeting of The American Educational Research Association. Seattle, WA.

Baker, B.D., Friedman-Nimz (2001 - Spring) *State Policy Influences Governing Equal Opportunity: The Example of Gifted Education.* American Education Finance Association Annual Meeting. Cincinnati, OH.

Baker, B.D., Green, P.C. (2001 - Spring) *Challenging School Finance Policy as Civil Rights Violation: The Application of Title VI to School Finance in Kansas.* American Education Finance Association Annual Meeting. Cincinnati, OH.

Baker, B.D. (2000-Spring) *Challenging Opportunities in Fiscally Challenged Schools?* Annual Meeting of the American Education Finance Association. Austin, TX.

Baker, B.D. (1999-Spring) *Searching for a "Rational Educational Explanation" for Spending Differences in Kansas Schools.* Annual Meeting of the American Education Finance Association. Seattle, WA.

Baker, B.D. (1999-Spring) *A Comparison of Linear and Non-linear Models for Testing the Sensitivity of Cost to Different Performance Expectations.* Annual Meeting of the American Education Finance Association. Seattle, WA.

Baker, B.D. (1999-Spring) *Effort, Burden, What do They Really Mean? Testing the Fairness of Formula Alternatives for Vermont.* Annual Meeting of the American Education Finance Association. Seattle, WA.

Baker, B.D. (1999-Spring) *Predicting the Cost of High Performance: A Sensitivity Simulation Using GMDH Neural Networks.* Annual Meeting of the American Educational Research Association. Division L. Montreal, Quebec.

Baker, B. D., Keller-Wolf, C., Wolf-Wendel, L. (1999-Spring) *Dispelling Myths through Disaggregation: The relationship between race/ethnicity and student achievement.* Annual Meeting of the American Educational Research Association. Montreal, Quebec.

Baker, B.D. (1998-Fall) *Systems Thinking Applied: Moving Beyond Conversation with ITHINK.* Annual Meeting of the University Council on Educational Administration. St. Louis, MO.

Baker, B.D. (1998-Fall) *Enhancing our Understanding of the Complexities of Education: "Knowledge Extraction from Data" Using Neural Networks.* Annual Meeting of the University Council on Educational Administration. St. Louis, MO.

Wolf-Wendel, L., Baker, B.D., Morphew, C. (1998-Fall) *Dollars & $ense: Resources and the Baccalaureate Origins of Women Doctorates.* Annual Meeting of the Association for the Study of Higher Education. Miami, Florida.

Baker, B.D. (1998-Spring) *A Comparison of Linear and Flexible Non-Linear Regression Methods for Forecasting Educational Spending.* Annual Meeting of the American Education Finance Association. Mobile, Al.

Baker, B.D. (1998-Spring) *An Inductive Approach to Production-Function Modeling: A Comparison of Group Method of Data Handling (*GMDH*) and Other Neural Network Methods.* Annual Meeting of the American Education Finance Association. Mobile, Al.

Baker, B.D., Richards, C.E. (1997-Spring) *Equity Through Vouchers: The Special Case of Gifted Education.* Annual Meeting of the American Education Finance Association. Jacksonville, FL.

Richards, C.E., Baker, B.D., Cilo, M. (1996-Spring) *Is Privatization More Efficient? The Case of Education Alternatives Inc. in Baltimore.* Annual Meeting of the American Educational Research Association. New York, NY.

Roundtables

Wolf-Wendel, L.E., Twombly, S., Baker, B.D. (2006 – Spring) Pathways to the Professoriate in Educational Administration: Are they different for men and women? Annual Meeting of the American Educational Research Association. San Francisco, CA.

Baker, B.D., Lacireno-Paquet, N. (2005 – Fall) Do the Smarter Kids get the Smarter Teachers? Evidence from the Schools and Staffing Survey on Teacher Sorting and Selective Magnet and Charter Schools. Annual Meeting of the University Council on Educational Administration. Nashville, TN.

Baker, B.D., Cooper, B.S. (2004 – Spring) Do Principals with Stronger Academic Backgrounds Hire Better Teachers? Policy Implications for High Poverty Schools. Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D., Dickerson, J. (2004 – Spring) Charter Schools and State Policies Regarding Teacher Certification: Using flexibility for "good" or "evil?" Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D. (2001 – Spring) *The State of School Finance in Kansas: State of the States Roundtable Series.* Annual Meeting of The American Educational Research Association. SIG - Fiscal Issues. Seattle, WA.

Reis, S.B., Baker, B.D., Pewewardy, C., Tippeconnic, J. (1999-Spring) *The Federal Government's Responsibility for Indian Education in an Era of Self-Determination.* Annual Meeting of the American Educational Research Association. SIG - Indian Education. Montreal, Quebec.

Baker, B.D. (1998-Spring) *Production-Function What's Your Function? A closer look at how the complexities of educational productivity evade traditional analytical techniques, and some new solutions.* Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D., Richards, C.E. (1998-Spring) *Exploratory Application of Neural Networks to School Finance: Forecasting Educational Spending.* Annual Meeting of the American Educational Research Association. San Diego, CA.

O. OTHER PROFESSIONAL PRESENTATIONS

Guest Lectures

2002 (Fall) 2002 Kansas Economic Policy Conference: At the Crossroads: Can Kansas Afford its Future? Policy Research Institute of the University of Kansas, Lawrence.

2002 (Fall) State Policies, Educational Efficiency and the Internal Allocation of School District Resources. Southwest Educational Development Laboratory (SEDL) Annual Policy Conference. Little Rock, AR.

2002 (Summer) Simulation Modeling in School Finance. Fordham University Summer Institute on School Finance. Coordinator, Bruce S. Cooper.

2002 (Spring) Alternatives for Funding Special Education in Kansas. Kansas Special Education Advisory Committee. Topeka, KS.

2001 (Fall): School Finance in Kansas. School of Education Research Roundtable. University of Kansas.

2000 (Summer) Evaluation & Critique of Kansas School Finance Policy. To the Governor's Task Force on "K – 12 Education: Financing for Results."

1998 (Fall): School Finance Equity in Kansas. School of Education Symposium. University of Kansas.

1998 (Spring): State of the States Roundtable. Annual Meeting of the American Education Finance Association. Mobile, Al. *Invited*

1998 (Spring): Equity and Adequacy in Education. Invited presentation to graduate seminar on Economics and Education. University of Kansas (Coordinator: Barbara Phipps) *Invited*

1997 (Summer): *A Comparison of Statistical and Neural Network Models for Forecasting Educational Spending.* Research Seminar: The RAND Corporation.

1996 (Spring): Technology in the Science Classroom: Using Computers to Develop Analytical Reasoning Skills. NJ Association for Gifted Children Annual Conference (Princeton, NJ)

1995 (Summer): Report on the Economic Health of Gifted Education in the Northeast. An invited roundtable presentation to the elected chairs of the state associations of New Jersey, Connecticut, New York and Massachusetts.

1995 (Spring): Integrating technology into science through projects involving data collection and analysis. College Gifted Day (Montclair State University, NJ)

1994 (Spring) Overview of School Finance Policy in the United States. Korean Ministry of Education. An invited presentation at Teachers College, Columbia University.

1989 (Spring) Developing Scientific Research Projects with Gifted High School Students. Connecticut State Update Conference on Gifted Education. Southern Connecticut State University (New Haven, CT)

P. SERVICE PRESENTATIONS

Special Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Jeannie Trammel. Spring, 2003.

Financing an Adequate Education in Kansas. Lawrence Business Education Partnership. January, 2003.

Financing an Adequate Education in Kansas. Lawrence – Douglas County League of Women Voters. November, 2002.

Evaluation of Augenblick & Myers Study on "The Cost of a Suitable Education in Kansas." Presented to the Governors Task Force. August 23, 2002.

Education Finance in Kansas. Invited presentation, University of Kansas Media Tour. Lawrence, KS. Fall, 2001.

Understanding Gifted Education Policy. Invited presentation, Gifted Education Advocacy Conference. Overland Park, KS. Summer, 2001.

Special Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Jeannie

Trammel. Spring, 2000.

Special Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Jeannie Trammel. Spring, 1999.

Overview of Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Barbara Phipps. Spring, 1998.

Q. OTHER GRANTS

External: Not Awarded

Baker, B.D., (PI) The Influence of Resource Progressiveness on Achievement Gaps within Major Metropolitan Areas and Large Urban School Districts. Funding Source – Institute for Education Sciences, U.S. Dept. of Education ($89,907 for one year, commencing Summer 2007)

Baker, B.D., (PI) The Influence of Resource Progressiveness on Teacher Labor Markets within Major Metropolitan Areas and Large Urban School Districts. Funding Source – Institute for Education Sciences, U.S. Dept. of Education ($143,303 for two years, commencing Summer 2007)

Baker, B.D. (Subcontractor) Career Paths and Influence of School Administrators. PI – Michelle D. Young, University of Texas at Austin. Funding Source – Institute for Education Sciences, U.S. Dept. of Education (Subcontract = $40,045 for two years, commencing Summer 2007)

External: Awarded Small Grants

Baker, Bruce D. (PI) *Exploring the Rationality of State Aid for Fringe Populations: Evidence from the Common Core of Data.* 2001 NCES/AEFA New Scholars Program. ($5,000)

Baker, Bruce D.; Hatley, Richard.; Arney, Lynn. (Spring - 1998) *Technology for Effective Educational Leadership.* Regional Consortia Grants. University Council on Educational Administration. ($1,000)

Internal: Awarded

Baker, B.D. (2003 – Summer) Understanding the Nexus Between State Policies, Education Governance and Teacher Labor Markets. University of Kansas Policy Research Institute (Research Fellow).

Friedman-Nimz, R.C., Baker, B.D. (2001 - Summer) Estimating the Resource Costs of Opportunities for Gifted Children. Graduate Research Fund. ($10,000)

Baker, B.D., Friedman, R.C. (2000 - Summer) Assessing Resource Equity: Social Status and the Availability of Opportunities for Gifted Children. Graduate Research Fund (Award: $11,979)

Baker, Bruce D., Pewewardy, Cornel. (Spring - 1998) *Financing Indian Education in an Era of Self Determination.* New Faculty General Research Fund Grants, University of Kansas Center for Research. ($5,000)

R. OTHER CONSULTANCIES & CONTRACTED RESEARCH

2012: NEPC – Evaluating expenditures of charter schools in New York City, Texas and Ohio

2010: NEPC – Evaluating expenditures of New York City charter schools

2008: EPIC/Great Lakes Center - Evaluating expenditures of private schools

2008: National Research Council. National Academy of Sciences. Evaluation of methods for costing out common education standards. With Lori L. Taylor and Arnold Vedlitz.

2006 – Present: CG & SB v. Commonwealth of Pennsylvania

2007: Arizona Center for Law in the Public Interest

2006: NY State Office of the Attorney General

2004: Education Week – Quality Counts 2005. Consultant on feature article on *Educational Adequacy* ($2.5k)

2004: Expert witness for the State of Texas, Attorney General. *West Orange Cove Consolidated Independent School District et al. v. Nelson, et al.* ($12k subcontract)

2004 – Present: Expert witness for plaintiff districts in *Committee for Educational Equality, et al. v. State.* Husch & Eppenberger, Jefferson City.

2004 – Present: Expert witness for plaintiff districts in *Douglas County School District v. Heineman.* Baird, Holm, McEachen, Pedersen, Hamann & Strasheim, LLP, Omaha.

2002 (Spring - Summer) Project consultant to Southwest Educational Development Laboratory (SEDL). Zena Rudo, Project Coordinator. ($1.5k)

2002 (Spring – Summer) Evaluation of Student Gains in CHOICE Schools in Indianapolis. Educational Choice Charitable Trust. Tim Ehrgott, Project Coordinator. ($9k)

2001 - 2002 (Winter) Analysis of the Allocation of Fiscal and Human Resources in Kansas School Districts. United School Administrators of Kansas. Brilla Highfill-Scott, Project Coordinator. ($2k)

2001 (Summer). Analysis of State Funding Programs for Limited English Proficient Students. Project Director: Paul Markham, University of Kansas.

2001 (Winter - Present). Expert Witness for plaintiffs in case of *Robinson v. State of Kansas* (U.S. Dist. Ct. Case No. 99-1193-MLB). The federal case charges that the current Kansas school funding formula (a) violates the enactment provisions of Title VI of the Civil Rights Act of 1964 by creating disparate impact by race, ethnicity or national origin (b) violates the Americans with Disabilities Act by creating disparate impact on students with disabilities and (c) violates equal protection. Attorneys for the plaintiffs: John Robb of Somers, Robb & Robb, Newton, KS and Alan Rupe of Husch & Eppenberger, LLC, Wichita, KS.

2001 (Winter – Present). Expert Witness for plaintiffs in case of *Montoy v. State of Kansas* (No. 99-C-1788 (Shawnee County Dist.Ct.). The state case charges that the current Kansas school funding formula does not meet the state's constitutional requirement of providing for a "suitable" system of public education. Attorneys for the plaintiffs: John Robb of Somers, Robb & Robb, Newton, KS and Alan Rupe of Husch & Eppenberger, LLC, Wichita, KS.

1999 (Winter). Statistical Consultant, Mayor's Advisory Task Force on the City University of New York. Provided support on statistical analysis of predictors of remedial needs for students moving from NYC k-12 public schools to the City University system for *Bridging the Gap Between School and College: A Report on Remediation in New York City Education.* Commission Chair: Benno Schmidt. Research Project Coordinator: Miriam Cilo. Collaborating Researcher: Bruce S. Cooper, Fordham University.

1999 (Winter). Policy Consultant, Council for Exceptional Children. Prepared policy briefs for Council for Exceptional Children in support of federal legislation for gifted education. Briefs requested by Jay McIntire, Policy Specialist for Governmental Relations, Department of Public Policy, CEC.

1996 – 1997. Research Assistant, Department of Organization and Leadership. Teachers College of Columbia University. NY, NY. Assistant to Dr. Craig E. Richards on *Developing Multidimensional Computer Simulations for Strategic Planning in Education* supported by an internal grant from Teachers College for curriculum development.

1994 – 1995. Research Assistant, Department of Educational Administration (Teachers College) & Economic Policy Institute. Assistant to Dr. Craig E. Richards on a grant from the Economic Policy Institute. Analyzed contractual issues and finances of Education Alternatives Inc. in Baltimore for a book titled Risky Business: Private Management of Public Schools.

S. EXPERT WITNESS TESTIMONY BY CASE

2018-Present: Bradford v. Maryland

2018-Present: Glendale Elem. Sch. District v. Arizona

2017-Present: Shelby County v. Haslam (TN)

Initial Report: March 2017

Second Report: May 2018

2014-Present: Chicago Teachers Union v. Chicago Board of Education

Reports Submitted – 2017-2018

Depositions – 2017-2018

2010 – Present: *CCJEF v. State of Connecticut*

Reports Submitted - 2011 & 2013

Trial Testimony - February 2016

2009 – Present: *Maisto v. New York*

Trial Testimony - March 2015

Reports Submitted - 2011 & 2013

2012- ????: *Texas Taxpayer & Student Fairness Coalition v. Scott*

Position: The Texas school finance system fails to provide equal educational opportunity to Texas schoolchildren

Report Submitted – August, 2012

Deposition Taken – October, 2012

Trial Testimony – November, 2012

2012 – 2012: *Chester Upland School District v. Commonwealth of Pennsylvania*

Position: The Pennsylvania special education finance formula and charter school funding formula arbitrarily and capriciously disadvantage CUSD

Report Submitted – May 2012

Trial Testimony – May 2012

Eastern District Court of Pennsylvania (Federal)

2011 – Present: *Gannon v. Kansas*

Position: Plaintiffs against state on question of whether finance formula complies with judicial order in Montoy v. Kansas

Report Submitted – November, 2011

Deposition Taken – December, 2011

Trial Testimony – June, 2012

Shawnee County District Court (Kansas)

2010 – 2011: *Lobato v. State of Colorado*

Position: Plaintiffs against state on question of whether Colorado school finance formula complies with equity and adequacy provisions of state constitution.

Report Submitted – March 17, 2011

Deposition Taken – June 22, 2011

Trial Testimony – August 5, 2011

Contact, Kathleen Gebhardt, kgebhardt@childrens-voices.org

2009 – Present: *Chicago Urban League v. Illinois State Board of Education*

2009: *Abbott v. Burke*

Position: Plaintiffs against state on question of whether process used to derive School Finance Reform Act establishes sufficient link between mandated outcomes and resources needed for children attending high poverty urban districts.

Report Submitted - Jan 21, 2009

Deposition Taken - Jan 30, 2009

Trial Testimony - Feb 20, 2009

Contact: David Sciarra, Education Law Center, Newark, NJ.

2008 – Present: *C.G. vs. Commonwealth of Pennsylvania*

Position: Plaintiffs against state on question of inequities arising from census based financing of special education

Report Submitted - Dec 1, 2008

Contact: Evalynn Welling, Community Justice Project. Pittsburgh, PA.

Middle District Court of Pennsylvania (Federal)

2007 – 2008: *Espinoza v. State of Arizona*

Position: Plaintiffs against state on question of whether Arizona school funding formula provides equal educational opportunity for poor and non-English speaking children

Report Submitted - Fall 2007

Deposition Taken - Fall 2007

Trial Testimony - Summer 2008

Contact: Tim Hogan, Arizona Center for Law in the Public Interest. Phoenix, AZ.

2004 – 2007: *Committee for Educational Equality, et al. v. State of Missouri* [04CV 323022]

Position: Plaintiffs against state on question of whether Missouri school funding formula provides equal educational opportunity for poor and minority children

Report Submitted - Fall 2006

Deposition Taken - Fall 2006

Trial Testimony - Winter 2007

Contact: Alex Bartlett, Husch-Blackwell-Sanders. Jefferson City, MO.

2004 – Present: *Douglas County School District v. Heineman (Nebraska)*

Position: Plaintiffs against state on question of whether Nebraska school funding formula provides equal educational opportunity for poor and minority children

First Report Submitted - Fall 2005

Supplemental Report Submitted - Fall 2007

Deposition Taken - Winter 2008

Contact: Jill Robb Ackerman, Baird Holm Law Firm. Omaha, NE.

2003 – 2006: *Montoy v. Kansas.* No. 92,032

Position: Plaintiffs against state on question of whether Kansas school funding formula provides equal educational opportunity or educational adequacy for poor and minority children

First Report Submitted - Spring 2003

Additional Reports Submitted - Through 2006

Deposition Taken - Spring/Summer 2003

Trial Testimony - Fall 2003

Contact: Alan Rupe, Kutak Rock. Wichita, KS.

2003 – 2005: *Robinson v. Kansas.* 295 F.3d 1183

First Report Submitted - Winter 2003
Deposition Taken - Spring/Summer 2003
Contact: Alan Rupe, Kutak Rock. Wichita, KS.

T. PROFESSIONAL ORGANIZATIONS & SERVICE

National

2009 – Present: NEA Task Force on Indicators
2007 – Present: UCEA Task Force on Leadership Preparation.
2005 – Fall: Nominating Committee for candidates for the Executive Committee of University Council on Educational Administration.
2005 – Spring: AERA Division A Dissertation Award Committee
2003 – 2004: Program Chair - AERA Special Interest Group: Fiscal Issues and Policy
2002 – 2003: Member – State Policy Task Force, National Association for Gifted Children
2002 – 2003: Chair - AERA Special Interest Group: Charter Schools Research and Evaluation
2000 – 2002: Secretary/Treasurer - AERA Special Interest Group: Charter Schools Research and Evaluation.
2000 - Present: Webmaster - AERA Special Interest Group: Charter Schools Research and Evaluation. www.csre.org
1997 - Present: Plenum Representative, University Council on Educational Administration
1996 - Present: Member, American Educational Research Association (Divisions A & L)
1996 - Present: Member, American Educational Finance Association

Regional

1998: Coordinator: Technology for Effective Educational Leadership. Regional UCEA Seminar on the uses of Computer Technology for 1) Information Management 2) Content Delivery and 3) Decision Making Analysis. (Postponed)

State

2002: Governor's (Bill Graves) Vision 21st Century Task Force. Member of the subcommittee on *K-12 Education: Financing for Results.* Task Force Chair: Lieutenant Governor Gary Sherrer.
2000: Governor's (Bill Graves) Vision 21st Century Task Force. Member of the subcommittee on *K-12 Education: Financing for Results.* Task Force Chair: Lieutenant Governor Gary Sherrer.

University

2003 – 2008: Executive Committee, Graduate Council
2000 – 2008: Graduate Council
2001 (Spring) - Reviewer for Graduate Teaching Assistant awards

School

2004 – Present: Personnel Committee

Department

1998 – 2000: Personnel Committee
1998 – Present: Faculty Representative to KAW Valley Purchasing Coop.
1997 – 1999: Member, T&L Operations Committee
1997 – 1998: Ad-Hoc Planning Team, Instructional Leadership Program

U. EDITORIAL RESPONSIBILITIES

Editorial Boards

Journal of Education Finance. Editor: James Gordon Ward. Association of School Business Officials International
Journal of Education Finance and Policy. Editors: David Monk & David Figlio. MIT Press.
2001 – 2003 Leadership and Policy in Schools

Journal Reviewer

Teachers College Record
Leadership and Policy in Schools
Journal of Education Finance
Education Finance & Policy
Education Policy Analysis Archives
Educational Evaluation and Policy Analysis
Economics of Education Review
Educational Administration Quarterly
Journal of Statistics Education (2003)

Grant Reviewer

William T. Grant Foundation (2009)

Policy Review Panels[47]

National External Policy Review Panel (Kevin Welner, Coordinator)
Texas School Finance Project 2005
School Finance Redesign Project (http://www.schoolfinanceredesign.org/)

V. TEACHING AND ADVISING

Doctoral Dissertations as Chair

Rutgers University

Kerrigan, S. M. (2019). *Consolidation and reorganization of schools and school districts in the united states from 1993 to 2012: An examination of the influence of state policies and laws on educational restructuring* (Order No. 13812759). Available from Dissertations & Theses @ Rutgers University. (2287048180). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/2287048180?accountid=13626

Weber, M. A., Jr. (2019). *The effects of charter school proliferation and locational decisions on the finances of public district schools* (Order No. 13877230). Available from Dissertations & Theses @ Rutgers University. (2315248375). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/2315248375?accountid=13626

Crespo, C. I. (2016). *Distributed school leadership and its influence on teaching capacity: A case study from teachers' perspective* (Order No. 10582871). Available from Dissertations & Theses @ Rutgers University. (1879738137). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/1879738137?accountid=13626

[47] Involve academic review of policy proposals and related policy research

Rich, A. A. (2015). *The intervention and referral process: Purpose, uses, and implications* (Order No. 3684434). Available from Dissertations & Theses @ Rutgers University. (1663938814). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/1663938814?accountid=13626

Gristina, M. (2014). *A descriptive analysis of the principalship in new jersey: 1996–2011* (Order No. 3613595). Available from Dissertations & Theses @ Rutgers University. (1504644372). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/1504644372?accountid=13626

Palmieri, J. R. (2014). *210RW1S34RfeSDcfkexd09rT3st1RW1S34RfeSDcfkexd09rT3 century girls' schools: For what reasons are new independent girls' schools opening in the united states?*(Order No. 3613599). Available from Dissertations & Theses @ Rutgers University. (1504644421). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/1504644421?accountid=13626

Casarico, P. (2013). *Factors affecting the distribution and access to athletic opportunities for new jersey high school students* (Order No. 3572622). Available from Dissertations & Theses @ Rutgers University. (1432160945). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/1432160945?accountid=13626

Kirk, K. L. (2013). *Personnel allocation in middle schools in the state of new jersey: An examination of school context, accountability pressure, and teacher assignments* (Order No. 3566490). Available from Dissertations & Theses @ Rutgers University. (1377195318). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/1377195318?accountid=13626

Zengel, S. (2010). *An analysis of athletic expenditures in new jersey schools* (Order No. 1483610). Available from Dissertations & Theses @ Rutgers University. (837430712). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/837430712?accountid=13626

University of Kansas (while at Rutgers)

Charles Belt (2010) Factors affecting principal turnover: A study of three Midwestern cities (co-chaired with Mickey Imber)

Craig Correll (2010) Principal participation in induction programs: Evidence from the Schools and Staffing Survey

Gretchen Anderson (2010) The effect of participation in teacher induction and mentor programs and the assignment of mentor teacher on the satisfaction and retention of new teachers (co-chaired with Marc Mahlios)

University of Kansas

Brian Huff (2002) Systems modeling for integrated fiscal planning in education

Michael Sullivan (2004) The allocation of resources in Catholic schools

Pamela Best (2005) Benefit-cost analysis of the Kansas Computerized Assessment (KCA): Implications for equity and cost-effectiveness in the allocation and use of educational resources

Paul Wooten (2006) The impact of business and industry tax appeals on education funding in Missouri

Michele Norman (2006) How much leave do school employees utilize? An analysis of sick leave policies and their relationship to the amount of leave used by school employees in Missouri public schools

Carolyn Carlson (2007) An examination of secondary reading specialists: Demographic, training, and employment characteristics

Mike Slagle (2007) A geographically weighted regression approach for explaining spatial variation among school districts in a median voter model of education demand

Eric Punswick (2008) Elementary principals' backgrounds, stability, moves, and departures: Evidence from Iowa, Minnesota, Missouri, and Wisconsin

Doctoral Dissertations as Committee Member

Yuan Hong (2010) A comparison among major value-added models: A general model approach
Brian Smith (2005) An investigation of the use of canine searches in Kansas high schools
Darrell Stufflebeam (2005) Suspicionless drug testing of students in Kansas public schools
Jean McCally (2004) Educational administration doctoral recipients in the state of Kansas and their pursuit of the superintendency: A study of gender differences
Helen Jenkins (2003) A study of risk management practices in K--12 Kansas school districts
Frank Jones (2003) Endowed teaching chairs at independent schools: Two case studies
Scott Strawn (2003) Herding cats with carrots and sticks: Performance funding, governance structures and faculty productivity
Christine Keller-Wolf (2003) Moving forward or standing still? Progress in achieving wage equity for women faculty in the 1990s
Jill Smith (2003) Reference checking and reference giving practices of Kansas school districts: A legal analysis
Todd Covault (2001) Early retirement incentive programs in Kansas school districts: Issues of compliance with state and federal law
Glenn Walker (2000) The effect of block scheduling on mathematics achievement in high and low SES secondary schools

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College of Education and Social Services
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Phone: 802.656.0174
Google scholar profile: https://scholar.google.com/citations?user=5MTVGBkAAAAJ&hl=en

EDUCATION

Degrees

Ed.D. University of Vermont, Education Leadership and Policy Studies (October 2005)
M.S. The Pennsylvania State University, Public Policy Analysis and Evaluation (August 1997)
B.A. Kalamazoo College, Political Science, with concentration in Public Policy & Urban Affairs (June 1992)

Non-degree Education

U.S. Department of Education, Institute for Education Sciences, Summer Training Institute: Quasi Experimental Design and Analysis in Education (Summer 2011)

American Educational Research Association (AERA) Institute on Statistical Analysis for Educational Policy (Schools and Staffing Survey & Teacher Follow Up Survey) (Summer 2005)

PROFESSIONAL EXPERIENCE

May 2019- Present	University of Vermont (Burlington, VT) Associate Professor (with tenure), Department of Leadership & Developmental Sciences
Sept. 2012- 2019	University of Vermont (Burlington, VT) Assistant Professor, Department of Leadership & Developmental Sciences
Sept. 2010- May 2012	University of Connecticut (Storrs, CT) Assistant Research Prsofessor, Department of Educational Leadership and Center for Education Policy Analysis
Aug. 2008- Aug. 2010	Florida State University (Tallahassee, FL) Assistant Professor, Department of Educational Leadership and Policy Studies
July 2005- July 2008	The University of Maryland (College Park, MD) Post-Doctoral Fellow (with Jennifer Rice)**,** Department of Education Policy and Leadership
March 2001- Aug. 2009	Abt Associates Inc. (Bethesda, Maryland) Director of Human Subjects Protection/IRB Administrator (2002-2009) Research Associate, Social & Economic Policy Division (2002-2005) Senior Survey Director (2001-2002)
March 1997- Feb. 2001	ORC Macro (Formerly Macro International, Inc.) (Burlington, Vermont) Survey Director
Aug. 1994-	State of New York, Executive Office, Division of the Budget (Albany, NY)

Aug. 1996	Fiscal Policy Analyst
Aug. 1992- Aug. 1994	The Pennsylvania State University (State College, PA) Graduate Fellowship, Department of Economics
Fall 1991- Summer 1993	The Evaluation Center, Western Michigan University (Kalamazoo, Michigan) Research Assistant

AWARDS

AERA Division L Outstanding Policy Report (Long) Award (2019)

Kroepsch-Maurice Excellence in Teaching Award (University of Vermont; Nominee for 2019)

Finalist, Association for the Advancement of Sustainability in Higher Education's 2017 Campus Sustainability Research Award (2017; nominated for outstanding paper published in *International Journal of Sustainability in Higher Education)*

Provost Teaching Commendation, Florida State University (Fall 2008, Spring & Fall, 2009, Spring 2010)

Post-doctoral Fellowship. Competitively awarded by the American Educational Research Association/U.S. Department of Education, Institute for Education Sciences (July 2005-July 2008)

EXTERNAL FUNDING GENERATED

(Includes funded projects where I was the lead or co-lead grant writer and does not include funded grants where I played supportive roles.)

Study of Pupil Weights in Vermont's Education Funding Formula (2018-2020) Vermont Agency of Education (Principal Investigator; $250,000)

Equity and Adequacy in Special Education Funding (2018) National Education Policy Center (Principal Investigator, $4,000)

Evaluating Census-based Funding Models for Special Education. (2018) James M. Jeffords Grant/Award for Policy Studies (Principal Investigator; $9,351)

Special Education Finance Reform in Vermont. (2016-2017) Vermont Agency of Education. (Principal Investigator; $86,358)

Understanding Post-Secondary Education Costs. (2015-16) Wisconsin HOPE Lab/The Great Lakes Foundation. (Principal Investigator; $21,537)

Collaborative Data Use by Teacher Decision-making Teams to Support Instructional Interventions for Struggling Students. (January 2014 – December 2016) The Spencer Foundation. (Co-principal investigators with Katharine Shepherd & George Salembier, University of Vermont; $299,430)

Cost of Implementing Massachusetts' Student Discipline Law: Report to the Legislature. (2013) Massachusetts Department of Elementary and Secondary Education. (Co-principal investigator with Jennifer Poulous, Rennie Center for Education Policy & Fran O'Reilly, EBERE; Sub-award: $15,000)

Assessing Student Performance in Windham Public Schools. (2010-11) Connecticut State Department of Education. (Co-principal investigator with Casey Cobb, University of Connecticut; $17,489)

Cost-effectiveness of Alternative Education Models in Massachusetts. (2011-12) Massachusetts Department of Elementary and Secondary Education. (Principal investigator; $20,000)

Costs of Expanded Learning Time Initiatives in Massachusetts Schools. (2010-11) National Center on Time and Learning. (Co-principal investigator with Fran O'Reilly, EBERE; $48,514)

Distribution Teacher and Teaching Quality: A Profile of Connecticut Districts. (2010-11) Connecticut Coalition for Justice in Education Finance. (Co-investigator with Morgaen Donaldson, University of Connecticut & Jennifer Rice, University of Maryland; $78,209)

Special Education Conditions, Opportunities, and Resources in Connecticut. (2010-11) Connecticut Coalition for Justice in Education Finance. (Co-investigator with Margaret McLaughlin, University of Maryland; $49,387)

A National Profile of Time and Learning in Districts and Schools. (2009-10) National Center on Time and Learning. (Principal investigator; $15,000)

Evaluating Costs and Effects of Expanded Learning Time Initiatives: A Pilot Study. (2010) Florida State University, COFRS. (Principal investigator; $14,000)

Economic Incentives as a Strategy for Recruiting and Retaining Teachers: A Baseline Profile. Florida State University, First Year Assistant Professor Grant Program. (Principal investigator, $17,000)

A Review and Critique Special Education Components of New Jersey's Education Finance Program. The Education Law Center. (Co-investigator with Margaret McLaughlin, University of Maryland; $21,970)

RESEARCH & SCHOLARSHIP

Peer-reviewed Journal Articles

11. **Kolbe**, T., Steele, C.*, White, B.* (2021). Time to teach: Instructional time and science teachers' use of inquiry-oriented instructional practices. *Teachers College Record*, *123*(2).

10. **Kolbe**, T. & Baker, B. (2019) Fiscal Equity and America's Community Colleges, *The Journal of Higher Education*, 90:1, 111-149 (doi: 10.1080/00221546.2018.1442984)

9. **Kolbe**, T., Kinsley, P., Feldman, RC & Goldrick-Rab, S. (2018) From the (Academic) middle to the top: an evaluation of the AVID/TOPS college access program, *Journal of Education for Students Placed at Risk (JESPAR)*, 23:4, 304-335 (doi: 10.1080/10824669.2018.1530114)

8. **Kolbe**, T. & Jorgenson, S. (2018).*)* Meeting the demand of new standards for middle-level science: Which teachers are best prepared? *Elementary School Journal,118*(4), 549-577 (doi:10.1086/697540)

7. **Kolbe**, T. & O'Reilly, F. (2016) The cost of increasing in-school time: Evidence from the Massachusetts Expanded Learning Time Initiative. *Leadership & Policy in Schools, 16*(4), 563-601. (doi: 10.1080/15700763.2016.1232832)

6. Goldrick-Rab, S. & **Kolbe**, T. (2016). A matter of trust: Applying insights from social psychology to make college affordable. *Policy Insights from the Behavioral & Brain Sciences, 3*(2), 237-244. (doi: 10.1177/2372732216656457)

5. Natkin, L.* & **Kolbe**, T. (2016). Enhancing sustainability curriculum through faculty learning communities. *International Journal of Sustainability in Higher Education, 16*(4), 540-558. (doi:10.1108/IJSHE-02-2015-0024)

4. **Kolbe**, T. & Strunk, K. (2012). Economic incentives as a strategy for responding to teacher staffing problems: A typology of policies and practices. *Educational Administration Quarterly, 48*(5), 779-813. (doi:10.1177/0013161X12441011)

3. **Kolbe**, T. & Rice, J. (2012). And they're off: Tracking federal Race To The Top investments from the starting gate." *Educational Policy, 26*(1), 185-209. (doi:10.1177/0895904811428975)

2. Rice, J., Roellke, C., Sparks, D., & **Kolbe**, T. (2009). Piecing together the teacher policy landscape: Multi-level case study findings from three states. *Teachers College Record, 111*(2), 511-546.

1. Hamilton, W. L., diStefano Norton, G., **Ouellette**, T.K., Rhodes, W., Kling, R., & Connolly, G. (2004). Smokers' responses to advertisements for regular and light cigarettes and potential reduced exposure tobacco products. *Nicotine & Tobacco Research*, *6*(3), 353-362. (doi:10.1080/14622200412331320752)

Other Articles

1. Goldrick-Rab, S. & **Kolbe**, T. (September 28, 2015.) "Rethinking state support for higher education." *Inside Higher Education.* (Retrieved at: https://www.insidehighered.com/views/2015/09/28/essay-need-consider-which-institutions-should-bear-brunt-state-cuts-public-higher)

Book Chapters

6. Baker, B., **Kolbe**, T. & Levin, J. (*In press)*. Toward equitable and adequate public financing of community colleges: Lessons from K-12 schooling. In J. Rice & C. Roellke, (Ed.) *Fiscal issues in higher education.* Information Age Publishing.

5. **Kolbe,** T. & Kelchen, R. (*In press)*. Aligning Questions with Data: A Critical Review of the IPEDS Finance Survey. In J. Rice & C. Roellke, (Ed.) *Fiscal issues in higher education.* Information Age Publishing.

4. **Kolbe**, T. & Feldman, R.* (2018). Estimating educational policy & program costs. In C. Lochmiller, (Ed.), *Complimentary research methods in educational leadership and policy*. New York: Palgrave MacMillan.

3. **Kolbe**, T., Shepherd, K. & Sessions, J.* (2018). Moving beyond academic achievement: Using non-academic data to identify and support struggling students. In H. R. Fives, & N. Barnes (Eds.), *Cases of teachers' data use.* New York: Routledge.

2. Monaghan, D., **Kolbe,** T., & Goldrick-Rab, S. (*2018*). Improving outcomes at community colleges: Experimental evidence on interventions. In B. Schneider (Ed.), *Handbook of the sociology of education in the 21st century*. New York: Springer International Publishing.

1. **Kolbe**, T. & Rice, J. (2009). Are we there yet? The distribution of teacher qualifications post-NCLB. In J. Rice& C. Roellke (Ed.), *The cost of accountability: Implications of high stakes education policies on resources and capacity.* Charlotte, NC: Information Age.

Policy Reports (Selected)

26. **Kolbe, T.,** Baker, B., Atchison, D., & Levin, J. (2020, December). *Study of pupil weights in Vermont's education funding formula.* Burlington, VT: University of Vermont. https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf
25. **Kolbe, T.** (2019, June*). Confronting complexity & crafting coherence: Charting a path forward for funding special education.* Boulder, CO: National Education Policy Center. https://nepc.colorado.edu/sites/default/files/publications/PB%20Kolbe_0.pdf

24. **Kolbe, T.** & French, D. (2019, January). *Report on Student-to-Staff Ratios.* Barre, VT: Vermont Agency of Education. https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-student-to-staff-ratios-2019.pdf

23. **Kolbe, T.** & Killeen, K. (2017). *Study of Vermont state funding for special education.* Burlington, VT: University of Vermont. https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-special-education-funding-study-executive-summary-and-full-report.pdf

22. **Kolbe,** T., & Kelchen, R. (2017). *Identifying new metrics using IPEDS data.* Washington DC: National Postsecondary Education Cooperative, U.S. Department of Education, National Center for Educational Statistics. (https://nces.ed.gov/ipeds/pdf/npec/data/NPEC_Paper_New_IPEDS_Finance_Metrics_2017.pdf)

21. **Kolbe**, T. & Feldman, R. (2016). *Evaluation of the AVID/TOPS program's resources & costs.* Madison, WI: The Wisconsin HOPE Lab. (http://wihopelab.com/publications/AVID-TOPS-Cost-Resource-Analysis.pdf)

20. Farbman, D., **Kolbe**, T., & Steele, C. (2015). *Time and learning in schools: An updated profile.* Boston, MA: National Center on Time and Learning. (http://m.timeandlearning.org/sites/default/files/resources/sass_2015final.pdf)

19. **Kolbe**, T. (2014). *The cost of alternative education: A comparison of high performing alternative education sites in Massachusetts.* Boston, MA: Massachusetts Department of Elementary and Secondary Education.

18. Rennie Center for Education Policy (by J. Poulus, F. O'Reilly, & T. **Kolbe**). (2013). *Report to the Legislature: Study of the cost of implementing the study discipline law.* Boston, MA: Massachusetts Department of Elementary and Secondary Education. (http://www.doe.mass.edu/research/reports/2013/11StudentDisciplineLawCost.docx)

17. **Kolbe**, T., Donaldson, M. & Rice, J. (2013). *An evaluation of disparities in instructional quality across Connecticut school districts.* Storrs, CT: University of Connecticut, Center for Education Policy Analysis.

16. **Kolbe**, T., McLaughlin, M. & O'Reilly, F. (2013). *Special education conditions, opportunities & resources in Connecticut.* Storrs, CT: University of Connecticut, Center for Education Policy Analysis.

15. **Kolbe**, T. & O'Reilly, F. (2013. *More time in school: A cost analysis of school-based efforts to lengthen the school day.* Boston, MA: Massachusetts Department of Elementary and Secondary Education. (http://www.doemass.org/research/reports/2012/10ELT-CostAnalysis.pdf)

14. O'Reilly, F. & **Kolbe**, T. (2011). *Where does the money go? Expenditures for the Massachusetts Expanded Learning Time Initiative.* Boston, MA: Massachusetts Department of Elementary and Secondary Education. (http://www.doe.mass.edu/research/reports/2011/12ELT-Expenditures.pdf)

13. Cobb, C. & **Kolbe**, T. (2011). *Academic performance of students in Windham Public Schools.* Hartford, CT: Connecticut State Department of Education.

12. **Kolbe**, T. & Partridge, M. (2010). *Time and learning in schools: A National Profile.* Boston, MA: National Center on Time and Learning. (http://eric.ed.gov/?id=ED534897)

11. **Kolbe**, T., McLaughlin, M., & Mason, L. (2007). *Special education funding in New Jersey: A policy analysis.* Newark, NJ: The Education Law Center. (http://eric.ed.gov/?id=ED504919)

10. **Kolbe**, T. & O'Reilly, F. (2005). *Plans to obtain special education finance data: Final report.* Washington DC: U.S. Department of Education, Office of Special Education Programs.

9. Schiller, E., Bobronnikov, E., Brown-Lyons, M., Burnaska, K., Burstein, N., Fritts, J., Lam, H.K., O'Reilly, F., Ouellette (**Kolbe**), T., Parsad, A., Price, C., & Rollefson, M. (2004). *Study of state and local implementation and impact of the Individuals with Disabilities Education Act: Second interim report for the 2002-2003 school year.* Washington DC: U.S. Department of Education, Office of Special Education Programs.

8. Ouellette (**Kolbe**), T., Burstein, N., Long, D. & Beecroft, E. (2004). *Measures of material hardship: Final report.* Washington DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Office of the Secretary, U. S. Department of Health and Human Services. (http://www.aspe.hhs.gov/hsp/material-hardship04/report.pdf)

7. Long, D. & Ouellette (**Kolbe**), T. (2004). *Private employers and TANF recipients: Final report.* Washington DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. (https://aspe.hhs.gov/report/private-employers-and-tanf-recipients)

6. Ouellette (**Kolbe**), T. (2003). *Comparable evaluation of AFL Care Demonstration Projects by developing a core evaluation instrument.* Washington DC: U.S. Department of Health and Human Services, Office of Population Affairs.

5. Hamilton, C., Ouellette (**Kolbe**), T., Rhodes, W., & Kling, R. (2002). *Consumer responses to advertisements for light and regular cigarettes.* Boston, MA: Massachusetts Department of Public Health, Massachusetts Tobacco Control Program.

4. Hamilton, C., Ouellette (**Kolbe**), T., & Rhodes, W. (2002). *Consumer responses to advertisements for potential reduced-exposure products.* Boston, MA: Massachusetts Department of Public Health, Massachusetts Tobacco Control Program.

3. Ouellette (**Kolbe**), T. (2001). *Where are they now? A study of Vermont Parent and Community Leadership Training (PCLT) program graduate outcomes.* Montpelier, VT: The Vermont Children's Forum.

2. Ouellette (**Kolbe**), T. & Jennings, H. (2000). *Producing and documenting data files: Guidance for ASPE Welfare Outcomes Grantees.* Washington DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. (https://aspe.hhs.gov/pdf-report/preparing-public-use-data-sets-guidance-aspe-welfare-outcomes-grantees)

1. Marks, E., Dewees, S., Ouellette (**Kolbe**), (1999). T., & Koralek, R. *Rural welfare to work strategies: Research synthesis.* Washington DC: U.S. Department of Health and Human Services, Administration for Children and Families. (http://www.acf.hhs.gov/opre/resource/rural-welfare-to-work-strategies-research-synthesis)

Invited Presentations

3. **Kolbe**, T. & Kelchen, R. (2018, October). Invited Presentation – Recommendations for changes to the IPEDS Finance Survey. National Center for Education Statistics, Technical Workgroup for IPEDS Finance Survey. (Washington DC)

2. **Kolbe,** T. & Kelchen, R. (2017, November). Invited Presentation – Framework for Using the IPEDS Finance Survey to investigate higher education costs. National Postsecondary Education Collaborative, Quarterly Meeting. (Washington DC)

1. **Kolbe,** T. (2016, November). Invited Reactor: Presidential Session - Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream: A Conversation About Making College Affordable. (annual meeting of the Association for the Study of Higher Education, Columbus, OH).

Instructional Materials

1. **Kolbe**, T. & Killeen, K. M. (2005). A NILDSPAR instructional module: Measuring organizational justice. [Instructional guide; PowerPoint presentation; spreadsheet data file]. Burlington, Vermont: National Institute for Leadership, Disability and Students Placed at Risk.

Peer-reviewed Presentations (Selected)

30. **Kolbe,** T. & Dhuey, B. (2020, March). When money shouldn't matter: The relationship between general education spending & special education identification. (Paper presented at the annual meeting of the Association for Education Finance and Policy, Ft Worth, TX)

29. **Kolbe**, T. & Kelchen, R. (2018, April). Aligning questions with data: A framework for using the IPEDS finance survey to investigate higher education finance. (Paper presented at the annual meeting of the American Educational Research Association, New York, NY).

28. **Kolbe,** T., Killen, K., & Levin, J. (2018, March). Estimating the cost of educating students with disabilities. (Paper presented at the annual meeting of the Association for Education Finance and Policy, Portland, OR)

27. **Kolbe,** T. & Bowden, B. (2017, November). Incorporating Resources & Cost Information in Studies of Education Program and Policy Implementation. (Paper presented at the annual meeting of the Association for Public Policy & Management, Chicago, IL).

26. **Kolbe,** T. & Jorgenson, S. (2017, March). *Meeting the Demand of New Standards for Middle-Level Science: Which Teachers Are Best Prepared?* (Paper presented at the annual meeting of the Association for Education Finance and Policy, Washington DC)

25. **Kolbe**, T. & Feldman, R. (2016, March). *Implementing the AVID/TOPS pre-college program: A resource utilization & cost study.* (Paper presented at the annual meeting of the Association for Education Finance and Policy, Denver, CO)

24. **Kolbe**, T. & White, B. (2015, April). *Instructional resources & students' opportunities to learn science* (Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

23. **Kolbe**, T., Partridge, M., & Steele, C. (2015, February.) *More time, more learning? The effects of instructional time on science achievement.* (Paper presented at the annual meeting of the Association of Education Finance and Policy, Washington DC.)

22. **Kolbe**, T., Steele, C. & White, B. (2014, March.) *Instructional time & instructional practices: The effect of time on teachers' use of inquiry-based science instruction.* (Paper presented at the annual meeting of the Association of Education Finance and Policy, San Antonio, TX.)

21. **Kolbe**, T., Donaldson, M. & Rice, J. (2013, March.) *Assessing differences in instructional quality across school districts: A new conceptual and empirical framework.* (Paper presented at the annual meeting of the Association of Education Finance and Policy, New Orleans, LA.)

20. **Kolbe**, T. & O'Reilly, F. (2011, March). *More time in school: A cost analysis of school-based efforts to lengthen the school day.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. (Paper also presented at the annual meeting of the Association of Education Finance and Policy, Seattle, WA.)

19. **Kolbe**, T. & Strunk, K. (2010, March). *Economic incentives as a strategy for responding to teacher staffing problems: A typology of policies and practices.* Paper presented at the annual meeting of the Association of Education Finance and Policy, Richmond, VA.

18. **Kolbe**, T. (2009, March). *The Intersection of Policy, Practice and Resources and Student Identification and Labeling for Special Education.* Paper presented at the annual meeting of the American Education Finance Association, Nashville, TN.

17. Mason, L. M. & **Kolbe**, T. (2008, April). *The shortage of highly qualified special education teachers: Implications for teacher supply and demand.* Paper presented at the annual meeting of the Council for Exceptional Children, Boston, MA.

16. **Kolbe**, T., McLaughlin, M., & Mason, L.* (2008, April). *Special education funding in New Jersey: A policy analysis.* Paper presented at the annual meeting of the American Education Finance Association, Denver, CO.

15. **Kolbe**, T., Lassetier, A. & Rice, J. (2008, April) *Timing is everything: The influence of school district job offer timing on the qualifications of newly hired teachers.* Paper presented at the annual meeting of the American Education Finance Association, Denver, CO.

14. **Kolbe**, T. & Sparks, D.+ (2008, April) *The more things change, the more they stay the same: The prevalence and distribution of out-of-field teaching reconsidered.* Paper presented at the annual meeting of the American Education Finance Association, Denver, CO.

13. **Kolbe**, T. (2007, April). *Are we there yet? The distribution of highly qualified teachers pre- and post- No Child Left Behind.* Poster session presented at the annual meeting of the American Education Research Association, Chicago, IL.

12. Rice, J. & **Kolbe**, T. (2007, April). *Linking teacher policy with local context: An analysis of policy-problem alignment.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

11. **Kolbe**, T. (2007, March). *Are we there yet? The distribution of highly qualified teachers pre- and post- No Child Left Behind.* Paper presented at the annual meeting of the American Education Finance Association, Baltimore, MD.

10. **Kolbe**, T. (2006, April). *Building schools' capacity to better educate all students: Lessons from Vermont.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

9. **Kolbe**, T. & Rice, J. (2006, April). *National profile of teacher staffing policy: Incidence & interactions.* Poster session presented at the annual meeting of the American Education Research Association, San Francisco, CA.

8. **Kolbe** T. & O'Reilly, F. (2006, March). *Discovering the bottom line: A model for future studies of special education finance.* Paper presented at the annual meeting of the American Education Finance Association, Denver, CO.

7. **Kolbe**, T. & Rice, J. (2006, March). *National profile of teacher staffing policy: Incidence & interactions.* Paper presented at the annual meeting of the American Education Finance Association, Denver, CO.

6. O'Reilly, F., Ouellette (**Kolbe**), T., & Schiller, E. (2005, March). *School and district resources for special education: Who has what? What difference does it make for students with disabilities?* Paper presented at the annual meeting of the American Education Finance Association, Louisville, KY.

5. Henderson, K., Schiller, E., O'Reilly, F., & Ouellette (**Kolbe**), T. (2004, April). *Addressing challenging behaviors: The influence of special education policy on districts and schools.* Paper presented at the annual meeting of the American Education Research Association, San Diego, CA.

4. Ouellette (**Kolbe**), T. (2004, March). *Reducing Vermont's special education costs through Educational Support Systems: Lessons from a cost analysis.* Paper presented at the annual meeting of the American Education Finance Association, Salt Lake City, UT.

3. Ouellette (**Kolbe**), T. & Jennings, H. (2000, August). *Producing and documenting public use data files for welfare outcomes data.* Paper presented at annual meeting of the National Association for Welfare Research and Statistics (NAWRS), Phoenix, AZ.

2. Dunton, N. & Ouellette (**Kolbe**), T. (1999, August). *A profile of welfare leavers in Missouri.* Paper presented at the annual meeting of the National Association for Welfare Research and Statistics (NAWRS), Cleveland, OH.

1. Ouellette (**Kolbe**), T. (1999, August). *Tips and tricks for obtaining high response rates in surveys with low-income populations.* Paper presented at the annual meeting of the National Association for Welfare Research and Statistics (NAWRS), Cleveland, OH.

MEDIA APPEARANCES/MENTIONS

6. Top of Mind with Julie Rose, Brigham Young Public Radio. (July 19, 2018). "The science of good science teachers." https://www.byuradio.org/episode/8ca08ef0-846f-458e-9612-3a83acf4da07/top-of-mind-with-julie-rose-students-skipping-tests-what-makes-a-good-science-teacher-with-grace-b-bold

5. Education Week. (July 12, 2018). Iasevoli, B. "Science degree holders more likely to use inquiry-based teaching. But there aren't enough of them." http://blogs.edweek.org/edweek/curriculum/2018/07/science_degree_holders_more_likely.html

4. Governor's Press Release. (May 25, 2018). "Governor Phil Scott signs bill to improve effectiveness of special education services at Vermont public schools." http://governor.vermont.gov/press-release/governor-phil-scott-signs-bill-improve-effectiveness-special-education-services

3. Vermont Digger. (February 4, 2018). Pache, T. "Special education students could be better served for less, studies say." https://vtdigger.org/2018/02/04/struggling-vermont-students-could-be-better-served-for-less-studies-say/

2. The Atlantic. (September 30, 2016.) McKenna, L. "The Unnecessarily Mysterious Cost of College" (http://www.theatlantic.com/education/archive/2016/09/the-unnecessarily-mysterious-cost-of-college/502403/)

1. Vermont Public Radio, Vermont Edition with Nina Keck. (January 14, 2014.) "The future of education in Vermont." (http://digital.vpr.net/post/future-education-vermont#stream/0) (Radio Interview)

SERVICE

National & State

Editorial Board Memberships

National Education Policy Center (NEPC) (2014-present)
Journal of Education Finance (2013-present)
Journal of Higher Education (2016-2018)

Professional Association Conference Paper Proposal Reviewer

American Educational Research Association, Division L - Educational Policy and Politics (2006, 2007, 2008, 2012, 2013, 2014, 2017, 2018)

American Educational Research Association, Division A – Administration, Organization & Leadership (2012, 2013)

American Educational Research Association, Fiscal Issues, Policy, and Education Finance Special Interest Group (SIG) (2007; 2009-2018)

Other Reviewing Activities

Selection committee. National Educational Policy Center, School of Opportunity Award Recognition. (Summer 2017). Reviewer for candidate schools nominated for national award.

Site review committee. National Educational Policy Center, School of Opportunity Award Recognition. (Spring 2016). Site evaluator for schools nominated for national award.

Technical reviewer. U.S. Department of Education, Regional Educational Laboratory (Southeast) (2013) Technical reviewer for selected policy reports.

Expert Panels

Invited speaker. National Center on Special Education in Charter Schools. (Spring 2020) *Special education finance convening.*

Invited participant. The Joyce Foundation. (Fall 2019) *Convening on the future of higher education.*

Chairperson. Statewide Taskforce on Student-to-Staff Ratios. (Fall 2018). *Vermont Agency of Education.*

Expert advisor. Sargent Shriver National Center on Poverty Law. (2018). *Special Education Funding and Equity for Chicago Public Schools.*

Invited participant. The Gates Foundation (Summer 2018). *Postsecondary Success Strategy/Strategic Finance in Higher Education.*

Invited participant. The Century Foundation. (2017- 2019). *Workgroup on Adequacy in Community College funding.*

Invited participant. The Gates Foundation. (October 2016). "*Research Sparks" convening for research in higher education.*

Invited panelist. Educational Testing Service. (June 2016). *Designing sustainable funding models for college promise initiatives convening.*

Invited panelist. White House Domestic Policy Council & White House Council for Economic Advisers. (January 2016). *Invited to brief senior officials on policies related to strengthening community colleges and expanding college opportunities.*

Invited panelist. Wisconsin HOPE Lab. (October 2015). *Costs & productivity in higher education convening.* (Convening summary: http://wihopelab.com/publications/Costs-and-Productivity-in-Higher-Education-Workshop-Summary.pdf)

Invited panelist. Wisconsin HOPE Lab. (July 2015). *Equity & Reasonable Costs in Public Higher Education.* (Convening summary: http://wihopelab.com/news/Wisconsin%20HOPE%20Lab%20Workshop%20on%20Equity%20and%20Reasonable%20Costs%20Convening%20Summary.pdf)

Invited panelist. US Department of Education, National Center for Education Statistics (NCES). (April 2015) *Improvements to the IPEDS Finance Survey, Technical Review Panel.*

Testimony & Policy Advice

Policy advice. Vermont Agency of Education, Special Education Funding Formula Redesign Workgroup (2015-2017)

Legislative testimony. Vermont House & Senate, Education Committee, Testimony on Special Education Funding (March 2016; April 2016; January-March 2018)

Testimony. Vermont State Board of Education, Testimony on Special Education Funding Policy (March 2018)

Expert witness. Connecticut Coalition for Justice in Education Finance. Support for and expert testimony, *CCJEF v. Rell* school finance court case. (2013-2016)

Testimony. Vermont State Board of Education, Testimony on Special Education Funding Policy (March 2015; February 2018)

Legislative testimony. Vermont House of Representatives, Education Committee, Testimony on Complexity in Education Policy & Funding (January 2015; February 2018)

Policy briefing. State of Vermont, Legislative Briefing, presentation on education policymaking. (February 2014)

Policy research & advice. Special Master appointed in the *Petties v. District of Columbia, et al.,* Technical assistance in evaluating District of Columbia Public School special education policies and practices (2008)

Policy advice. Office of the Superintendent, State of Michigan Department of Education, Teacher Vacancies. (Fall 2007)

Advisor. Education Law Center (ELC), Policy analysis related to funding equity in New Jersey's special education programs and services. (Spring 2007)

Service to National Associations

Chair. Fiscal Issues, Policy and Education Finance SIG, American Education Research Association (AERA) (2013-2017)

Dissertation Awards Committee. Fiscal Issues, Policy and Education Finance SIG, American Education Research Association (AERA) (2017)

Annual Meeting Program Coordinator. Fiscal Issues, Policy and Education Finance SIG, American Education Research Association (AERA) (2011-2012; 2016-2020)

Dissertation Awards Committee. Division A (Administration, Organization & Leadership) American Educational Research Association (2007-2008)

Caitlin Kearns

Education

B.A.	2010, Wellesley College, Economics (*with honors*)
Doctoral Studies	Enrolled in Ph.D. program at University of California - Berkeley, Economics

Honors and Awards

Fisher Center for Real Estate Research Grant Program, Haas School of Business, 2017

Graduate Research Fellowship, NSF, 2014

Present Position

Researcher, American Institutes for Research (AIR) (2018–Present)
Responsible for conducting quantitative analyses; cost analyses; survey analyses; technical assistance in quantitative methods. Expertise in program evaluation using quasi-experimental designs.

Professional Experience

Quantitative Analyst, Study of Weighted Student Funding, AIR (2018–2019)
Performed statistical analysis of weighted district and principal survey data for evaluation of resource distribution of districts with and without weighted student funding.

Graduate Student Researcher, Health Care Prices and Market Consolidation in California, Petris Center for Health Care Markets and Consumer Welfare (2018–2019)
Conducted quantitative analysis of insurance claims to measure health care price growth for multiple inpatient and outpatient procedures. Estimated relationship between healthcare market concentration and prices in a fixed effects regression framework. Drafted key sections of report for California legislators.

Graduate Student Researcher, Competing with Charter Schools - Student Selection, Retention, and Achievement in Los Angeles Pilot Schools, UC Berkeley Institute of Human Development (2016–2017)
Conducted quantitative analysis of the impact of pilot high schools in Los Angeles Unified School District. Used double-robust propensity score matching procedure to estimate effects on student achievement and retention within the district. Drafted methods and results sections of journal article.

Graduate Student Researcher, Gauging Growth Unique Identifier Study, UC Berkeley Institute of Human Development (2016–2017)
Facilitated integration of Bay Area preschool records into state CALPADS database. Cleaned preschool records and presented summary of enrollment and QRIS measures to First 5 Santa Clara.

Graduate Student Researcher, Haas School of Business (2016–2017)
Performed quantitative analysis for evaluation of the Home Affordable Refinance Program (HARP). Conducted event study and regression discontinuity analysis of mortgage data and trading data.

Senior Associate Economist, Financial Markets Group, Federal Reserve Bank of Chicago (2010–2014)
Managed 10+ long-term projects from analysis to submission and coordinated with outside academics. Analyzed survey and large panel datasets using instrumental variables, regression discontinuity designs, propensity score matching, and parametric survival models. Developed expertise in Census data, consumer credit reports, mortgage servicer data, HMDA records, and call reports.

Quantitative Intern, Transitions to Adulthood Project, GRADE (2009)
Conducted cleaning and quantitative analysis of survey data on Peruvian secondary school graduates. Reviewed economics and sociology literature on transitions to college and adulthood.

Employment History

2018–Present	Researcher, AIR
2018–2019	Graduate Student Researcher, Petris Center for Health Care Markets
2016–2017	Graduate Student Researcher, Institute of Human Development
2017–2017	Graduate Student Instructor, University of California - Berkeley
2016–2017	Graduate Student Researcher, Haas School of Business
2010–2014	Senior Associate Economist, Federal Reserve Bank of Chicago

Professional Affiliations

American Economic Association (AEA)
Association for Public Policy Analysis and Management (APPAM)

Publications

Journal articles

Butcher, K. F., Kearns, C. M. & McEwan, P. J. (2013). Giving Till it Helps? Alumnae Giving and Children's College Options. *Research in Higher Education, 54*, 499-513.

Technical reports

Amromin, G., & Kearns, C. M. (2014). *Access to Refinancing and Mortgage Interest Rates: HARPing on the Importance of Competition.* (2014-25). Chicago, IL: Federal Reserve Bank of Chicago.

Professional Presentations

Campos, C. Q., and Kearns, C. M. (2020, March). *Options and Opportunity: Evidence from the Zones of Choice.* Presented at the Association for Education Finance and Policy Annual Conference, Fort Worth, TX.

Kearns, C. M. (2019, November). *State School Finance Reforms and Neighborhood Change.* Poster presentation at the Association for Public Policy Analysis and Management Fall Research Conference, Denver, CO.

Kearns, C. M. (2019, April). *What's in a review? Using text analysis to understand how parents value schools.* Poster presentation at the Digital Humanities Fair, Berkeley, CA.

Jay G. Chambers

Education

Ph.D. 1975, Stanford University, Economics
B.A. 1969, San Jose State College, Economics

Honors and Awards

Outstanding Service Award, American Education Finance Association, 2007

Present Position

Senior Research Fellow and a Managing Director, Education Finance Business Development Group, Education and Human Development Program, American Institutes for Research (AIR) (1989–Present)
Responsible for promotional activities; group and project budgets; project development, planning, and management; the establishment of standards of scientific rigor; assurance of quality of proposals and project deliverables; and communications with clients.

Professional Experience

Principal Investigator, Feasibility Study on Improving the Quality of School-Level Expenditure Data
An evaluation for the Office of Planning Evaluation and Policy Development in the U.S. Department of Education.

Principal Investigator, Evaluation of Hawaii's Weighted Student Formula. American Institutes for Research
An evaluation of HI WSF on patterns of resource allocation across all schools within the state.

Principal Investigator, Study of a New Method of Funding for Public Schools in Nevada, for the Nevada Legislative Counsel Bureau, American Institutes for Research
This project analyzed the current method of funding schools in the State of Nevada and made recommendations for revisions in the funding formula.

Task Leader, Resource Allocation Component of the Evaluation of the Empowering Effective Teachers (EET) Initiative, funded by the Bill and Melinda Gates Foundation (2010–Present)
This project examines the implementation, outcomes, and replication of the EET initiative The focus of the evaluation includes alternative compensation for teachers along with s lead on resource allocation task.

Co-Principal Investigator (with James Brown of Pivot Learning Partners), Strategic School Funding for Results (SSFR) (2009–Present)
AIR received funding from the William and Flora Hewlett and Ford Foundations and the Institutes of Education Sciences to support the development, implementation, and evaluation of a pupil- and need-based strategy for distributing resources among schools in two school districts (Los Angeles, Twin Rivers) in CA. The AIR/Pivot team provides the data analysis, technical assistance, coaching, and training to achieve the funding strategies and evaluate their success. Total combined grant amounted to over $3 million.

Employment History

1989–Present	Senior Research Fellow (economics) and Managing Director, Education and Public Sector Finance Group, AIR
1981–1989	President and Senior Economist, Associates for Education Finance and Planning, Inc.
1983–1985	Senior Research Economist, Institute for Research on Educational Finance and Governance, Stanford University
1978–1983	Associate Director and Senior Research Economist, Institute for Research on Educational Finance and Governance, Stanford University
1978	Visiting Scholar at the Center for Educational Research at Stanford University
1975–1978	Assistant Professor, College of Education and Graduate School of Management, University of Rochester, Rochester, NY..
1973–1975	Instructor in Labor Economics, Graduate School of Business, University of Chicago

Selected Professional Affiliations

Editorial board, Education Finance and Policy
President's Commission on Excellence in Special Education
President, American Education Finance Association

Selected Recent Reports and Publications

Brian M. Stecher, Deborah J. Holtzman, Michael S. Garet, Laura S. Hamilton, John Engberg, Elizabeth D. Steiner, Abby Robyn, Matthew D. Baird, Italo Gutierrez, Evan Peet, Iliana Brodziak de Los Reyes, Kaitlin Fronberg, Gabriel Weinberger, Gerald Paul Hunter, Jay Chambers. (January 2018). *Improving Teaching Effectiveness: Final Report: The Intensive Partnerships for Effective Teaching, 2009-10 Through 2015-16.* RAND Education and American Institutes for Research RR-2242-BMGF. January, 2018, Prepared for Bill & Melinda Gates Foundation

Harr, J. J., Parrish, T. & Chambers, J. (2015). Special Education. In H. F. Ladd & E. B. Fiske (Eds.), Handbook of Research in Education Finance and Policy, 2nd Edition. New York: Routledge.

Chambers, Jay and Jesse Levin (2014) Special Education Finance International Encyclopedia of Education Economics and Finance, Sage Publications.

Chambers, Jay and Jesse Levin (2014) Adequacy: Professional Judgment International Encyclopedia of Education Economics and Finance, Sage Publications.

Bruce D. Baker, Lori Taylor, Jesse Levin, Jay Chambers, Charles Blankenship (Forthcoming Summer 2013) Adjusted Poverty Measures and the Distribution of Title I Aid: Does Title I Really Make the Rich States Richer? Education Finance and Policy, Journal of the Association for Education Finance and Policy, MIT Press

Jesse Levin, Jay Chambers, Diana Epstein, Nick Mills, Mahala Archer, Antonia Wang, and Kevin Lane (June 2013). Evaluation of Hawaii's Weighted Student Formula. Prepared for the Hawaii Department of Education

Jay Chambers, Iliana Brodziak de los Reyes, and Caitlin O'Neil, American Institutes for Research. (May 2013) How Much Are Districts Spending to Implement Teacher Evaluation Systems?: Case Studies of Hillsborough County Public Schools, Memphis City Schools, and Pittsburgh Public Schools. RAND Education and American Institutes for Research. WR-989-BMGF. Prepared for the Bill & Melinda Gates Foundation.

Chambers, Jay, Jesse Levin, Antonia Wang (AIR), Deborah Verstegen, Teresa Jordan, Bruce Baker.(Sept 24, 2012). Study of a New Method of Funding for Public Schools in Nevada, submitted Nevada Legislative Counsel Bureau, American Institutes for Research

Clarisse Haxton, Iliana Brodziak de los Reyes, Jay Chambers, Jesse Levin, and Lisa Cruz (*March 2012*). A Case Study Of Title I Comparability in Three California School Districts (PDF) http://www.schoolfundingforresults.org/reports.php

Baker, Bruce D., Lori L. Taylor, Jay G. Chambers, Jay G., Jesse D. Levin, Charles Blankenship, Lisa Marie Cruz. *Towards a More Accurate Measure of Student Poverty: An Alternative Method for Calculating Cost-Adjusted Poverty with an Application to Measuring Student Need. Published along with a* series of papers entitled *The Impact of Using a Cost-Adjusted Poverty Threshold On the Distribution of Student Need, one for each state analyzed (Iowa, Illinois, Indiana, Minnesota, Wisconsin.* December 22, 2011. Supported by the Institute of Education Sciences with a grant to the REL-MW.

Levin, J., Manship, K., Chambers, J., Johnson, J., & Blankenship, C. (2011). *Do schools in rural and nonrural districts allocate resources differently? An analysis of spending and staffing patterns in the West Region states* (Issues & Answers Report, REL 2011–No. 099). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory West. Retrieved from http://ies.ed.gov/ncee/edlabs

Chambers, J. G. (2010). Compensating differentials in teacher labor markets. In E. Baker, P. Peterson, & B. McGaw (Eds.), *International encyclopedia of education* (3rd ed.). Elsevier.

Chambers, J. G., Brown, J. R., Levin, J., Jubb, S., Harper, D., Tolleson, R., & Manship, K. (2010). *Strategic school funding for improved student achievement. School business affairs.*

Chambers, J., Levin, J., & Shambaugh, L. (2010). Exploring weighted student formulas as a policy for improving equity for distributing resources to schools: A case study of two California school districts. *Economics of Education Review,* 29(2), 283–300.

Chambers, J. G., & Levin, J. D. (2009). *Determining the cost of providing an adequate education for all students.* Washington, DC: National Education Association.

Hebbeler, K., Levin, J., Perez, M., Lam, I., & Chambers, J. G. (2009). Expenditures for early intervention services. *Infants & Young Children,* 22(2) 73–83.

Shambaugh, L. S., & Chambers, J. G. (2009). Implementing a student-based funding policy: considerations for school districts. *School Business Affairs,* 75(3), 29–30.

Chambers, J. G., Lam, I., Mahitivanichcha, K., Esra, P., Shambaugh, L., & Stullich, S. (2009). *State and local implementation of the No Child Left Behind Act: Volume VI—Targeting and uses of federal education funds* (prepared for the U.S. Department of Education, Office of Planning, Evaluation and Policy Development). Washington, DC: U.S. Department of Education.

Chambers, J. G., Shambaugh, L., Levin, J., Muraki, M., & Poland, L. (2008). *A tale of two districts: A comparative study of student-based funding and decentralized decision making in San Francisco and Oakland Unified School Districts.* Washington, DC: American Institutes for Research.

Shambaugh, L. S., Chambers, J. G., & DeLancey, D. (2008). *Implementation of the weighted student formula policy in San Francisco: A descriptive study of an equity-driven, student-based planning and budgeting policy.* Issues & Answers Series, Institute of Education Sciences, Regional Education Laboratory-West (REL 2008–No. 061).

Chambers, J. G., Levin, J. D., & DeLancey, D. *An independent comprehensive study of the New Mexico Public School funding formula, Vol. I and Vol. II.* Washington, DC: American Institutes for Research.

Chambers, J. G., Levin, J., Stapleton, J., DeLancey, D., & Segarra, M. (2008). *Comprehensive high school reform resource allocation study.* Prepared for the Bill and Melinda Gates Foundation.

Chambers, J. G., Levin, J. D., & Parrish, T. B. (2006). Examining the relationship between educational outcomes and gaps in funding: An extension of the New York Adequacy Study. *Peabody Journal of Education,* 81(2), 1–32.

Chambers, J. G., Levin, J. D., & DeLancey, D. (2006). *Efficiency and adequacy in California school finance: A professional judgment approach.* Palo Alto, CA: American Institutes for Research.

Chambers, J. G., & Levin, J. D. (2006). Funding California schools, Part II: Resource adequacy and efficiency. In H. Hatami (Ed.), *Crucial issues in California education 2006* (pp. 27–50). Berkeley, CA: University of California, Policy Analysis for California Education.

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

Chambers, J.G., Pérez, M., Esra, P. (2005). Funding to Support the Highest-Need Students with Disabilities, Journal *of Special Education Leadership*, Volume 18 (1), pg 14–21.

Appendix C.
Sample Work

To minimize the length of the proposal document we have provided links for three sample works. These reports have also been attached to this submission as stand-alone files:

1) *Study of Pupil Weights in Vermont's Education Funding Formula* https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf.

2) *What Does It Cost to Educate California's Students? A Professional Judgment Approach* https://gettingdowntofacts.com/sites/default/files/GDTFII_Report_Levin.pdf.

3) *Study of a New Method of Funding for Public Schools in Nevada* https://www.educatenevadanow.com/wp-content/uploads/2016/03/AIR_NV_Funding_Study_Sept2012_0.pdf.

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