



# The Shift from Adequacy to Equity in Federal Education Policymaking: A Proposal for How ESEA Could Reshape the State Role in Education Finance

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*ESEA's original intent was to provide educational assistance to less privileged students. However, ESEA's supplemental funding for students and teachers has often been inadequate in addressing pervasive and systematic disparities in fiscal resources. These disparities exist between states, within states, and within school districts. In the spirit of the original legislation, this article proposes addressing educational fiscal inequities via a new program within ESEA that would reward states for reforming their education finance systems to address inequities between and within states, and within districts. The program would effectively steer federal resources to encourage thoughtful work to reform and recalibrate state- and district-level finance mechanisms. It would be designed as a competitive grant program built upon the framework of Race to the Top. This article articulates a rationale for the program, especially the need for a renewed federal focus on opportunity-to-learn, reviews relevant research, outlines program details, and reviews political considerations.*

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Beginning in the 1990s, the field of school finance began to reflect the wider world of education policy by undergoing a conceptual shift from an equity perspective focused on the equalization of educational inputs toward an adequacy perspective focused on the performance of the educational system overall, measured by student performance on systematically aligned assessments. Federal policymaking—best exemplified by the No Child Left Behind Act (NCLB)—also came to reflect this outcomes-oriented approach. No Child Left

Behind was the 2001 reauthorization of the Elementary and Secondary Education Act (ESEA), and any subsequent reauthorization will be made within the context of this legislation.

Despite the positive intentions of many members of Congress who supported NCLB's direct school-level, subgroup accountability model, observers of the law have written that its design includes many dis-equalizing incentives. Scholars have decried the pervasiveness of standardized testing, the historical bias of standardized tests for poor and mi-

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nority students, the subsequent narrowing of the curriculum for students as a result of NCLB's focus on reading and mathematics, the state level system-gaming undertaken to meet NCLB requirements, the potential effect on teacher labor markets, and the chilling effect of accountability sanctions on schools and communities (Burroughs, Groce, and Webeck 2005; Schoen and Fusarelli 2008; Berliner 2011; Cawelti 2006; Grodsky, Warren, and Felts 2008, 385; Reich 2013; Porter, Linn, and Trimble 2005; Bushaw and Calderon 2014). The law has also been criticized for overregulation of local schools (Howe and Meens 2012); and being an unfunded mandate (National Conference of State Legislatures 2005; McColl 2005, 604).

Federal education policy should not continue unchecked in this outcomes-based approach indefinitely, we argue. Unequal funding across states, districts, and schools harms low-income and minority students disproportionately; consider that in 2005, 76 percent of the nation's low-income students attended public schools in districts with a per pupil expenditure below the national average (Southern Education Foundation 2009, 17). Continuing unabated, trends of unequal school funding in the United States have obvious compounded negative effects on equality of opportunity for both individual citizens and the society as a whole, namely, diminishing economic security, citizens' living standards, and democratic participation (Southern Education Foundation 2009; Kenworthy 2014; Mr. Y 2011; Carter and Welner 2013). In response, the federal government should use ESEA to develop an "equality orientation," which does not necessarily revolve solely around inputs to education; it may be just as concerned with equal outputs or equal access to schooling (Reich 2013, 52). State and local governments can foster equality of opportunity by alleviating levels of concentrated poverty in schools, expanding health care and education for very young children, and creating conditions for strengthening the economic and housing opportunities in the communities in which schools are located. Yet after so much focus over the past fourteen years on the NCLB paradigm, those

states undeniably require inducements to formulate different kinds of policies.

State-level work on the equitable provision of educational resources has occurred without substantial federal assistance due to a host of legal and political factors. The tenth amendment, and the 1973 Supreme Court decision in *San Antonio ISD v. Rodriguez* (411 U.S. 1), have hampered federal activism in the realm of school financing. We see an opportunity to address such lack of action.

By reaching back into the litigious origins of the concept of adequacy, this paper develops a notion of resource sufficiency closely aligned with the concept of opportunity-to-learn standards advanced by education policymakers in the 1990s. It then proposes a competitive grant program that could be embedded within ESEA, the goal of which is to spur innovation in closing inter- and intradistrict resource gaps, while also offering states the opportunity to develop resource sufficiency to address student academic achievement gaps (*San Antonio ISD v. Rodriguez*). States would compete based on their plans to both reform their finance systems and design innovative interventions in the areas of early childhood education, community supports, and desegregation. This proposal represents a focus different from the often-contentious recent debates over the federal role in supporting charter schools, teacher evaluation plans, and adoption of the Common Core standards.

As observers of developments in education finance and federal education policymaking, we note that these two fields, although sharing goals, aspirations, and values, have developed separate vocabularies to describe the work of resource allocation. We seek to bridge these two nomenclatures by aligning the concept of equal opportunity from the policymaking field with the concept of resource equity from the education finance literature, and by aligning opportunity-to-learn from policy with a specific notion of adequacy—resource sufficiency—from school finance. Although ESEA has provided billions of dollars in supplemental funding to states and districts, and although Congress and the federal Department of Education (ED) have successfully leveraged ESEA dollars to drive educational policy in

terms of standards, assessment, governance, and accountability, we believe this proposal provides federal policymakers with the ability to begin to address one systematic component that it has long been restrained from addressing: the inequitable per-pupil funding levels between states, within states, and within districts.

Others have written about the evolution of ESEA from a focus on equality of opportunity to one primarily on adequacy via standards-based reform, and our aim here is not to review that evolution in substantial detail (McDonnell 2005; McGuinn 2006; DeBray 2006; Wells 2009). Our premise is that if state legislatures and federal courts are no longer active arenas for addressing issues of equal educational opportunity, Congress should do so for democratic reasons (see Belfield and Levin 2013). As noted earlier, both national economic security and individual living standards, like democratic participation and educational attainment, are directly affected by funding inequality. Layered over these factors, however, is a growing educational and economic opportunity gap in the United States since 1970 (Duncan and Murnane 2014). Data from the National Assessment of Educational Progress (NAEP) indicate that, though racial and ethnic achievement gaps are narrowing, socioeconomic gaps in achievement remain. These gaps have far-reaching implications: in school completion, lifetime earnings, and the wide range of resulting societal outcomes. Gaps in achievement related to family background, therefore, persist into the school system, and the system itself does little to blunt their impact. Furthermore, returns to education in the labor market have risen dramatically in the past forty years. “Between 1979 and 1987,” Greg Duncan and Richard Murnane write, “the inflation-adjusted earnings of male high school graduates plunged by 16 percent, while the earnings of college-educated workers rose by nearly 10 percent” (2014, 15). Upward intergenerational mobility, to which education was the key in the United States for most of the twentieth century, has also witnessed a downward trend since the mid-1990s and a flat long-term trend in addition to widening income gaps (Duncan and Murnane 2014, 20; Chetty et al. 2014).

We do not contend that the federal role in education alone can be tasked with alleviating these problems. Compensatory education has a harder time equalizing outcomes under such conditions. As we will see, other scholars have called for more comprehensive solutions that cut across social service sectors to serve students. However, a federal program that seeks to create the public finance contexts in which a genuine equality of opportunity-to-learn exists is long overdue in U.S. elementary and secondary educational policy. This proposal outlines a mechanism to achieve what plaintiffs sought in *Rodriguez* and what two generations of litigators have pursued in state courts: a more equitable resource base for students, justifying the existing accountability framework of federal policy.

In the following section, we review first what we believe to be the problems of unequal resource distribution among American schools, and then the concepts of equity and adequacy as they are discussed in the fields of educational policy and education finance.

#### **FUNDING VARIATIONS AMONG AND WITHIN STATES AND DISTRICTS AND POSSIBLE REMEDIES**

As a state-led function in a federalist system, interstate variation in school finance has presented federal policymakers with a perennial problem. Measures of fiscal inequality between and within states are not new and have not dramatically changed in recent years; substantial variation in per pupil expenditures is long-standing (U.S. Department of Education 2009). As Bruce Baker and Sean Corcoran report in an analysis of regressive and progressive state funding formulas, state rankings in terms of progressivity are relatively immune to such statistical controls for regional cost and wage variations when examining the differences in mean revenues between districts in the lowest and highest poverty quintiles within a state (2012). This point has been made through school finance litigation—*Serrano v. Priest* (5 Cal.3d 584, 1971) being the earliest and most commonly cited example—and has been enshrined as the field of school finance’s Proposition One: “The quality of a child’s schooling should not be a function of wealth, other than

the wealth of the state as a whole” (Guthrie et al. 2007, 174).

### **Interstate Variation**

Interstate variation in funding is driven by two factors: variation among states in the soundness of school finance systems that raise and distribute educational funds, and state political will and fiscal capacity to raise money. Our proposal seeks to improve the interstate variation in educational funds by focusing more on the former than the latter. To that end, a number of finance system tools serve to decrease both the impact of local wealth and the disproportional underfunding of poor or minority communities. Providing states incentives to adopt and strengthen these policies will help address—but not eliminate—interstate spending variation. Three tools are pupil weighting, power equalization, and full state assumption of educational costs.

#### *Pupil Weights*

Pupil weights steer dollars to high needs or high-risk populations. These weights overcount students in these populations—an economically disadvantaged student may count 1.4 times a normal student—and funds are allocated on this adjusted per-pupil basis. Pupil weighting systems add a dimension of vertical equity into a finance system, primarily by steering additional funds to districts with concentrations of high-needs students. More recently, districts have adopted pupil weighting strategies to allocate resources to schools, with notable examples being Oakland, Houston, Cincinnati, and Boston.

#### *Power Equalizing, or Guaranteed Tax Base Plans*

Many states require a local district’s contribution from local property taxes to ensure local political will and to shift costs to districts. A guaranteed tax base (GTB) structure subsidizes local property so that one tax unit brings in an equal amount of funds across all districts.

#### *Full State Funding*

Another strategy for diminishing the impact of local wealth variation is for the state to assume higher proportions of overall funding in a state. Doing so eliminates variations based

on property wealth that drive interstate funding disparities. In a sense, experiments with aspects of full state funding are occurring in some of the forty-two states with charter school legislation on the books, since charter schools often receive only the state amount of funding per pupil or reduced contributions from sending LEAs. As of this writing, the National Center for Education Statistics estimates the number of charter school students to be approximately 2.3 million, or approximately 4.6 percent of the public school population. The charter sector, in other words, currently lacks the scale for its school funding and attendance to affect statewide funding systems substantially.

Some have argued that state assumption of the fiscal burdens of public education breaks Tiebout relationships between local communities and their schools—stating that local communities are more supportive of taxation that supports local schools. We acknowledge that how much a jurisdiction chooses to spend on lowering property taxes versus purchasing educational services (a substitution effect) is a question of political will. Stated another way: taxpayers may express preferences for tax savings over enhanced (and price-discounted) educational quality in funding systems that are more centralized and rely less on local effort for school funding. Our sole purpose here is to focus on policy mechanisms that have the potential to reduce within-state inequities. This is a separate problem from the inequity introduced into finance systems by intrastate variations in property wealth (Tiebout 1956; Fischel 1989), and can be addressed by variations to the models themselves, up to and including leaving some districts off-model to enhance equity (Reschovsky 1994; Rothstein 1992).

Another approach would be for the federal government to provide direct federal equalization money to states. However, providing additional funds into antiquated, inefficient school finance systems is akin to throwing good money after bad; we think that instead federal actors should first ensure the quality of school finance systems before dramatically investing in them, and envision a competitive grant program as one way to incentivize these state-level improvements.

### Intrastate Variation

This approach of using state-level funding formulas to leverage national equality in student access to resources correlates highly with a state's capacity to improve equity within its borders and across district boundaries. Multiple state-level studies have examined the inequity of intrastate (or interdistrict) resources allocation by examining levels of funding as well as the inequality of resource allocation based on measure such as race and poverty (for examples examining North Carolina and Tennessee, see Rolle, Houck, and McColl 2008; Rolle and Liu 2007). In addition, multiple papers have examined the results of changes in state funding formulas as a result of school finance litigation, generally finding that changes in funding formulas can reduce overall interdistrict levels of inequity and sufficiency (Baker and Welner 2011; Sims 2011; Springer, Liu, and Guthrie 2009; Murray, Evans, and Schwab 1998). Multiple studies confirm the efficacy of successful litigation during this period in both increasing spending and reducing inequality within states (Murray et al. 1998; Jackson et al. 2014). Kirabo Jackson, Rucker Johnson, and Claudia Persico find a correlation between increased per-pupil expenditures for all twelve years of elementary and secondary education for children from poor families and higher earnings and reduction in the annual incidence of adult poverty (2014). Finally, national studies of interdistrict equity include those from the National Center for Education Statistics, *Education Week*, the Education Trust, and the Education Law Center (ELC). The ELC publishes an annual report card analyzing funding fairness across districts within states. Although it is beyond the scope of this article to examine each model in detail, we feel that the preponderance of such analyses indicate that work in this area is available for adoption in assessing state-level equity from a federal perspective. States can be assessed on the level of fairness in their funding system along a number of dimensions. Adopting such measures at the federal level would provide states with a set of resource allocation goals and allow cross-state comparisons. Although states have different school finance systems, they would be able to compete with each other in providing equal-

ized educational opportunities for students from different racial, ethnic, and socioeconomic backgrounds.

### Intradistrict Variation

Recent research in school finance has demonstrated that equitably allocating resources to school districts does not necessarily ensure equitable distribution of resources to schools within those districts. The subfield of intradistrict school finance has seen increased attention with the development of more sophisticated data collection systems and a focus on disaggregated student performance (on intradistrict finance, see Berne and Stiefel 1994; Burke 1999; Condrón and Roscigno 2003; Hertert 1995; Iatarola and Stiefel 2003; Owens and Maiden 1999; Roza 2005; Rubenstein 1998; Stiefel, Rubenstein, and Berne 1998; Houck 2010). Studies indicate that the interaction of district transfer policies results in migration across schools within districts, the result of which is that schools with higher concentrations of high-needs students end up with aggregately less credentialed, less experienced teachers (Roza and Hill 2004). This, paired with the ubiquity of the single salary schedule, results in real-dollar gaps across schools, with high-needs schools being the most disadvantaged (Freeman, Scafidi, and Sjoquist 2005; Lankford, Loeb, and Wyckoff 2002; Ingersoll 2001; Houck 2010; Baker 2012). Current debate over intradistrict equity has focused on the comparability provisions in Title I, including an ED policy brief that estimated a shift to a dollar-based comparability requirement instead of the current credential-based requirement would result in an additional 18 to 28 percent of districts falling out of compliance, a per pupil expenditure increase estimated at 2 to 15 percent for Title I schools, and a disproportionate (that is, vertically equitable) benefit deriving to the lowest spending schools (Stullich 2011). Members of Congress have advanced proposals to change Title I comparability requirements, but these efforts have so far been resisted by a range of interest groups. Changes in addition to comparability may also help. University of California law professor Goodwin Liu recommends increasing the appropriation for the concentration grants in Title I, because

they “provid[e] the most equitable distribution of Title I aid across states” with their 15 percent poverty-eligibility threshold for districts, as well as strengthening maintenance of effort requirements and use of district salary averages in calculating comparability requirements. He also calls for Congress to “build research-based cost factors into Title I formulas” because costs vary between states and districts, noting that Congress could commission new studies to accomplish this (Liu 2008, 973).

Although ED and the federal government have not proposed direct remedies to the problems of finance inequity along these three dimensions, two recent federal policy proposals have sought to address resource equity in other ways. First, the Obama administration’s 2015 budget proposal contained a draft of a new Race to the Top (RTT) priority focused on equity and opportunity. Envisioned as a competitive grant, the budget “recognized the harmful impacts of economic segregation in schools, and encourages grantees to identify and carry out strategies that help ‘break up and mitigate’ the effects of concentrated poverty” (National Coalition on School Diversity 2014, 2). Although Congress appropriated no funds to support this new priority, the proposal indicates some measure of influence of the National Coalition on School Diversity and other civil rights advocates in continuing to press for a federal investment in equity.

Second, in October of 2014, ED’s Office for Civil Rights (OCR) issued guidance to school districts regarding what it termed *resource comparability*. This guidance “highlights and explains what Federal law requires regarding the provision of educational resources, how OCR investigates resource disparities, and what States, school districts, and schools can do to meet their constitutional obligations to all their students” (U.S. Department of Education Office for Civil Rights 2014, paragraph 2). Notably, OCR re-circulated a letter from Clinton Secretary of Education Richard Riley about resource disparities by race and ethnicity as constituting potential violations of Title VI of the Civil Rights Act, and called on states to examine whether their provision of educational resources was equitable (Riley 2001).

Clearly, therefore, efforts have been made

within the research community and at the federal policymaking level to document and address resource disparities along a conceptual continuum beginning with notions of equity and ending with notions of adequacy. The following section traces the development as well as our conceptual understanding of key terms, specifically those of adequacy and equality of opportunity.

### ADEQUACY AND OPPORTUNITY-TO-LEARN

Adequacy does not rest on the principle of equal treatment, and school finance adequacy cases reflect the goal of providing a minimum basic education (Reich 2013), such as the Kentucky Supreme Court’s 1989 *Rose v. Council for Basic Education* ruling (90 S.W.2d 186, 60 Ed. Law Rep. 1289). The adequacy orientation in finance and policy also emphasized school outputs. Equality of opportunity, by contrast, pertains to states’ “attempt[s] to improve or equalize life chances and opportunities, or to provide an opportunity for each person to flourish” (Reich 2013, 44). “Equality is necessarily comparative or relational; sufficiency is not” (48). Both the 1965 ESEA and the wave of school finance litigation from 1973 through 1989 embodied the equality principle (Reich 2013; Reed 2001). Although the two concepts are easily distinguished, the philosophical arguments for state or federal action to promote either approach are quite complex.

We posit that in the absence of court-mandated actions, the federal government has a future role for providing states with incentives to ameliorate school funding disparities. The range of fiscal factors that make up opportunity-to-learn is wide. NCLB’s exclusive focus on adequacy, as measured by test score outcomes, as equity has narrowed the federal role, and future versions of the law need a counterbalance toward other kinds of supports.

### OPPORTUNITY-TO-LEARN AND ADEQUACY FROM A SCHOOL FINANCE PERSPECTIVE

In the literature in school finance, the idea of opportunity-to-learn has developed under the umbrella of the value of adequacy. The notion

of adequacy, though contested in the school finance literature, has been made quite clear in successive rounds of school finance litigation, through which courts have developed definitions and specific resources necessary for state finance mechanisms to provide students with adequate educational opportunities.

Some saw the development of adequacy standards and methods after 1989 as a new subfield in education finance, others as more an extension of the more venerable concept of equity, referring to work around adequacy as “equity II” (Ladd, Chalk, and Hansen 1999; Guthrie et al. 2007). This definition shifts the focus of the adequacy agenda toward safer ground: ensuring the fair distribution of existing funds (Clune 1994).

In school finance, the term *adequacy* is subject to multiple interpretations. William Clune was the first to formalize it as representing a legal and policy conceptual shift away from equity. Bruce Baker describes it, relative to school finance, as having both an absolute and a relative dimension, where the absolute is concerned with the overall total spending needed for an educational system to meet stated educational outcomes goals, and the relative indicating the expenditure differentials necessary to support different types of students in supporting those goals (2005).

Eric Houck and Moonyoung Eom expanded on this framework by conceptualizing equity and adequacy dimensions along the spectrum of educational productivity by tracing the concept of adequacy through input, throughput, and output phases of production, corresponding to the concepts of sufficiency of funds, purchased inputs, and performance (2012).

Federal action on finance and fiscal equalization was circumvented via Rodriguez (Ryan 2010; Robinson 2015; Reich 2013; Reed 2001). Combined with the scant change in school finance distribution structures and systems since the development of tax base equalization schemes in the 1930s (Springer, Houck, and Guthrie 2007), school finance reform advocates have gravitated away from state houses and into courthouses to adjudicate and seek redress (Hanushek and Lindseth 2009). That is, although additional funds have flowed into schools, the basic mechanisms by which those

funds are raised and distributed have perpetuated structural inequality.

Recent adequacy-based policy proposals, such as weighted student funding (WSF) models, have gained limited traction at the LEA level but not engendered any innovation or development at the state level (Ladd 2008). State-level student weights are still more politically than scientifically derived and are not pushed through districts to schools: that is, a state weight to the advantage of economically disadvantaged students that determines how much funding a district receives is not necessarily passed through the district to the school. From a structural perspective, therefore, school finance mechanisms are weak, and there is little incentive to do anything more than marginally affect the amount of dollars flowing into the system.

#### **OPPORTUNITY-TO-LEARN AND ADEQUACY FROM A POLICY PERSPECTIVE**

The concept of opportunity-to-learn grew from the recommendations of the National Council on Education Standards and Testing’s (NCEST) 1992 report, which held that a new national system of standards and assessments ought to be accompanied by assurances that students had had preparation to learn the material, sometimes called delivery standards. Marshall Smith of Stanford University, chair of the NCEST standards task force, advocated for these service delivery standards, but was strongly opposed by Governor Carroll Campbell (R-SC), who “objected to focusing on inputs rather than outcomes and feared that this would stifle teacher creativity.” The compromise Campbell proposed was that “states would develop indicators to assess the quality of the education they offered but would be free to select the data they reported” (Vinovskis 2008, 53).

A year later, Smith and Jennifer O’Day published an article outlining a vision for “standards-based, systemic reform” as a strategy to support educational equity: “It is not legitimate to hold students accountable unless they have been given the opportunity to learn the material on the examination. Similarly, teachers or schools cannot be legitimately held

accountable for how well their students do unless they have the preparation and resources to provide the students the opportunity to learn” (1993, 272). In addition, the National Governors Association in 1993, recognizing that the issue might surface in upcoming legislative debates, convened a special task force on how opportunity-to-learn standards might be defined. Numerous scholars wrote papers as background, considering the question “What role should outcomes, processes, and inputs play in monitoring education performance?” (Traiman 1993, 22). As far as Congress was concerned after 1995, the ultimate answer would be that outcomes should play the chief role.

As many have elsewhere elaborated, one version of a national certifying body for state-level opportunity-to-learn standards was authorized as part of the 1994 Goals 2000: Educate America Act (Jennings 1998). This quasi-governmental entity, the National Education Standards and Improvement Council (NESIC), was to be staffed by presidential appointees holding rotating terms of service, and would certify both state-level content and performance standards, as well as opportunity-to-learn standards. NESIC was repealed by the new Republican-majority Congress in 1995. The National Governors Association, in registering its own opposition to NESIC, wrote that it “comes dangerously close to derailing our hard-won emphasis on student achievement” (Schwartz and Robinson 2000, 194).

Over the past decade or so, many observers of the federal role in K–12 education have written in various ways about the need to match NCLB’s focus on outcomes with provisions for opportunity-to-learn, whether explicitly termed thus or not. In their 2008 book *Moving Every Child Ahead*, Michael Rebell and Jessica Wolff outline a detailed proposal for reauthorizing ESEA, which they characterize as having been highly inadequate at achieving its stated vision of equality of opportunity, to give greater emphasis to “opportunity” provisions over proficiency provisions (7). They first recommend including in ESEA a statutory provision that states must ensure a “meaningful educational opportunity” in several “designated essential categories” of opportunity, which in-

cluded both in-school and out-of-school factors (79). Among these essential categories were “effective teachers, principals and other personnel,” “adequate school facilities,” and “instrumentalities of learning, including, but not limited to, up-to-date textbooks, libraries, laboratories, and computers” among other essential resources (157). Rebell and Wolff also propose that the “practices and conditions” needed to create what they termed “meaningful educational opportunity” be devised on a state-by-state, and perhaps even local, basis (78). We similarly endorse the premise that the federal government can and should provide assurances of capacity and support to states, if the states undertake the reform of their state finance systems.

Also concerned with opportunity-to-learn is legal scholar Kimberly Robinson, who in addressing the failures of NCLB to close the achievement gap has developed a conception of “disruptive federalism” (2015). Robinson advocates for a federal role that would incentivize development of a national common floor of educational opportunity that states must provide; provide necessary research, technical, and financial assistance to accomplish this goal; monitor state progress to achieve this goal through a collaborative enforcement model (984–85); and notably, “distribut[e] financial assistance with the goal of closing the opportunity and achievement gaps” (985). The collaborative enforcement model Robinson envisions would consist of states voluntarily adopting compacts for provision of opportunity-to-learn standards at the state level. The federal government, in turn, would offer technical assistance and a base of research and development, and monitoring of state progress (990–91). She writes that through this collaborative model, which would require new legislative measures and would also include enforcement via sanctions of states when necessary, “the federal government would reestablish itself as the final guarantor of equal access to an excellent education” (1002).

Former Undersecretary of Education Marshall Smith, in a 2011 essay, posited that a competitive grant program situated within Title I could help address state-level intra- and inter-district funding inequalities. The competition



as he envisioned it would address “state inequality in resources by stimulating the use of state finance formulae that take into account the special needs of low-income and other students.” Extra federal resources, competitively awarded to states that would agree to change their funding formula to be more sensitive to students with disabilities and English-language learners, for instance, “could make a very important contribution to equal opportunity in many states” (Smith 2011, 241). Although his proposal was not elaborate, Smith’s envisioned linkage between Title I and a competitive state-level grant competition is the only one of which we are aware.

Other authors have called for federal incentives to be developed for states to alter districts’ or schools’ levels of poverty concentration (Suarez 2014; Kahlenberg 2012), to promote interdistrict transfer plans (Holme and Finnigan 2013), to more closely coordinate housing and education policy, and to expand the Promise Neighborhoods program to enhance community-based services in high-poverty areas (DeBray and Frankenberg 2011; Smrekar and Goldring 2011; DeBray and Blankenship 2013). An initiative of the Economic Policy Institute called the Broader Bolder Approach to Education, positioning its comprehensive social-services approach as the decided opposite of No Child Left Behind’s narrow focus on test-driven accountability, calls for improved federal policies to support early childhood, health and nutrition, after-school, as well as school reform (2013). Prudence Carter and Kevin Welner’s *Closing the Opportunity Gap* is a comprehensive examination of the multiple factors contributing to deficits in opportunity-to-learn, particularly from the standpoint of racial, socioeconomic, linguistic, and geographic barriers. Some of the solutions they propose are improving fair housing enforcement, racial desegregation of schools, and meeting students’ need for adequate health care (Carter and Welner 2013).

In a section of its 2013 report, the Commission on Equity and Excellence calls for “bold action by the states—and the federal government—to redesign and reform the funding of our nation’s public schools” (U.S. Department

of Education 2013, 17). The report delineates general recommendations for both states and the federal government in this area. The commission calls on the federal government to “provide incentives for states to explore and pursue ways to reduce the number of schools with concentrated poverty, because schools without concentrated poverty are less expensive to run than schools with concentrated poverty” (19); as well as to

direct states, with appropriate incentives, to adopt and implement school finance systems that will (1) provide a meaningful educational opportunity for all students, along with appropriate budgetary and other frameworks to ensure the effective and efficient use of all funds to enable all students to achieve state content and performance standards as outlined above, and (2) demonstrate progress toward implementing such a school finance system. (19)

Further, the report recommends that the federal government “reassess its enforcement regime with respect to issues of school finance equity,” noting that “enforcement mechanisms derived from other areas of federal civil rights law” were a viable policy tool (U.S. Department of Education 2014, 20). Thus, the commission recommends that the federal government play a stronger role in leveraging—if not enforcing—state-level finance equity, but did not lay out any specifics for how this ought to be accomplished programmatically (26).

Other scholars have also called for changes to ESEA funding, especially in terms of targeting. Linda Darling-Hammond in her book *The Flat World and Education* sharply criticizes school finance policies in the United States, whereby state aid offsets some of the core inequalities produced by the local property-tax based system, and then federal categorical grants are layered on, “often with extensive strings attached” (2010, 311). She calls on Congress to “equalize allocations of ESEA resources across states,” “enforce comparability provisions for ensuring equally qualified teachers to schools,” and “require states to report on opportunity indicators along with reports

of academic progress for each school” (309). Her recommendations about funding echo many of those of the Equity and Excellence Commission.

To summarize, since the 1990s, many justifications of support have been advanced for the principle of federal and national efforts to foster the many components of “opportunity to learn.” Many of these reports call for federal action in alleviating fiscal inequity among and within states; others call for specific changes in how the current ESEA drives funding to districts. With a few exceptions, however, these have generally not laid out how legislative or statutory changes might advance them through the ESEA. Our proposal is a first step in this direction.

### GOALS AND DESIGN

We envision a competitive grant program, modeled after the recent Race to the Top grant competition, to bring reform to the three levels of school finance inequity outlined.<sup>1</sup> This program could be a pilot to be subsequently developed into a permanent part of the legislation. We conceptualize it as a competitive grant to provide states with the incentives to undertake the difficult work of school finance reform in exchange for priority consideration in a grant competition designed to provide substantial federal funds for work in developing integrated and successful schools in supportive communities across the P–12 spectrum. This approach privileges finance equity as a value in exchange for providing students with greater opportunities to learn. Our supposition is that states will be willing to do the former in exchange for funding and flexibility to implement the latter.

### Structure

Although Race to the Top has been criticized along many dimensions, few have argued that it has not resulted in states adopting meaningful, systemic changes to policies ranging from adoption of the Common Core State Standards (CCSS) to addressing charter schools caps and streamlining data systems policies. An impor-

tant criticism—and one our proposal also faces—is that states with a greater capacity for reform are advantaged in zero-sum competitions of this nature. Much like RTT, our proposal seeks to yoke this competition to federalist impulses by seeking states willing to address issues of finance equity in the search for scalable solutions.

### State Finance Reform

We recommend beginning with roughly one quarter of the states eligible for awards. Although the competition will be open to all states, states will be able to increase their standing by committing to a series of reforms to their school finance systems. These commitments will serve as priorities in the competition. In this way, the federal government can leverage ESEA dollars to support state-level (state-initiated) finance reforms. Although the nature of the reforms will be left up to states, the competition would outline specific target goals for each of the three dimensions of finance inequity.

### Measures and Indicators

Operationalizing notions of equity and adequacy will be a critical first step in developing this program. The field of school finance has developed such measures. This section reviews these measures, briefly discusses their applicability, and offers examples of indicators that states and the federal government could use to assess outcomes in the opportunity-to-learn component of the program.

### Horizontal Equity

The concept of horizontal equity in school finance is concerned with the equal treatment of equal units. The coefficient of variation is one such measure borrowed from the field of economics; the McLoone index is another measure of horizontal equity specific to the field of school finance and indicates the degree to which variation exists within the bottom half of a distribution. Indexing state levels of horizontal equity and asking for annualized stair-step improvements toward established

1. The major difference being that our proposal lives within ESEA, unlike RTT.

thresholds would be one way of ensuring state focus.

### *Vertical Equity*

Vertical equity is expressed as the different treatment of differently situated units. In this case, positive vertical equity in state-level finance systems would steer additional funds toward higher-needs classes of students—such as economically disadvantaged students. The degree of vertical equity is measured via a regression coefficient that shows an association with resources such as dollars or teacher qualities. The federal government could index vertical equity on one dimension or class, or add multiple measures, including racial and ethnic subgroups, such as those identified under NCLB. Similarly, the department could look solely at dollars allocated per pupil as a dependent variable or instead include multiple resource variables. Whatever the decision, indexing vertical equity relationships and requesting maintenance or improvement of these measures is well within ED capacity.

### *Adequacy*

The notion of sufficiency can be operationalized across dollars, throughputs such as teacher and instructional practices, or outcomes. Measures such as adequate yearly progress (AYP) indicators already purport to measure levels of performance adequacy. Another adequacy-based measure is cost functions—econometric models that indicate the amounts of funding that should be necessary for different classes of students to meet established performance standards. These measures will yield insight into how close a state system is to covering these adequate costs. Additional methods exist—the use of professional judgment panels, costing out studies, and others.

### *Desegregation*

The federal government would have multiple measures from which to choose when examining levels of desegregation in states over time. The dissimilarity index has been a bellwether measure in sociological and policy studies for years, but other measures may be more appropriate (Reardon and Firebaugh 2002; Gorard and Taylor 2002).

### *Housing Density and Distribution*

Measures of housing policy outcomes could include the same measures of spatial segregation used to examine segregation in schools or measures of the types of contexts present in neighborhoods (Goldring et al. 2006).

### *Early Childhood Education*

Measures of state provision of early childhood education can be measured with counts of enrolled children as a percentage of the overall age cohort population, credentials and experience of early childhood teachers, and similar distributive measures of administrative data.

Although the nature of the targets would be subject to political debate, we propose the following examples:

- To address interstate finance equity, states could focus on increasing the proportion of educational revenues from state sources, thereby bringing more funding into the equity-producing mechanisms of state finance systems and reducing inequalities in funding based on differential property wealth across districts. ED would support these efforts by indexing state levels of resource provision accounting for regional cost differentials. ED could provide support by further subsidizing existing power-equalizing plans or working to support states in creating power equalizing components within their state finance structures. (For example, the state of Georgia subsidizes districts at the 75th percentile of district wealth up to 14 mills of taxation on property. Georgia could increase the equity of its finance system by requesting federal equalization funds to equalize at a higher percentile of local wealth, and to provide assistance beyond the 14th mill of taxation). To address intrastate finance inequity, states could focus on significant proportional reductions of key equity statistics for key resource variables; a stair-step reduction toward a federal goal in the coefficient of variation across measures would be an ambitious target. Similarly, increases in vertical equity as measured by key regression coefficients would be a place for federal assistance. To address intradistrict

finance inequity states would develop policies that redefined comparability for Title I schools within a framework of waivers from ED. Comparability could move to a metric of teacher salaries per pupil in Title I versus non-Title I schools, or some measure of teacher qualification or performance.

- Because education finance analysis builds evidence of inequity through the analysis of multiple variables of interest using multiple statistics (Berne and Stiefel 1994), decisions about which measures and which statistics to assess may therefore best be left to the states. Conversely, allowing states this discretion might also create a bewildering array of analyses for federal administrators. For the sake of simplicity, we recommend straightforward measures such as total per pupil expenditures or the pupil-teacher ratio. In terms of statistics, variation as measured by the coefficient of variation is a traditional approach, as is the comparison of regression coefficients on variables indicating student types. For example, a stair-step reduction toward an established goal over three years of negative coefficients indicating inequitable relationships between race and class variables and resource variables might be an approach. We anticipate that ED would be able to convene school finance researchers and economists to determine what kind of modeling would be acceptable within proposals. Undertaking this work should also build capacity within ED to support states in school finance reform efforts, which we describe in the next section.

Priority will be given to states that undertake this package of policies. Funds through this program will be awarded in two main areas. The primary one is to support state transition to these new funding structures by providing funds for hold-harmless or grandfathering provisions.

### **State-Initiated Interventions Supporting Opportunity-to-Learn**

The mechanisms described so far seek to reduce the inequitable distribution of critical in-

put variables, but do not consider resource sufficiency. A secondary goal would therefore be to provide funding for states to better develop and innovate within an opportunity-to-learn structure. Specifically, competitive priority points will be awarded to states that address developing and supporting an opportunity-to-learn infrastructure. The general areas of focus would be: early childhood education; student assignment and desegregation; and housing and community support policy.

Each of these policy areas has shown promise of reducing resource, opportunity, and outcome gaps across student groups. Early childhood education interventions have been linked to a host of positive school preparedness and life outcomes, but rather than being included in a meaningful way in most federal education policy conversations, they have been almost exclusively relegated to debates over Head Start's often-disputed effectiveness. (President Obama's expansion of early childhood grants into a final round of Race to the Top is an important exception.) Defining early childhood as a focus area builds on established research indicating that schools are less well equipped to narrow achievement gaps than they are at maintaining achievement trajectories, establishes a mechanism that draws ED and the U.S. Department of Health and Human Services (HHS) into closer relationship, and provides openings for school to create opportunities for remediation and acceleration for high needs students before they enter the formal K-12 pipeline (Heckman 2011; Heckman and Masterov 2007; Weiland and Yoshikawa 2013). Expanding access to preschool and providing incentives to improve its quality, in other words, should not be the exclusive domain of Head Start and HHS. Incentives for states to experiment with new structures and emphases should be jointly devised between HHS and ED.

Multiple studies have indicated that resegregation of schools has consequences for students in terms of peer effects, teacher qualities, and qualifications that lead to achievement gaps and unequal and inequitable resource distribution (Lee 2007; Linn and Welner 2007; Schofield 1995). Defining school segregation as a focus area allows states and districts to work

on ways to create student populations balanced in terms of race, class, and ethnicity, which some indicate may influence teachers' decisions to work in any given school (Scafidi, Sjoquist, and Stinebrickner 2007; Houck 2011). There is precedent for a federal role in providing this kind of technical assistance to local school districts, first to desegregating schools in the 1970s through the Emergency Schools Assistance Act (Orfield 2011), through the Equity Assistance centers, and more recently, through the Technical Assistance for Student Assignment Plans grant program (McDermott, DeBray, and Frankenberg 2012). Districts could focus on integration by either socioeconomic status or race, as constitutionally permissible, to create schools within relatively balanced student populations, thus disrupting the influence of internal teacher labor market dynamics and providing opportunities for higher-needs students to become more acculturated to the middle-class norms of schools (Frankenberg 2011; Kahlenberg 2003).

Finally, and more ambitiously, this proposal would reach beyond the schoolhouse walls to address an issue raised by many in the Broader Bolder Approach coalition: how community-level preconditions affect attendance zones with high concentrated poverty. Department of Education support for housing and community development would address the legacy of residential segregation left unaddressed by courts that establishes the preconditions of school segregation. David Kirp identified the Promise Neighborhoods initiative that invested \$10 million in 2010 as an example of a federally supported incentive program that may strengthen the community schools movement (2011, 139). The program is designed to get communities to identify district-specific problems and develop research supported solutions that incorporate multiple community agencies, including education, health, law, and social services. Promise Neighborhoods' prin-

ciples could serve as a basis for the technical support to communities within awardee states (Goldring et al. 2006).

State applications should specify the particular interventions (desegregation, community interventions, improving or expanding early childhood education) they seek to develop, in which districts, and should submit relevant documentation of support from district leadership. States, in cooperation with participating districts, should submit quantifiable goals to be achieved over five years (that is, number of additional children to be served, reduction in school-level student poverty rates, or expansion of health services at community schools), with accompanying budgets. Federal officials would then negotiate awards with states.<sup>2</sup>

The legislation should specify that applications need to be reviewed by policy analysts with high levels of technical expertise and a substantive background in school finance—and that those who would administer the program should have the same qualifications. Because the pilot program includes an experimental component, the legislation should also mandate a strong and independent evaluation of all awardee states' activities, during the funding cycle and beyond.

In sum, the principal reason for inducing changes in these state and district contexts is to ensure the presence of nonfinancial inputs (opportunities) that have been shown to produce better student outcomes. The competitive program could be undertaken in concert with other recommended changes in Title I targeting (like altering comparability), as well as other changes to NCLB's present accountability system; at the same time, however, its equity-based principles are a counterbalance to NCLB. We next examine the overall political climate in Congress and how it might affect both the reauthorization and support for an equity agenda.

**2.** One of the criticisms of competitive programs in education, such as Race to the Top, notes that states with greater capacity to undertake reform were advantaged in the competitive process. An analogue in our plan would be that states with progressive school finance structures would have greater capacity—and greater political will—to undertake the reforms, and thus also the unintended consequence of increasing interstate inequities. One way to avoid this potential difficulty would be to include existing measures of fiscal inequity as part of the application package, thereby ensuring that need for reform, as well as capacity, is emphasized.

## POLITICAL CONTEXT AND INSTITUTIONAL CONSIDERATIONS

Although the structure we focus on here is a competitive grant program within ESEA, our conversations with observers of the politics of federal education policy lead us to understand why a role for the federal government in supporting state finance reform could be politically feasible in the next reauthorization. Even though the overall composition of Congress is more conservative than at any point in the law's history, the Senate floor debate in 2015 showed that the two parties can agree on greater flexibility for states in holding schools accountable (Rich and Lewin 2015, paragraph 18). We argue that this renewed attention to more equitable state finance systems and granting states broader discretion in interventions in low-performing schools are complementary reforms.

One long-standing political condition that might indicate the potential for such support to grow is the fairly broad bipartisan dissatisfaction with the perceived overregulation of states with respect to school accountability. The Every Child Achieves Act, approved by the full Senate in July 2015, maintains the annual federal testing schedule and the requirement for disaggregation of data, but permits states to decide how tests and data are used (Camera 2015b). On the Senate floor, Senator Richard Burr (R-NC) offered an amendment to change the state Title I funding formula so that 80 percent of aid would be based on poverty rates and 20 percent on population (thereby disadvantaging relatively wealthier states). It was approved by a vote of 59-39 (Camera 2015a; White 2015), an indicator of potential support for other federal policy measures to improve targeting of funds.

A second and related point is that, as we have reviewed here, during the NCLB era, calls for greater equity have been widespread and vocal from both the practitioner and academic communities. If the reauthorization hearings are not structured to offer some of those constituents and experts a voice, or at least more of a voice than they had when NCLB was passed, then members of Congress are likely to pay some political price. Governors, state chiefs, the Council of Great City Schools, and

the Committee on Education Funding continue to be powerful actors on Capitol Hill, and all of these groups ought to be in support of greater finance equalization within states.

Current policy controversies may also carry some future seeds for such a political bargain. The halting progress toward national adoption of Common Core State Standards across the states may provide a common metric for state performance comparison. By removing the ability of states to game the NCLB accountability system via a patchwork of state assessments and cut scores, one result of the CCSS may be to encourage states to push for greater finance equity through the provision of baseline student performance comparison data.

### Monitoring of State-Level Finance Statistics, Oversight by OCR

Currently, the technical expertise within the Department of Education about state finance systems is located within the National Center for Education Statistics (NCES). NCES would play a vital role in designing reporting requirements for states. Also, we note throughout this article that an important federal function to accompany this grant program would be possible cost and feasibility studies for state finance. The Office of Planning and Evaluation could take the lead, given that it commissions comparable projects, such as a study currently under way that is examining practices of states that are considered leaders in collecting school-level expenditure data (U.S. Department of Education 2014). Staff from both OCR and the Office of Elementary and Secondary Education would also have important roles, particularly in providing capacity and technical support to awardee states. To help oversee the technical support on the early childhood education priority in particular, ED should establish a cross-cutting team with HHS. Staff knowledgeable about Title I from the perspective of community involvement should also be involved. OCR's newly released guidance on resource comparability constitutes a serious policy statement that equity is being defined as a civil rights issue under Title VI. In sum, multiple technical dimensions to how to best assist states are possible, from commissioning studies to providing models for better data col-

lection, to continuing to send clear messages with respect to civil rights. This will not be a straightforward process, and the Department of Education will need to consult with many outside experts and constituents.

### Political Sustainability

Any substantial paradigm shift in federal education policy requires the cooperation of numerous actors across many levels of government, as well as the support of a broad and diverse array of constituents—what historian Carl Kaestle has termed “the polity” (2007).

A revived federal role in educational finance is only as viable as the governors and state legislators who ultimately must advocate for and oversee the political changes needed to sustain longer-term changes in state finance systems. The competitive grant funds are designed to provide political cover for governors to ask legislators to make changes they might otherwise not. To sustain longer-term change, the federal government could make changes to state finance systems an explicit condition of aid to K–12 education. Jack Jennings advances the argument that the categorical structure of federal education programs has not been effective because of the inequitable state funding structures in which they have been administered; and that categorical aid (with the exception of special education funds under the Individuals with Disabilities Education Act) ought to be gradually converted to general aid in exchange for assurances from states in the areas of finance equity, as well as pupil and teacher factors related to learning (Jennings 2015; Marshall Smith, personal communication with authors, October 9, 2014).

### CONCLUSION

School finance equity is the third rail that has too long gone unaddressed in the politics of U.S. education. Federal court actions have failed to move state-level finance equity forward, and the work of state courts has not been uniform. However, as we argue here, the moment is right to consider how federal resources and authority, through legislation, can demand more from states in terms of equity and the resources that matter most to learning. The long-standing partisan logjam on ESEA will be

broken when a bargain is struck between demands for flexibility and easing of regulations for states on the one hand, and support for some targeted opportunity-to-learn measures like early childhood education on the other. Here we have proposed a first step to what could eventually become part of a comprehensive rethinking of ESEA: a variety of incentives that could reduce interstate funding inequality, as well as interdistrict inequities within states, and a deliberately designed federal role in the areas of technical support and capacity-building for states seeking to address aspects of opportunity-to-learn. We also emphasize that there is no single approach to an effective federal role in supporting state-level finance equity in the coming decades. As we began to explore here, increasing the overall federal share of education funding to states, encouraging states to change their funding formulae, and requiring districts to change the way they allocate federal compensatory dollars are not mutually exclusive. We believe that, if carefully planned and accompanied by the requisite capacity and expertise, a number of strategies to bolster an equality orientation to federal education policy are plausible; and we look forward to witnessing that conversation advance.

### REFERENCES

- Baker, Bruce D. 2005. “The Emerging Shape of Educational Adequacy: From Theoretical Assumptions to Empirical Evidence.” *Journal of Education Finance* 30(3): 259–87.
- . 2012. “Rearranging Deck Chairs in Dallas: Contextual Constraints and Within-District Resource Allocation in Urban Texas School Districts.” *Journal of Education Finance* 37(3): 287–315.
- Baker, Bruce D., and Sean P. Corcoran. 2012. “The Stealth Inequities of School Funding: How State and Local School Finance Systems Perpetuate Inequitable Student Spending.” *Center for American Progress*, September 19, 2012. Available at: <https://www.americanprogress.org/issues/education/report/2012/09/19/38189/the-stealth-inequities-of-school-funding/> (accessed July 22, 2015).
- Baker, Bruce D., and Kevin G. Welner. 2011. “School Finance and Courts: Does Reform Matter, and

- How Can We Tell?" *Teachers College Record* 113(11): 2374–414.
- Belfield, Clive, and Henry Levin. 2013. "The Cumulative Costs of the Opportunity Gap." In *Closing the Opportunity Gap: What America Must Do to Give Every Child an Even Chance*, edited by Prudence Carter and Kevin Welner. New York: Oxford University Press.
- Berliner, David. 2011. "Rational Responses to High Stakes Testing: The Case of Curriculum Narrowing and the Harm That Follows." *Cambridge Journal of Education* 41(3): 287–302. doi: 10.1080/0305764X.2011.607151.
- Berne, Robert, and Leanna Stiefel. 1994. "Measuring Equity at the School Level: The Finance Perspective." *Educational Evaluation and Policy Analysis* 16(4): 405–21.
- Broader, Bolder Approach to Education. 2013. "Policy Areas." Available at: <http://www.bolderapproach.org> (accessed July 22, 2015).
- Burke, Sarah M. 1999. "An Analysis of Resource Inequality at the State, District, and School Levels." *Journal of Education Finance* 24(4): 435–58.
- Burroughs, Susie, Eric Groce, and Mary Lee Webeck. 2005. "Social Studies Education in the Age of Testing and Accountability." *Educational Measurement: Issues & Practice* 24(3): 13–20. doi: 10.1111/j.1745-3992.2005.00015.x.
- Bushaw, William J., and Valerie J. Calderon. 2014. "Americans Put Teacher Quality on Center Stage: The 46th Annual PDK/Gallup Poll of the Public's Attitudes Toward the Public Schools: Part II." *Phi Delta Kappan* 96(2): 49–59. doi: 10.1177/0031721714553411.
- Camera, Lauren. 2015a. "Efforts to Change Federal Formulas Prove Tricky." *Education Week*, May 16. Available at: <http://www.edweek.org/ew/toc/2015/05/06/> (accessed July 22, 2015).
- . 2015b. "Senate Education Committee Unanimously Passes Bipartisan ESEA Rewrite." *Education Week*, April 16. Available at: [http://blogs.edweek.org/edweek/campaign-k-12/2015/04/senate\\_education\\_committee\\_una.html](http://blogs.edweek.org/edweek/campaign-k-12/2015/04/senate_education_committee_una.html) (accessed May 15, 2015).
- Carter, Prudence, and Kevin Welner, eds. 2013. *Closing the Opportunity Gap: What America Must Do to Give Every Child an Even Chance*. New York: Oxford University Press.
- Cawelti, Gordon. 2006. "The Side Effects of NCLB." *Educational Leadership* 64(3): 64–68.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, Emmanuel Saez, and Nicholas Turner. 2014. "Is the United States Still a Land of Opportunity? Recent Trends in Intergenerational Mobility." *American Economic Review* 104(5): 141–47.
- Clune, William H. 1994. "The Shift from Equity to Adequacy in School Finance." *Educational Policy* 8(4): 376–94.
- Condron, Dennis J., and Vincent J. Roscigno. 2003. "Disparities Within: Unequal Spending and Achievement in an Urban School District." *Sociology of Education* 76(1): 18–36.
- Darling-Hammond, Linda. 2010. *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*. New York: Teachers College Press.
- DeBray, Elizabeth. 2006. *Politics, Ideology & Education: Federal Policy During the Clinton and Bush Administrations*. New York: Teachers College Press.
- DeBray, Elizabeth, and Ann Blankenship. 2013. "Future Policy Directions for Congress in Ensuring Equality of Educational Opportunity: Toward Improved Incentives, Targeting, and Enforcement." *Peabody Journal of Education* 88(1): 21–36.
- DeBray, Elizabeth, and Erica Frankenberg. 2011. "Federal Legislation to Promote Metropolitan Approaches to Educational and Housing Opportunity." In *Integrating Schools in a Changing Society: New Policies and Legal Options for a Multiracial Generation*, edited by Erica Frankenberg and Elizabeth DeBray. Chapel Hill: University of North Carolina Press.
- Duncan, Greg J., and Richard Murnane. 2014. *Restoring Opportunity: The Crisis of Inequality and the Challenge for American Education*. Cambridge, Mass.: Harvard Education Press.
- Fischel, William A. 1989. "Did Serrano Cause Proposition 13?" *National Tax Journal* 42(4): 465–73.
- Frankenberg, Erica. 2011. "Integration After 'Parents Involved': What Does Research Suggest About Available Options?" In *Integrating Schools in a Changing Society: New Policies and Legal Options for a Multiracial Generation*, edited by Erica Frankenberg and Elizabeth DeBray. Chapel Hill: University of North Carolina Press.
- Freeman, Catherine, Benjamin Scafidi, and David Sjoquist. 2005. "Racial Segregation in Georgia Public Schools 1994–2001: Trends, Causes and Impact on Teacher Quality." In *Resegregation of Southern Schools? A Crucial Moment in the History (and the Future) of Public Schooling in Amer-*



- ica. Chapel Hill: University of North Carolina Press.
- Goldring, Ellen, Lora Cohen-Vogel, Claire Smrekar, and Cynthia Taylor. 2006. "Schooling Closer to Home: Desegregation Policy and Neighborhood Contexts." *American Journal of Education* 112(3): 335–62.
- Gorard, Stephen, and Chris Taylor. 2002. "What Is Segregation? A Comparison of Measures in Terms of 'Strong' and 'Weak' Compositional Invariance." *Sociology* 36(4): 875–95.
- Grodsky, Eric, John Robert Warren, and Erika Felts. 2008. "Testing and Social Stratification in American Education." *Annual Review of Sociology* 34: 385–404. doi: 10.1146/annurev.soc.34.040507.134711.
- Guthrie, James W., Matthew G. Springer, R. Anthony Rolle, and Eric A. Houck. 2007. *Modern Education Finance and Policy*. Chicago: Allyn & Bacon.
- Hanushek, Eric A., and Alfred A. Lindseth. 2009. *Schoolhouses, Courthouses, and Statehouses: Solving the Funding-Achievement Puzzle in America's Public Schools*. Princeton, N.J.: Princeton University Press.
- Heckman, James. 2011. "The Economics of Inequality: The Value of Early Childhood Education." *American Educator* 35(1): 31–35.
- Heckman, James, and Dimitriy Masterov. 2007. "The Productivity Argument for Investing in Young Children." *Review of Agricultural Economics Association* 29(3): 446–93.
- Hertert, Linda. 1995. "Right Game, Wrong Field? The Pursuit of School Funding Equity." *School Business Affairs* 61(8): 8–12.
- Holme, Jennifer Jellison, and Kara S. Finnigan. 2013. "School Diversity, School District Fragmentation and Metropolitan Policy." *Teachers College Record* 115(11): 1–29.
- Houck, Eric A. 2010. "Teacher Quality and School Resegregation: A Resource Allocation Case Study." *Leadership and Policy in Schools* 9(1): 49–77.
- . 2011. "Intradistrict Resource Allocation: Key Findings and Policy Implications." *Education and Urban Society* 43(3): 271–95.
- Houck, Eric A., and Moonyoung Eom. 2012. "Resource and Output Equity as a Mechanism for Assessing Educational Opportunity in Korean Middle School Education." *Journal of Education Finance* 38(1): 18–51.
- Howe, Kenneth, and David Meens. 2012. "Democracy Left Behind: How Recent Education Reforms Undermine Local School Governance and Democratic Education." Boulder: University of Colorado, National Education Policy Center. Available at: <http://nepc.colorado.edu/publication/democracy-left-behind> (accessed July 22, 2015).
- Iatarola, Patrice, and Leanna Stiefel. 2003. "Intradistrict Equity of Public Education Resources and Performance." *Economics of Education Review* 22(1): 69–78.
- Ingersoll, Richard. 2001. "Teacher Turnover and Teacher Shortages: An Organizational Analysis." *American Educational Research Journal* 38(3): 499–534.
- Jackson, Kirabo, Rucker Johnson, and Claudia Persico. 2014. "The Effect of School Finance Reforms on the Distribution of Spending, Academic Achievement, and Adult Outcomes." NBER working paper no. 20118. Cambridge, Mass.: National Bureau of Economic Research.
- Jennings, Jack. 2015. *Presidents, Congress, and the Public Schools: The Politics of Education Reform*. Cambridge, Mass.: Harvard Education Press.
- Jennings, John. 1998. *Why National Standards and Tests? Politics and the Quest for Better Schools*. Thousand Oaks, Calif.: Sage Publications.
- Kaestle, Carl. 2007. "Federal Education Policy and the Changing National Polity for Education, 1957–2007." In *To Educate a Nation: Federal and National Strategies of School Reform*, edited by Carl Kaestle and Alyssa Lodewick. Lawrence: University Press of Kansas.
- Kahlenberg, Richard D. 2003. *All Together Now: Creating Middle-Class Schools Through Public School Choice*. Washington, D.C.: Brookings Institution Press.
- Kahlenberg, Richard. 2012. "Turnaround Schools and Charter Schools that Work: Moving Beyond Separate but Equal." In *The Future of School Integration: Socioeconomic Diversity as an Education Reform Strategy*, edited by R. Kahlenberg. New York: Century Foundation.
- Kenworthy, Lane. 2014. *Social Democratic America*. Oxford: Oxford University Press.
- Kirp, David. 2011. *Kids First: Five Big Ideas for Transforming Children's Lives and America's Future*. New York: Public Affairs.
- Ladd, Helen F. 2008. "Reflections on Equity, Adequacy, and Weighted Student Funding." *Education Finance and Policy* 3(4): 402–23.

- Ladd, Helen F., Rosemary Chalk, and Janet S. Hansen. 1999. *Equity and Adequacy in Education Finance: Issues and Perspectives*. Washington, D.C.: National Academy Press.
- Lankford, Hamilton, Susanna Loeb, and James Wyckoff. 2002. "Teacher Sorting and the Plight of Urban Schools: A Descriptive Analysis." *Educational Evaluation and Policy Analysis* 24(1): 37–62.
- Lee, Jaekyung. 2007. "Can Reducing School Segregation Close the Achievement Gap?" In *Lessons in Integration*, edited by E. Frankenberg and G. Orfield. Charlottesville: University of Virginia Press.
- Linn, Robert, and Kevin G. Welner. 2007. *Race-Conscious Policies for Assigning Students to Schools: Social Science Research and the Supreme Court Cases*. Washington, D.C.: National Academy of Education.
- Liu, Goodwin. 2008. "Improving Title I Funding Equity Across States, Districts, and Schools." *Iowa Law Review* 93(3): 973–1013.
- McCull, Ann. 2005. "Tough Call: Is NCLB Constitutional?" *Phi Delta Kappan* 86(8)(April): 604.
- McDermott, Kathryn A., Elizabeth DeBray, and Erica Frankenberg. 2012. "How Does 'Parents Involved in Community Schools' Matter? Legal and Political Influence in Education Politics and Policy." *Teachers College Record* 114(12): 1–39.
- McDonnell, Lorraine. 2005. "NCLB and the Federal Role in Education: Evolution or Revolution?" *Peabody Journal of Education* 80(2): 19–38.
- McGuinn, Patrick. 2006. *No Child Left Behind and the Transformation of Federal Education Policy, 1965–2005*. Lawrence: University Press of Kansas.
- Murray, Sheila, William N. Evans, and Robert Schwab. 1998. "Education Finance Reform and the Distribution of Education Resources." *American Economic Review* 88(4): 789–812.
- National Coalition on School Diversity. 2014. Internal staff memo (on file with authors). Washington, D.C.
- National Conference of State Legislatures. 2005. "Task Force on No Child Left Behind: Final Report." Washington, D.C.: National Conference of State Legislatures. Available at: <http://www.hartfordinfo.org/issues/documents/education/nclb.pdf> (accessed July 26, 2015).
- O'Day, Jennifer A., and Marshall Smith. 1993. "Systemic Reform and Educational Opportunity." In *Designing Coherent Education Policy: Improving the System*, edited by Susan Fuhrman. San Francisco: Jossey-Bass.
- Orfield, Gary. 2011. "Conclusion: Returning to First Principles." In *Integrating Schools in a Changing Society: New Policies and Legal Options for a Multiracial Generation*, edited by Erica Frankenberg and Elizabeth DeBray. Chapel Hill: University of North Carolina Press.
- Owens, Tom, and Jeffrey Maiden. 1999. "A Comparison of Interschool and Interdistrict Funding Equity in Florida." *Journal of Education Finance* 24(4): 503–18.
- Porter, Andrew C., Robert L. Linn, and C. Scott Trimble. 2005. "The Effects of State Decisions About NCLB Adequate Yearly Progress Targets." *Educational Measurement: Issues & Practice* 24(4): 32–39. doi: 10.1111/j.1745-3992.2005.00021.x.
- Reardon, Sean F., and Glenn Firebaugh. 2002. "Measures of Multigroup Segregation." *Sociological Methodology* 32(1): 33–67.
- Rebell, Michael, and Jessica Wolff. 2008. *Moving Every Child Ahead: From NCLB Hype to Meaningful Educational Opportunity*. New York: Teachers College Press.
- Reed, Douglas. 2001. *On Equal Terms*. Princeton, N.J.: Princeton University Press.
- Reich, Rob. 2013. "Equality, Adequacy, and K-12 Education." In *Education, Justice, and Democracy*, edited by Rob Reich and Danielle Allen. Chicago: University of Chicago Press.
- Reschovsky, Andrew. 1994. "Fiscal Equalization and School Finance." *National Tax Journal* 47(1): 185–97.
- Rich, Motoko, and Tamar Lewin. 2015. "Schools Wait to See What Becomes of No Child Left Behind Law." *New York Times*, March 20, para 18. Available at: <http://www.nytimes.com/2015/03/22/us/politics/schools-wait-to-see-what-becomes-of-no-child-left-behind-law.html> (accessed July 22, 2015).
- Riley, Richard. 2001. "Dear Colleague." Washington: U.S. Department of Education.
- Robinson, Kimberly Jenkins. 2015. "Disrupting Education Federalism." *Washington University Law Review* 92(4): 959–1018.
- Rolle, Anthony, Eric A. Houck, and Ann McColl. 2008. "And Poor Children Continue to Wait: An Analysis of Horizontal and Vertical Equity Among North Carolina School Districts in the

- Face of Judicially Mandated Policy Restraints 1996–2006.” *Journal of Education Finance* 34(1): 75–102.
- Rolle, Anthony, and Keke Liu. 2007. “An Empirical Analysis of Horizontal and Vertical Equity in the Public Schools of Tennessee, 1994–2003.” *Journal of Education Finance* 32(3): 328–51.
- Rothstein, Paul. 1992. “The Demand for Education with ‘Power Equalization’ Aid.” *Journal of Public Economics* 49: 135–62.
- Roza, Marguerite. 2005. *Strengthening Title I to Help High-Poverty Schools: How Title I Funds Fit into District Allocation Patterns*. Seattle, Wash.: Center on Reinventing Public Education.
- Roza, Marguerite, and Paul Thomas Hill. 2004. “How Within-District Spending Inequities Help Some Schools to Fail.” *Brookings Papers on Education Policy* 7: 201–27.
- Rubenstein, Ross. 1998. “Resource Equity in the Chicago Public Schools: A School-Level Approach.” *Journal of Education Finance* 23(4): 468–89.
- Ryan, James. 2010. *Five Miles Away, a World Apart: One City, Two Schools, and the Story of Educational Opportunity in Modern America*. New York: Oxford University Press.
- Scafidi, Benjamin, David L. Sjoquist, and Todd Stinebrickner. 2007. “Race, Poverty, and Teacher Mobility.” *Economics of Education Review* 26(2): 145–59.
- Schoen, LaTefy, and Lance D. Fusarelli. 2008. “Innovation, NCLB, and the Fear Factor: The Challenge of Leading 21st-Century Schools in an Era of Accountability.” *Educational Policy* 22(1): 181–203.
- Schofield, Janet W. 1995. “Review of Research on School Desegregation’s Impact on Elementary and Secondary School Students.” In *Handbook of Research on Multicultural Education*, edited by James A. Banks and Cherry A. McGee Banks. New York: Simon and Schuster Macmillan.
- Schwartz, Robert, and Marian Robinson. 2000. “Goals 2000 and the Standards Movement.” *Brookings Papers on Educational Policy* 3: 173–214.
- Sims, David P. 2011. “Lifting All Boats? Finance Litigation, Education Resources, and Student Needs in the Post-‘Rose’ Era.” *Education Finance and Policy* 6(4): 455–85.
- Smith, Marshall S. 2011. “Rethinking ESEA: A Zero-Base Reauthorization.” In *Carrots, Sticks, and the Bully Pulpit: Lessons from a Half Century of Federal Efforts to Improve America’s Schools*, edited by Frederick Hess and Andrew Kelly. Cambridge, Mass.: Harvard Education Press.
- Smrekar, Claire, and Ellen Goldring. 2011. “Rethinking Magnet School Policies and Practices: A Response to Declining Diversity and Judicial Constraints.” In *Integrating Schools in a Changing Society*, edited by Erica Frankenberg and Elizabeth DeBray. Chapel Hill: University of North Carolina Press.
- Southern Education Foundation. 2009. *No Time to Lose: Why America Needs an Education Amendment to the U.S. Constitution to Improve Public Education*. Atlanta, Ga.: Southern Education Foundation.
- Springer, Matthew G., Eric A. Houck, and James W. Guthrie. 2007. “History and Scholarship of United States Education Finance and Policy.” In *Handbook of Research in Education Finance and Policy*, edited by Helen F. Ladd and Edward B. Fiske. New York: Routledge.
- Springer, Matthew G., Keke Liu, and James W. Guthrie. 2009. “The Impact of School Finance Litigation on Resource Distribution: A Comparison of Court-Mandated Equity and Adequacy Reforms.” *Education Economics* 17(4): 421–44.
- Stiefel, Leanna, Ross Rubenstein, and Robert Berne. 1998. “Intra-District Equity in Four Large Cities: Data, Methods, and Results.” *Journal of Education Finance* 23(4): 447–67.
- Stullich, Stephanie. 2011. *The Potential Impact of Revising the Title I Comparability Requirement to Focus on School-Level Expenditures*. Washington: U.S. Department of Education.
- Suarez, Christopher. 2014. “The School District Boundary Problem.” Paper presented at the Education and Civil Rights Conference. Penn State University, University Park (June 7, 2014).
- Tiebout, Charles M. 1956. “Pure Theory of Local Expenditures.” *Journal of Political Economy* 64(5): 416–24. doi: 10.1086/257839.
- Traiman, Susan L. 1993. *The Debate on Opportunity-to-Learn Standards*. Washington: National Governors’ Association.
- U.S. Department of Education. 2009. “National Public Education Financial Survey (NPEFS),” fiscal year 2009, Version 1a. Common Core of Data (CCD). Washington: National Center for Education Statistics.
- . 2013. *For Each and Every Child: A Strategy for Education Equity and Excellence*. Washington:

- Commission on Equity and Excellence. Available at: <https://www2.ed.gov/about/bdscomm/list/eec/equity-excellence-commission-report.pdf> (accessed July 22, 2015).
- . 2014. "Study Description: Feasibility Study on Improving the Quality of School-Level Expenditure Data." Washington: Office of Planning and Evaluation Studies.
- . 2015. "Fiscal Year 2015 Budget Summary and Background Information." Washington: U.S. Department of Education.
- U.S. Department of Education. Office for Civil Rights. 2014. *Resource Comparability Materials*. Washington: U.S. Government Printing Office. Available at: <http://www2.ed.gov/about/offices/list/ocr/resourcecomparability.html> (accessed August 18, 2015).
- Vinovskis, Maris. 2008. *From A Nation at Risk to No Child Left Behind*. New York: Teachers College Press.
- Weiland, Christina, and Hirokazu Yoshikawa. 2013. "Impacts of a Prekindergarten Program on Children's Mathematics, Language, Literacy, Executive Function, and Emotional Skills." *Child Development* 84(6): 2112–30.
- Wells, Amy Stuart. 2009. "Our Children's Burden: A History of Federal Education Policies that Ask (Now Require) Our Public Schools to Solve Social Inequality." In *NCLB at the Crossroads: Reexamining the Federal Effort to Close the Achievement Gap*, edited by M. Rebell and J. Wolff. New York: Teachers College Press.
- White, Herbert L. 2015. "Change Would Aid Title I Funding: Burr Amendment Would Add \$99M for NC." *The Charlotte Post* (online edition), July 22, 2015. Available at: <http://www.thecharlottepost.com/news/2015/07/22/local/change-would-aid-title-i-funding> (accessed August 17, 2015).
- Y, Mr. 2011. "A National Strategic Narrative." Princeton, N.J.: Woodrow Wilson School for Public and International Affairs. Available at: <http://www.wilsoncenter.org/sites/default/files/A%20National%20Strategic%20Narrative.pdf> (accessed July 22, 2015).