Professional Rigor, Public Engagement and Judicial Review: A Proposal for Enhancing the Validity of Education Adequacy Studies

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Background/Context:

In recent years, state legislatures, state education departments, and advocacy groups in over 30 states have sponsored education adequacy studies, which aim to determine objectively the amount of funding needed to provide all students a meaningful opportunity for an adequate education. Not surprisingly, because of their growing influence on funding decisions, these studies have now become the subject of critical commentary and judicial scrutiny, and serious questions have arisen about the validity of the methodologies used in some of the studies. By setting out to determine objectively the resource levels needed to provide all students with an adequate education—and by doing so through relatively open and transparent processes—the contemporary adequacy cost studies are vast improvements over the ad-hoc political deal-making processes of the past. Nevertheless, the validity and the reliability of these methodologies can be improved.

Purpose/Objective/Research Question/Focus of Study:

This article provides the first detailed analysis of judicial critiques of the state of the art of “costing out” studies in order to recommend improvements to the current practice of costing-out educational adequacy.

Research Design:

The article engages in an extensive review of judicial critiques of adequacy cost studies, literature critiquing adequacy cost studies, and the adequacy cost studies themselves, in order to identify the best and worst practices in the field.

Conclusions/Recommendations:

Based on these critiques, the article recommends explicit articulation of the premises behind the adoption of particular outcome standards, more precise means for identifying the extent to which students with special needs require extra resources, specific mechanisms to minimize political bias and political manipulations, and the use of “quality education models” to integrate efficiency and accountability considerations within the basic cost analysis. In addition, more extensive public engagement and continuing judicial oversight will be necessary to ensure the credibility and the legitimacy of the ultimate judgments that result from these studies.
INTRODUCTION

Over the past 16 years, courts in over 25 states have ruled on claims that state systems for financing public education deny many students the resources they need for a constitutionally “adequate” education. Plaintiffs have prevailed in 75 percent of these cases. One of the reasons for this startling plaintiff success rate is that close scrutiny of the state education finance systems revealed that few states had seriously attempted to determine objectively the amount of resources actually required to meet children’s learning requirements. Instead, judges learned that education funding in the United States was based more on inequitable political deals than on any serious assessment of actual educational needs.

One of the most dramatic examples of the typical deal-making pattern came to light during the trial of the New York adequacy case. Although the state’s education finance system was composed of a complex set of approximately 50 separate formulas and funding streams that ostensibly met the educational needs of the state’s children in a variety of specific priority areas, in reality the formulas proved meaningless. They were all manipulated to yield exact percentage allocations for each region of the state, as determined each year by “three men in a room;” the governor, the speaker of the assembly, and the senate majority leader. For the 13 years preceding the trial, New York City’s “share” was precisely 38.86 percent of any annual increase in state education funding. Each year, the legislative staff was directed to work the formulas backwards in their computer programs “until the politically negotiated ‘share’ for the City schools and other districts is hit in the calculations.” The total failure of these annual political deals to “align funding with need” was the critical constitutional deficiency “that runs afoul of the Education Article [of the New York State Constitution],” the Court held.

This judicial focus on the level of funding needed to provide an adequate education, together with the nationwide movement to raise educational standards, has resulted in an explosion of “costing-out” studies that aim to determine objectively the amount of funding that is actually needed to provide all students with a meaningful opportunity for an adequate education. Although only a handful of such studies were attempted prior to 1990, since that time, adequacy cost studies have been conducted in over 30 states. Some of these studies were directly ordered by the courts, and others have been undertaken by state legislatures, or sponsored by advocates, school boards associations, or unions in anticipation of litigation. The trend seems to be escalating: in 2004, nine costing-out studies were undertaken.

The impact of these studies has been powerful. An increasing number of legislatures have directly relied on these studies in formulating their education funding decisions, and courts have repeatedly cited their findings as evidence of constitutional violations. Not surprisingly, because of their accelerating impact, the costing-out studies themselves have increasingly become the subject of judicial scrutiny, and serious questions have now been raised about the validity of the methodologies used in some of the studies. For example, a Massachusetts trial court recently rejected all three costing-out studies that had been submitted by both sides in a recent adequacy litigation because the first was “not wholly accurate,” the second gave “one pause about its total objectivity,” and the third did not offer “useful guidance with respect to the issue of the adequacy of the district’s funding levels.”

The rising influence of adequacy cost studies on education finance decisions nationwide, and the concomitant increase in critical analyses of these studies calls for an assessment of the state of the art, and a review of the general and judicial critiques of current practices. This article will attempt to provide such an assessment and review, and will offer suggestions for reforms that may be needed to respond to critiques and enhance the validity of future adequacy cost studies. By setting out to determine objectively the resource levels needed to provide all students an
adequate education—and by doing so through relatively open and transparent processes—there is no doubt that the contemporary adequacy cost studies are a vast improvement over the ad-hoc political deal-making processes of the past. Nevertheless, the aura of “scientific” decision-making that is associated with these studies can be misleading. It is not, in fact, possible to definitively identify the precise amount of money that is needed for an adequate education. Although these studies use a variety of complex statistical and analytic techniques, all of them are premised on a number of critical judgments which strongly influence their ultimate outcomes. Moreover, the studies are often undertaken in the highly charged political environments created by ongoing litigation or legislative reform movements. Since the credibility and validity of all adequacy cost studies hinge on these core judgments, their internal integrity, the manner in which they have been formulated, and the extent to which they have been the subject of fair open public discussion should be subjected to extensive, ongoing professional and public scrutiny.

Part I of this article provides an overview of the historical development of education adequacy cost studies, and of the methodologies currently in use. Part II provides critical perspectives on the strengths and weaknesses of each of the four major methodologies based on the literature, insights provided by practitioners themselves, and specific judicial critiques in a number of the recent education adequacy decisions. The final section responds to these critiques by arguing that the quality and credibility of adequacy cost studies can be enhanced through three inter-related processes: greater professional rigor in the development and application of the specific methodologies; increased public engagement in the formulation of the judgments that underlie these studies; and a clearly defined judicial role in reviewing adequacy studies.

I - AN HISTORICAL AND METHODOLOGICAL OVERVIEW

A. THE ORIGIN OF COSTING-OUT STUDIES

Ever since states began to appropriate money to local communities to assist with the cost of education more than a century ago, state education finance systems have purported to provide sufficient funding for a basic education. In its first incarnation, such state funding took the form of a flat state grant for each school child, theoretically in an amount that would provide a minimum education. During the 1920s, insufficiencies in state funds and the inequity of providing the same amount of funding for students in both poor and wealthy districts led many states to adopt “foundation” programs. These required local school districts to levy taxes at a rate that was aimed at generating enough revenue to fund a minimum education, with the state supplementing the amount actually raised by poor districts when the required rate did not yield the minimum “foundation level.”

From the beginning, however, good intentions to support a meaningful foundation level were never realized. No real system was established to determine what the minimum foundation amount should be, and the foundation amounts were not set in accordance with any analysis of actual costs or actual needs; instead they tended to be established by the legislature based on the amount of funding currently available for education funding. Even the base amounts initially established tended to erode over time because of budget pressures and competing political priorities.

The first sustained attempt to overcome the limitations of the historical foundation funding approach was undertaken in the early 1980s by Jay Chambers and Thomas Parrish in studies undertaken in Alaska and Illinois. In order to “develop a basis for providing cost-based adjustments to the education funding allocations school districts received from the state,” they created a “Resource Cost Model” (“RCM”), which sought to determine the “exact quantity and precise mix of resources needed to reach desired goals in education.” The RCM was an input-
oriented model that organized panels of superintendents, administrators, and teachers to develop “appropriate” service delivery systems.

The Resource Cost Model was further developed into a “professional judgment” cost-study methodology, which emphasized educational “outputs” as well as “inputs,” by James Guthrie and his colleagues at Management Analysis and Planning (MAP). This took place in the mid-1990s in response to a 1995 order of the Wyoming Supreme Court, which required the state to calculate the cost of the “basket of goods and services” needed to provide all students with a “proper” education. The professional judgment approach Guthrie et al. developed for the Wyoming Legislature called upon panels of educators with directly relevant experience to design an educational program that would deliver a proper education and to identify the specific resources necessary for its success. After the basic prototype was established, the members of the panels were also asked to consider whether extra resources would be required to provide certain types of students—such as those from poverty backgrounds, students with disabilities, or English language learners—the opportunity to obtain a proper education. Once the panels had identified the set of inputs required to achieve the stated goals, the researchers determined the cost of obtaining those goods and services for Wyoming school districts through an extensive series of economic analyses and market-pricing assumptions.

A second major costing-out methodology was created at about the same time by John Augenblick and John Myers in response to the education adequacy order of the Ohio Supreme Court in DeRolph v. State. This technique, which was originally called the “empirical” approach, has come to be known as the “successful school district” method. It seeks to identify those school districts that are currently meeting state standards and then to use their average expenditures as a fair estimate of the actual cost of an adequate education. After removing “outliers,” the Ohio researchers chose a sample of successful school districts by reference to six specific measures of student achievement and eight input measures such as pupil-teacher ratio and average teacher salary.

Over the past 10 years, the techniques developed in these initial professional judgment and successful school district studies have been applied and further refined in over two dozen states, and two additional methodologies, the “expert judgment” and the “cost function” approach, have also been utilized, although in a more limited number of instances. A number of states also adopted cost-analysis strategies that did not adhere to any of the four professionally accepted methodologies in the statutes and regulations they enacted in response to court orders calling for reform of their education finance systems.

1. THE IMPACT OF STANDARDS-BASED REFORM

The impetus for this rapid expansion of adequacy cost studies was the emergence of the standards-based reform movement in the early 1990s and the acceleration of plaintiff victories in legal challenges to state education finance systems that began at about the same time.

Standards-based reform was a response to a slew of reports critical of the state of American education in the 1980s and the call for improved education standards issued by a national education summit convened by the President in 1989 and attended by all 50 governors. Over the past 15 years, this dramatic movement to raise the achievement of all American students has been implemented in virtually all of the states. Standards-based reforms are built around substantive content standards in English, mathematics, social studies, and other major subject areas. These content standards are usually set at sufficiently high levels to meet the competitive standards of the global economy, and they are premised on the assumption that virtually all students can meet these high expectations if given sufficient opportunities and resources. Once the content standards have been established, every other aspect of the education system including—teacher training and certification, curricula, textbooks, and student assessments—should be revamped to conform to these standards.
The standards-based reform movement has strongly influenced judicial concepts of adequacy, which have tended to interpret constitutional requirements for a “thorough and efficient” or a “sound basic” education in terms of a “high minimum” level related to the state learning standards. The combination of explicit, higher expectations for student achievement set forth in state learning standards and mandates to provide all students the resources to meet these standards in the state court education adequacy decisions has been the driving force behind the accelerating utilization of adequacy cost studies.

The state standards specify in concrete terms what students are supposed to learn, and state assessment and accountability systems identify certain gaps in student preparation and achievement in relation to these expectations. In order to overcome these gaps, each state needs to determine the types and amounts of resources that are essential to allow all students to meet their standards and the cost of providing those resources. In short, the inherent logic of standards-based reform—as well as explicit mandates in many court orders—compels the use of adequacy cost analyses as the primary building block for a proper and constitutionally acceptable state education funding system.

B. THE CURRENT METHODOLOGIES

1. PROFESSIONAL JUDGMENT

Professional judgment has been the predominant costing-out approach. In addition to the original and a follow-up Wyoming study, professional judgment has been utilized in at least 18 other states: Arizona, Colorado, Indiana, Kansas, Kentucky, Maryland, Massachusetts, Missouri, Montana, Nebraska, New York, North Dakota, Oregon, South Carolina, South Dakota, Vermont, Washington, and Wisconsin. Most of these studies have cleaved to the basic Wyoming model, but with variations in the composition of the panels and in the variables that the panelists are asked to consider. For example, in Augenblick & Myers’ 2002 Kansas study, panels of six to eight educators from districts of four different sizes each developed prototype schools, two additional panels reviewed the prototype schools and developed prototype district activities and resources, and an “expert panel” then reviewed their work. In Oregon, professional judgment techniques were utilized by the Oregon Council on the Oregon Quality Education Model, a 23-person body of legislators, educators, business leaders, advocates, and other community representatives, which appointed an expert staff and four separate subject-area working groups composed of experts on costs, best practices, and school funding equity, who devised prototype elementary, middle, and high schools.

The most extensive professional judgment study to date has been the New York Adequacy Study, which was undertaken jointly by the American Institutes for Research and Management Analysis and Planning in 2003 and 2004. This effort involved 10 professional judgment panels (two consisting of educators from New York City, two from other urban districts, two rural, two suburban, and two focusing on special education). The results of their deliberations were synthesized through an elaborate set of computer analyses and then reviewed by a panel of outside experts, a “stakeholders” group, and a summary professional judgment panel. The specific elements of the synthesized prototype education models were then subjected to economic analyses and market pricing review. A geographic cost-of-education index was also compiled for this study. In addition, the researchers undertook a companion successful schools study both to identify candidates for the professional judgment panels and to provide comparative data on salary patterns.

The study provided recommendations concerning the amount of funding needed for each district in the state in order to provide its students a full opportunity to meet the state’s learning
standards. Overall, the prime recommendation was that a statewide increase of $7.2 billion in 2002 dollars, or 41 percent above total expenditure levels in the base year was required. The New York study also pioneered the use of extensive public engagement processes to identify the precise output standards that should be utilized by the panels and to promote broad-based public deliberation on many of the judgments and issues involved in the study.  

2. EXPERT JUDGMENT STUDIES

In three states, Arkansas, Kentucky, and Wyoming, studies were recently conducted that derived resource needs from the literature on “proven effective” school reform models. In other words, instead of building educational prototypes from the recommendations of panels of experienced educators, judgments in these studies are made by the expert researchers conducting the study based on educational delivery strategies that they believe to be supported by research or proven best practices.  

“The subtle distinction between professional judgment and expert judgment studies is that the latter requires an empirical research basis for recommended resource configurations.”

For example, in the recent Kentucky study, Allan Odden, Lawrence Picus, and Mark Fermanich set forth and then costed out each element of a model for a high-quality instructional program, which they asserted was based on the latest “state-of-the-art” research, influenced primarily by common elements of “whole-school” reform strategies. This model included publicly funded preschool programs for children aged three and four from poverty backgrounds, full day kindergarten, school sizes of 300–600 at the elementary level and 600–900 at the secondary level, class sizes of 15 in grades K-3 and 25 in other grades, collaborative professional development, extra help strategies for struggling students, family outreach, and technology.  

Overall, the study concluded that to meet adequacy requirements, Kentucky would need to increase spending by $740 million, a 19 percent increase above actual expenditures in the base year.

3. SUCCESSFUL SCHOOL DISTRICT STUDIES

Since the original Ohio study, additional successful school district analyses have been undertaken in at least nine other states: Colorado, Illinois, Kansas, Louisiana, Maryland, Mississippi, Missouri, South Dakota, and New York. “Successful schools” is essentially a statistical modeling approach that calculates the cost of an adequate education based on specific data regarding resource inputs, student test scores, and other precisely defined outcome measures. Accordingly, such studies require clear data sets regarding both input and output standards, and the absence of such data in many states is one of the reasons that fewer states have used this methodology than the professional judgment approach.

Recent successful schools studies have added factors to the straightforward inputs and outputs analyzed in the original Ohio study. Most significantly, responding to criticism that these studies are “uncontrolled for student characteristics,” most of the recent studies take student characteristics into account by proposing that additional resources above the successful district base be provided for each student from a poverty background, each student with disabilities, and each English language learner. For example, using primarily the implicit weights determined by a companion professional judgment study, Augenblick & Myers’ 2001 Maryland study added additional per-pupil weights of 0.9 for students from poverty backgrounds, 1.17 for students with disabilities, and 1 for English Language Learners. In their 2003 Massachusetts Study, Augenblick & Myers, relying on numbers determined for other states, added weights of 0.5 for economically disadvantaged students, 0.25 for English language learners and 0.9 for special education students.
Identification of the standard for success has also taken on added complexity. Standard and Poor’s, in their recent New York successful school district analysis defined “success” four different ways, which resulted in the identification of four different pools of “successful” school districts, ranging from 102 districts in the smallest grouping to 281 in the largest. Each of these definitions of “success” also resulted in substantial differences in the amount of resources needed to eliminate the identified adequacy gap. For example, under the most rigorous definition of “success,” which included only school districts that already met New York State’s 2007–08 performance index targets, the statewide spending gap was $8.75 billion; if, however, success was defined in terms of those districts that have a simple, unweighted average of 80 percent on seven specified state tests, the spending gap would be reduced to $6.03 billion.

4. COST FUNCTION STUDIES

Cost function studies apply econometric models used to analyze data from manufacturing and other production processes in private industry to the education context. Specifically, they attempt to determine how much a particular school district would need to spend relative to the average district to produce a set performance target, given the characteristics of the school district and its student body. Cost function analyses differ from successful school district analyses in that they involve much more rigorous attempts to determine not only the levels of present spending that are associated, on average, with a specific set of outcomes, but also how those levels of spending may vary for districts of different characteristics that serve different student populations.

Cost function analyses require extensive statewide data on per-pupil school expenditures, student performance, and various characteristics of students and school districts. The statistical analyses involved in these studies are quite complex and often are difficult for policy-makers and the public to understand. For these reasons, cost function analyses have generally been theoretical modeling exercises rather than studies that are ordered or utilized by legislatures or courts.

Recently, however, both the plaintiffs and the defendants in West Orange-Cove School District v. Neeley, a Texas education adequacy case, submitted cost function analyses to the Court. Cost function appeared to be a feasible methodological approach in Texas because of the exceptional range of data available in that state, and because of its high number of districts and a large variation in the variables that needed to be assessed. The first study, undertaken for the Legislature’s Joint Select Committee on Public School Finance by Lori Taylor and other researchers from Texas A&M University, concluded that current aggregate spending in the state was at a level sufficient to provide all districts the resources needed to allow 55 percent of their students to meet the state performance targets for that year. If no funds were to be re-distributed away from districts spending at levels higher than the adequacy level designated by the study, however, an additional $226 million to $408 million would be needed. A different cost function analysis prepared by Andrew Reschovsky and Jennifer Imazeki for the plaintiffs used three differing outcome standard definitions and a number of different judgments; it concluded that between $1.65 billion and $6.17 billion would be needed to meet the 55 percent successful performance measure.

II - CRITICAL PERSPECTIVES

Four distinct methodologies for conducting costing-out studies have been developed in recent years because each approach is based on a core set of judgments about how to proceed, and there are significant differences of opinion among practitioners and commentators about these judgments. One of the strengths of the costing-out approach to education finance is its transparency and the candor with which its practitioners tend to openly discuss both the advantages and disadvantages of their own and competing methodologies. In recent years,
each of the costing-out methodologies, as well two legislative cost analyses that were not based on any of the professionally established methodologies, have also been reviewed and, at times, closely scrutinized, by courts in eight states (New Jersey, Ohio, Wyoming, Arkansas, Kansas, Massachusetts, Texas, and New York) as part of their analyses of the legal issues raised in education adequacy litigations.\textsuperscript{39} The discussion in this section will provide critical perspectives on each of the costing-out methodologies and approaches based on practitioners’ own insights, the literature in the field, and these judicial critiques. The judicial perspectives tend to confirm aspects of the practitioner and commentators’ critiques, but they also tend to be more extensive and, at times, more scathing. Of particular significance is the fact that the courts have upheld only 5 of these 12 professionally conducted studies.\textsuperscript{40} That fact, as well as the practitioners’ own recognition of deficiencies in each of the current approaches, underscores the need for a reconsideration and a strengthening of current costing-out approaches, a task we hope to advance with the suggestions for reform we discuss in the next section.

A. PROFESSIONAL JUDGMENT

1. GENERAL CRITIQUE

The primary advantage of the professional judgment approach is that it pools the best judgments of highly qualified practitioners who are experienced in both program implementation and resource allocation and are familiar with the learning needs of the particular state or locale. In addition, “its methods are relatively simple and transparent and produce easily understood results.”\textsuperscript{41} Professional judgment, therefore, promotes dialogue and tends to build consensus. Legislators, policy-makers and the public at large can understand precisely what assumptions and judgments underlie the panels’ recommendations and can assess them accordingly. Another advantage of professional judgment is that the experienced professionals who serve on these panels are in a position to assess the full range of educational needs and outcomes, including components of a basic quality education such as artistic creativity, that are not easily measured through test scores, and outcome goals like “citizenship skills,” that can not readily be expressed in quantifiable terms.

The main disadvantage of the professional judgment approach is the inverse of its core strength: precisely because this method is based on pooled judgments, it lacks the exacting specificity of the statistically oriented methodologies. Moreover, since the caliber of the pooled judgments that emerge from professional judgment studies depends on the depth and diversity of the professionals who are selected to participate in the panels, the quality of the resulting recommendations may be compromised by insufficient efforts to select a highly qualified pool of participants. Finally, even though instructions to professional judgment panels counsel otherwise, educators on these panels may incorporate “wish lists” rather than essential educational resources into their prototypes.\textsuperscript{42}

2. JUDICIAL CRITIQUES

a. Wyoming

The first, and to date the most extensive, judicial review of a professional judgment study was the Wyoming state courts’ detailed review of the Guthrie et al. effort. The Wyoming Supreme Court accepted the validity of the basic model developed by the researchers, and it was adopted with some modifications by the legislature.\textsuperscript{43} In a detailed decision, the court decided a number of technical issues that had engendered particular controversy among the parties to the lawsuit. For
example, the Court held that a) the model must be adjusted for inflation every two years, b) administrative and classified salaries must be revised to account for differences in experience, responsibility, and seniority, and c) statewide average costs must be adjusted for regional cost of living differences which include specified housing and medical cost components.

The Wyoming court did express concern that aspects of the model should have been informed by further empirical data on actual costs specific to Wyoming. For example, the consultants had included an extra allotment of $500 for each “at risk” and limited English Proficient (“LEP”) student enrolled in districts having at least 150 percent of the statewide average proportion of such students. The $500 figure was based on the approximate cost of the “Success for All” program used to improve reading for at-risk and LEP students in elementary schools in a number of other states. Citing the example of the Laramie School District, which had received only half of the amount actually required to fund what the court considered an appropriate program for dealing with at-risk students, the court held that “actual reimbursement of identifiable, legitimate, state-approved costs” should be the criterion for funding these special needs students, rather than estimates based on the professional literature or reported cost estimates from other states. Similarly, the court determined that the adjustment provided to small schools to cover their proportionately higher fixed costs “does not fully rely on actual data from Wyoming schools to estimate the relationship between unit costs and school size but rather uses an arbitrary scheme.”

b. Massachusetts

Two professional judgment studies, one conducted by Deborah Verstegen and one conducted by James Smith, were analyzed in 2004 by Judge Margot Botsford in *Hancock v. Driscoll*. She rejected the validity of both. The fatal flaw in the Verstegen study, according to Judge Botsford, was the choice of teachers and administrators from the four primary plaintiff districts to compose the professional judgment panels. Under these circumstances, she considered the resource needs identified to “represent to some extent a wish list of resources that teachers and administrators would like to have if they were creating an ideal school with no need to think about cost at all.” She also questioned why the panelists were asked to consider a range of programs, including full-day kindergarten, extended school time, and gifted and talented programs, but not preschool, transportation, or debt service.

Judge Botsford rejected the Smith study for a variety of reasons. The panelists used in the Smith study were mostly from out-of-state. They were asked to design prototype programs within designated budget ranges (which were roughly the same as the current appropriations in the four “focus” plaintiff districts) and express their degree of confidence in the programs designed under the various budgetary assumptions. The court’s major criticism of Smith’s methodology was that the set of propositions that the panelists were instructed to assume were, in fact, erroneous. At least three of these propositions—that facilities, supplies and materials, and special education funding were at adequate levels—had been shown to be false at the trial. In addition, the Judge questioned the assumption that teacher salaries were adequate in the focus districts, and she also was critical of the limited outcome measure that the study utilized, which was confined to only two of the state’s seven curriculum framework areas.

c. New York

Because the State had not met a July 30, 2004 compliance deadline established by the Court of Appeals in *CFE v. State of New York*, the trial court appointed a panel of three Judicial Referees, composed of two former appeal court judges and a former law school dean to hear
evidence and make recommendations regarding how compliance could be achieved. The Judicial Referees reviewed both the AIR/MAP professional judgment study and the Standard and Poor’s successful school district analysis, and heard extensive testimony from about half a dozen witnesses about these methodologies and their application in these studies. In their report to the court, the Judicial Referees focused on the successful schools study, likely because it had been submitted as the state’s official position. Their comments about the AIR/MAP study were less extensive, but generally approving: “when viewed as a whole, [it] offers a reasonable alternate approach to a costing-out analysis.” They also noted that “this methodology, which calls for the active involvement of educational professionals, is an analysis worthy of replication every four years, in conjunction with the successful schools methodology (as modified herein).”

The Judicial Referees referred to the AIR/MAP study primarily as a benchmark for assessing the validity of the state’s use of the data that emerged from the S&P successful school district analysis. For example, in faulting the state for utilizing arbitrary and unfounded weightings for students from poverty backgrounds, the panel referred favorably to the “implicit weightings” of the AIR/MAP study, which had been empirically grounded in the judgments of New York State educators. As it turned out, the AIR/MAP study yielded a recommended expenditure level which was almost precisely identical to the figure the panel reached based on a detailed analysis of the S&P data, and after correcting what the Judicial Referees considered to be major flaws in the State’s application of that data. The Referees consequently stated that the AIR/MAP study provided “significant support” for their conclusion.

B. EXPERT JUDGMENT

1. GENERAL CRITIQUE

The expert judgment approach, like the professional judgment approach, has advantages of simplicity, transparency, and the ability to deal comprehensively with the full range of educational needs and outputs. An additional advantage of this method is its potential for “overcoming the lack of cost effectiveness literature knowledge inherent in many professional judgment panels.” The main distinction between “expert judgment” and “professional judgment” is that the former is based on education practices that purportedly have been proven effective in the research literature, rather than the pooled judgments of a number of professional educators. That additional strength may, of course, also be its greatest weakness: to the extent that the research evidence regarding the effectiveness of the particular reform approaches being advocated is limited, inconclusive, or controverted, or its applicability in the particular context has not been tested, the validity of this methodology is undermined.

2. JUDICIAL CRITIQUE

a. Arkansas

In Arkansas, as in New York, the court appointed special masters to make recommendations after the State had failed to meet a compliance deadline. The special masters reviewed a range of legislation, including legislation that had been enacted after their appointment, much of which was based on an expert judgment study that had been undertaken by Drs. Picus, Odden, and Wallace. Although much of the detailed legislation was controversial, the underlying cost study was not. Therefore, the special masters referred to the study in passing, but did not analyze its methodology in any detail. Noting that the experts who had testified for the state, Drs. Guthrie and Smith, were mildly critical of the study because they complained that its authors should not claim
that their study was “evidence based,” the special masters nevertheless concluded that “the study seemed thorough in its approach.”

C. SUCCESSFUL SCHOOL DISTRICT STUDIES

1. GENERAL CRITIQUE

The primary strength of the successful school district methodology is the direct, quantifiable link it establishes between education costs and desired outcomes. The correlations that emerge from these studies, and the fact that they are tied to actual performance, appeal to both policy-makers and the public. Successful school district studies can be completed relatively quickly and they are comparatively inexpensive to undertake.

A major limitation of the successful schools approach is its dependence on the availability of accurate data on a broad variety of input and output variables, data that may be lacking or incomplete in many places. This means that “success” may be defined by a limited number of available test scores or other readily available quantitative indicators, which may not represent the full range of educational needs and outcomes. Even where ample, accurate data exists, these studies can be manipulated relatively easily by modifying major variables in order to achieve particular desired outcomes. The successful school district approach also has difficulty determining how to calculate the extra resources needed to educate students with special needs, such as students from poverty backgrounds, English language learners, and students with disabilities, and to prepare them to meet proficiency expectations that increase over time.

2. JUDICIAL CRITIQUES

a. Ohio

The Ohio courts closely examined Augenblick’s original successful school district study. The first version of the successful school district model had actually been developed by a panel of five experts who had been appointed by the State Education Commissioner. John Augenblick had been one of these experts, and was retained by the legislature to update the study. In that capacity, he revised some of the criteria that had been used in the original design.

The trial court was skeptical about Augenblick’s decision to select 18 performance standards for identifying successful districts without examining the specific educational programs the districts were providing, and about his decision to eliminate the wealthiest five percent of districts and the poorest five percent of districts without demonstrating that they were “outliers” in a true statistical sense. The Court also questioned the assignment of certain extra weightings for special education students and special funding for pupils in conditions of high poverty without conducting any analysis of the actual needs of these students.

The Court was even more critical of the General Assembly because of “evidence of a conscious consideration by the State [to manipulate] Dr. Augenblick’s methodology with an intent to lower the base cost of calculation.” For example, the Court found that:

The Department of Education prepared an analysis for Senator Watts that compared the cost of using weighted averages, unweighted averages, and the median based on four different scenarios. It is apparent that the sole function of this document is to determine the cost difference in these scenarios . . . the Court considers changing the methodology to use unweighted averages to be further evidence of the State’s engaging
in residual budgeting under the guise of altering the components of a purportedly rational methodology to achieve a specific fiscal result.\textsuperscript{68}

Noting that these manipulations resulted in the lowering of the original recommendation for a $5051 expenditure per-pupil to a legislatively-approved figure of $4063, the trial court specifically held that the General Assembly had engaged in a series of “manipulations” that capriciously allowed the “picking and choosing of factors.” The Ohio Supreme Court upheld these findings, stating that “We are perplexed by the General Assembly’s actions of enlisting an expert in the area of school financing and then, with no explanation, altering his methods.”\textsuperscript{69}

\textbf{b. Massachusetts}

A study by John Myers identified 75 successful school districts on the basis of student scores on certain state English language Arts and Math tests. The Court was critical of the limited scope of this outcome standard because it did not encompass all of the subject areas covered by the state’s curriculum frameworks and by the constitutional definition of an adequate education in Massachusetts’ earlier adequacy decision.\textsuperscript{70} The Court also considered the manner in which extra weightings for special needs students were applied in the study. Although the court agreed that this methodology had a “superficial logic to it,”\textsuperscript{71} upon analysis the Judge determined that the actual results of the application of the methodology yielded implausible results: “I am troubled by the apparent fact that if one were to compute the ‘necessary’ per-pupil cost of all 75 of Myers’ ‘successful’ districts according to his methodology . . . two-thirds of them are not spending the necessary amount on a per-pupil basis.”\textsuperscript{72}

\textbf{c. New York}

The Judicial Referees and the trial court were highly critical of the manner in which the state had distorted the findings and recommendations of the successful school district analysis conducted by Standard and Poor’s (S&P).\textsuperscript{73} S&P had utilized a range of outcome measures and related variables, each of which identified differing pools of successful schools and differing annual expenditure increases that would be needed to overcome the funding “adequacy gap” that had been identified. These expenditure increases ranged from $1.93 billion to at least $7.28 billion for the New York City schools.

S&P declined to recommend any of these output measures or funding levels; they explicitly left these critical judgments to the state policymakers. In their submissions to the Court, however, the state defendants had presented the $1.93 billion figure, the lowest of 10 figures S&P had used for illustrative purposes, as “the actual cost of making available a sound basic education in New York City . . .”\textsuperscript{74} implying that the figure had been endorsed by the researchers. Moreover, the state did not provide any policy rationale for this choice, and did not explain what process had been used to make this decision, or who the decision-maker had been. The Judicial Referees, therefore, considered the state’s endorsement of this figure as meaningless and proceeded to closely analyze the S&P data on its own.\textsuperscript{75}

The Judicial Referees first focused on a “cost reduction” filter that S&P, at the request of the state authorities, had included as one of its variables; this procedure had substantially reduced the initial costs of adequacy identified by the study. The “cost reduction” filter was applied as “an efficiency factor” to eliminate purportedly inefficient districts from the pool of successful districts. The “inefficient” districts were identified as the 50 percent of districts that spent the most amongst the initial pool of districts whose students performed well according to the outcome standards applied in the study. There was, however, no evidence that the higher spending successful districts were actually less efficient than the lower spending successful districts. In fact, the
Judicial Referees noted that application of the filter eliminated virtually all of the districts in the two counties closest to New York City that would presumably be the most relevant comparative benchmarks since these are “the very school districts against which New York City must successfully compete in order to attract and retain high-quality teachers.”

The second major flaw of the state’s approach, according to the Judicial Referees, was its use of arbitrary weightings for students from poverty backgrounds. Although S&P had utilized a 35 percent poverty weighting as one of the variables in its calculations, it had also utilized a 100 percent weighting in other calculations within this study, which was in the range recommended by the state Regents. S&P had also acknowledged that all of the weightings used in successful schools studies were based on the national literature, not empirical evidence of the actual extra costs of educating students from poverty backgrounds in New York. They further admitted that even these national figures tended to be arbitrary since they “result from guesses or policy decisions based on the amount of available funding,” rather than any empirical analysis of actual student needs.

In light of these findings, the Judicial Referees decided to use evidence regarding the implicit special needs weightings that were deduced from the AIR/MAP professional judgment study, together with the low range of the Regents’ estimated weighting to arrive at a “conservative” poverty weighting of 50 percent. Using this figure, together with an up-to-date version of the Geographic Cost of Education Index, and omitting the cost efficiency filter factor, the Panel determined that $5.63 billion, not the $1.93 billion figure put forward by the state, was the true annual adequacy gap for New York City.

D. COST FUNCTION STUDIES

1. GENERAL CRITIQUE

The cost function approach incorporates and magnifies many of the strengths and many of the weaknesses of the successful school district methodology. It uses even more precise statistical correlations, employs a more comprehensive range of analytic variables, and calculates exact adjustments to reflect the costs of serving students with special needs. This means that cost function studies can more precisely identify districts that perform well despite external obstacles, such as concentrated poverty, as well as districts that do not perform well despite favorable circumstances. Since its assumptions are explicit, the methodology can be replicated by others relatively easily.

The precision implied by the cost function approach may, however, come at a price. “Being totally reliant on the data base, the studies are only as good as the data.” Because of its complexity, the cost function approach has proved difficult to explain outside of academic settings. Moreover, the apparent precision of this method “may be misleading because each of the definitions of data used in these equations, and rationales for their use, requires assumptions and judgments that are not necessarily more precise than those of professionals operating without statistical models.” It is also sometimes problematic to extrapolate beyond the experience of the data “to predict the costs associated with a level of performance that is not regularly achieved or is not achieved by districts with a particular set of geographic and demographic characteristics.”

2. JUDICIAL CRITIQUE

a. Texas
As noted above, both the plaintiffs and the defendants in the recent Texas education adequacy case submitted cost function studies. The plaintiffs' study was prepared by Andrew Reschovsky and Jennifer Imazeki ("the I&R Study"), and the defendants' by Lori Taylor and others ("the Taylor Study") at the behest of the Legislature’s Joint Select Committee of Public School Finance. The Court accepted the I&R study and strongly criticized the Taylor study.

One of the major differences between the two studies was the outcome standards they used. The Taylor study looked only at a single outcome measure, the cost of meeting a 55 percent passing rate on the state’s basic student achievement test, the "TAKS" exam. The I&R Study considered three separate definitions of the 55 percent passing rate (which essentially involved differing assumptions about how quickly districts below the 55 percent standard would be expected to rise to that level) as well as the three higher pass rates (60 percent, 70 percent, and 90 percent) that will be required by state and federal accountability systems in future years. The Taylor Study concluded that between $226 and $408 million per year would be necessary to bring all districts up to at least the current passing standard on the TAKS, while the I&R study concluded that $1.65 billion to $6.17 billion would be needed, depending on the definition chosen; to reach the 70 and 90 percent standards would increase costs statewide by $4.67 to $10 billion. The Court noted that the Taylor study initially intended “to report the costs of meeting multiple performance measures...[but that] Dr. Taylor removed the discussion relating to these higher performance targets at the request of certain legislative leaders, who were concerned that the higher costs associated with the higher performance levels would be the focus of attention.”

In addition to these problems with the outcome standard, the court found a number of other methodological flaws in the Taylor study. These included a failure to properly account for the relative size of districts in the study’s expenditure recommendations, the use of flawed methods used to compare scores on the current state achievement test with scores on a predecessor exam, and failure to capture variations in teacher salaries which result from cost of living and other factors outside a district’s control. The court also accused the Taylor study of “misusing” the cost function results by, among other things, assuming that all district funds are fungible and that the higher costs for high school students required by the model could be readily obtained by reallocating large sums out of elementary and secondary school budgets.

After rejecting the Taylor Study for these and other reasons, the Court went on to describe a half dozen or more ways that both the I&R and the Taylor studies under-predict the costs of meeting performance targets under the Texas accountability system. The main concerns in this regard involved the fact that even though Texas had more extensive data sets than most other states, there was insufficient data regarding levels of student achievement in all grades and all subject areas, and regarding the scores of each disaggregated student group —Blacks, Whites, Hispanics and economically disadvantaged students—to undertake full cost function analyses covering these areas.

E. COMBINED PROFESSIONAL JUDGMENT/ SUCCESSFUL SCHOOLS STUDY

1. KANSAS

In Kansas, Augenblick & Myers conducted parallel professional judgment and successful school district studies, which resulted in recommended foundation levels of $5811 and $4547, respectively. Additional per-pupil weightings of $1200 to $7000 were added to these figures for bilingual, at-risk, and special education students. These recommendations became the prime evidence in the ensuing litigation that led the Kansas Supreme Court to conclude that the state legislature was not maintaining sufficient funding to provide a “suitable education” as required by the state’s constitution.
The trial court did not discuss the costing-out study in any detail, after noting that the study was the only credible evidence available regarding the actual cost of a “suitable education.” The court was, however, impressed that “Two different professionally accepted analytical methods were employed by Augenblick & Myers to reach their conclusions. Their final report drew from both methods and included numerous consultations with Kansas educators working ‘in the trenches.’”

The Supreme Court affirmed the trial court opinion, simply commenting that “there is substantial competent evidence, including the Augenblick & Myers study, establishing that a suitable education . . . is not being provided.” In a follow-up decision, which held that the legislature had not fully complied with its prior order, the Court ordered an immediate appropriation for the next school year of one-third of the full amount called for in the A&M study, holding that the state had cited no cost study or evidence to rebut the A&M study and “the A&M study is the only analysis resembling a legitimate cost study before us.”

F. LEGISLATIVE COST ANALYSES

1. GENERAL CRITIQUE

In response to court orders requiring reform of their education finance systems, several states have undertaken sui generis cost analyses that do not conform to any of the four professionally established methodologies. For example, in Washington the legislature, using the average statewide cost of educating “the normal range ability student” as its standard, defined the costs of a basic education by reference to ratios of teachers and other employees per 1,000 students, in accordance with a state salary scale, plus additional compensation for non-employee-related costs such as books, supplies, and utilities. Similarly, in Tennessee, the Basic Education Program consists of a classroom component (based on staffing ratios established by an accreditation agency and the State Education Department) and a non-classroom component (that includes central administration, transportation, maintenance, and capital outlay). And most recently, in Kansas the Legislative Division of Post Audit undertook an “input-based” analysis of the cost of the foundational costs of delivering the K-12 curriculum mandated by state statute in accredited schools, using three alternate models based on variations in class size.

These cost analyses can be undertaken relatively quickly by legislative or state education department staff, and they can be closely coordinated with legislative priorities and policy preferences. Although these analyses are more analytical and more transparent than “three men in a room” political funding decisions, serious questions of credibility and objectivity arise when governmental officials adopt their own procedures for cost analyses that differ from the established professional methodologies that use techniques developed by neutral professional practitioners through extensive field testing and peer scrutiny.

2. JUDICIAL CRITIQUES

a. New Jersey

In 1996, the New Jersey Department of Education developed a computer simulation of a school district to estimate the costs of providing a “thorough and efficient” education to all students in the state using a series of simulations based on a hypothetical model. Construction of the model was based on judgments of State Education Department officials, rather than panels of diverse educators, and the study lacked the transparency and methodological rigor of professional judgment approaches. The New Jersey Supreme Court considered it invalid precisely because of
its failure to reflect the type of empirical grounding that emerges from the professional judgment methodology.

The New Jersey hypothetical school district contained an elementary school of 500 students, a middle school of 675 students, a high school of 900 students, and a district central office. The model included specific assumptions about the number of teachers, teachers’ aides, administrative staff, textbooks, supplies, and equipment that are required to deliver an education conforming to the content standards. No basis was provided, however, for these judgments, and there was no indication that they had been open to any sort of professional or public discussion or review. The proposed model resulted in recommended spending amounts that were below the existing average spending levels throughout the state.

The New Jersey Supreme Court, in *Abbott v. Burke*, invalidated the “thorough and efficient amounts” determined by this computer simulation model. It held that use of a hypothetical model that has no grounding in empirical reality “can furnish only an aspirational standard.”

The Court’s prime concern was the fact that the hypothetical assumptions that went into the simulation ignored the realities of the educational needs of the poor urban school districts: [The model] rests on the unrealistic assumption that . . . all school districts can be treated alike and in isolation from the realities of their surrounding environment. For example, the model assumes that one security guard is sufficient for a 900 pupil “model” high school. The model district therefore would provide funding for only 3.3 guards in the 3000 pupil Trenton High school. Presently, however, approximately twenty security guards are required to ensure the safety of high school students in Trenton. Surely the State would not contend that the seventeen additional security guards presently employed by Trenton High are unnecessary and mere constitutional excess.

*b. Kansas*

Although, as discussed above, a combined professional judgment/successful schools study had been undertaken several years earlier, the Kansas legislature, as part of its response to the state supreme court’s order in *Montoy v. State I*, directed its “division of post-audit” to conduct a new cost study analysis based on the “actual costs incurred in a sample of school districts to provide reasonable estimates of the costs of providing services and programs required by state statute. . .”

The plaintiffs and the State Education Department contended that this study was designed merely to determine the historical amount of expenditures in the sample districts and would then inappropriately equate those expenditures to the cost needs of a new constitutionally adequate system. The Court, noting that the statutory language was unclear, specified that the post-audit study would be acceptable only if the legislative agency modified its methodology to ensure, among other things, that its examination of historical expenditures corrects for the recognized inadequacies of these past expenditures and ensures that a reliable method of extrapolation is adopted, incorporates the consideration of outputs, and includes all administrative costs.

**III - ENHANCING THE VALIDITY OF ADEQUACY COST STUDIES**

Over the past 15 years, cost study analyses have appreciably improved the design and implementation of education finance systems. Instead of seat-of-the-pants estimates and backroom deal-making, rational analysis that ties resource levels to actual student needs has become the prime input for legislative and executive funding decisions, and important evidence for the courts in a growing number of states. Moreover, the discussion has now become significantly more transparent, with more of the assumptions and justifications for school funding decisions becoming the subject of open debate and public scrutiny.
The fact that less than half of the cost studies reviewed by the courts to date have passed muster is, however, clearly a cause for concern. The highly charged political environment in which cost studies are conducted, as well as the inherently judgmental nature of the enterprise, means, of course, that there will always be intense disagreement about the results and recommendations of these studies. Nevertheless, the high rate of judicial disapprovals and the fact that many of the courts’ criticisms echo concerns also raised in the scholarly literature and by practitioners themselves, warrant serious consideration. In the hope of sparking more extensive policy discussion of these important issues, this section suggests a number of specific reforms of present practice under three headings: greater professional rigor, increased public engagement, and a clearly defined role for the courts.

A. GREATER PROFESSIONAL RIGOR

1. SETTING THE OUTCOME MEASURES

Two major conclusions emerge from the judicial critiques of the output measures that are being used in current cost studies. First, the choice of an outcome standard dramatically affects the ultimate recommendation: in New York and Texas, the expenditure level needed to close the adequacy gaps varied by 50–100 percent or more, depending on the measure used. Second, little professional attention has actually been given to this critical standard-setting issue. School finance researchers tend to accept a standard or a range of standards proposed by their clients and do not feel compelled to vouch for the validity of the standard or for the relevance of its application in the costing-out context.

The early costing-out studies were quite casual in their approach to standard-setting. The original successful schools study in Ohio chose a set of output measures that roughly correlated with passing rates at the 70th percentile of all districts in the state, essentially because these standards seemed right to the cost-study experts. The initial Wyoming professional judgment study simply asked the professionals on the panels to develop prototypes that could “deliver an adequate education” without attempting to define that concept in relation to any specific proficiency measures. These approaches presumably were justified by the transparency of the costing-out process: policy-makers or readers who considered the output measure used too high or too low could make their own adjustments. This response is unacceptable for two reasons. First, policy-makers and the general public tend to latch on to the ultimate figures that emerge from a study, and they simply assume that there is a solid rationale for core components like the output measure. Second, even if a reader were to disagree with the stated or implicit output standard, he or she would have no way to determine what impact an alternative standard might have without re-doing the entire study.

Enactment of the federal No Child Left Behind Act (NCLB) in 2001 radically altered the importance of the output measure issue. NCLB established a national mandate: by 2014, 100 percent of the students in every state must meet state-proficiency standards. Seemingly, this new national policy has solved the standard-setting problem: henceforth every costing-out study should simply posit 100 percent success as its output target.

Major problems arise in attempting to do this, however. Should 100 percent proficiency be the immediate target of costing-out study calculations, or should interim goals be considered sufficient before 2014? If interim goals are accepted, who should determine them, and what should they be? Even more troublesome is the fact that no one—no legislator, no teacher, no parent, and no researcher—really believes that the NCLB’s 100 percent target can actually be met. The politicians who enacted this mandate may have seen 100 percent proficiency as a statement of serious intent that would maximize attempts to close the achievement gap, and they may have assumed that as we approach 2014, the 100 percent goal will be postponed or
reconsidered. In the costing-out context, however, positing a decade-distant goal has major and immediate funding consequences. For example, to achieve 100 percent proficiency by 2014, virtually all children currently in preschool and in the early grades must be provided the huge levels of support that would allow them to meet grade-level literacy and core learning goals. The difference in pursuing a long-range goal of 100 percent proficiency or of 90 percent proficiency can have enormous practical consequences. The marginal cost of ensuring grade level proficiency for the last 10 percent of low-performing students, even in these early grades, could be prohibitive.

Few of the current costing-out studies done to-date have seriously confronted this issue. Some have simply put forward the unrealistic 100 percent proficiency standard without explaining whether or how they expect any level of resources to actually achieve this result. Others continue to utilize a pre-existing standard (e.g., 55 percent proficiency or 90 percent proficiency), while candidly acknowledging that they have not yet determined how to respond to the implausible NCLB requirements. Most accept various interim goals that have been adopted by the states to comply with NCLB, without analyzing or explaining whether these concepts are appropriate in the costing-out context.

For example, a recent North Dakota professional judgment study provided the panel with a two-page summary of the state’s current achievement standards and then listed the percentage of fourth-, eighth-, and twelfth-graders who were expected to pass state tests in reading and math during the current year and five years later. No explanation was given to the members of the panel as to how they should relate this broad range of expected outcomes over a five-year period to the immediate resource specifications they were expected to develop. Indeed, use of such precisely calibrated statistical information, though relevant for successful school district and cost function analyses, may, in fact, be totally inappropriate for professional judgment studies, since it is highly questionable that any individual can absorb and usefully relate such data to practical education programming decisions.

Quantitative output measures taken from a state’s adequate yearly progress goals can be relevant to successful school district and cost function studies, but decisions about which interim AYP target is most relevant for cost decisions for the current year or the next few years need to be made and explicitly defended. For example, the New York S&P study utilized output measures based on meeting the state’s AYP goals for the current year, for two years hence, and four years hence, without providing any rationale or recommendation as to why one or another of these interim outcome measures should govern current cost allocations. Providing a range of analyses to policy-makers based on these interim NCLB target goals is actually of little practical use. It does not, in fact, spark any significant public policy debate, since in the absence of any available rationales, politicians are inclined simply to choose the lowest figure presented, while advocacy groups are likely to focus on the highest.

Similarly, a major difference between the two cost function studies in Texas was that the Taylor study utilized only the 55 percent passing rates that state law permitted for the current year, while the I&R study used the current 55 percent rate, as well as the 70 and 90 percent rates that would be in effect in future years. The two reports focused on the huge cost differences associated with these choices. Little if any attention was given, however, to the critical, practical cost analysis question of what level of resources needs to be made available now in order to reach a desired outcome goal at a particular point in the future. To what extent do extra resources need to be provided to students currently in the second grade who are achieving at a 55 percent proficiency level to ensure that five years from now 75 percent will achieve proficiency, or that eight years from now 100 percent will? These are the types of difficult questions that must be posed and answered if the output measures used in adequacy cost study are to have any real credibility.

In short, most cost studies today are "muddling through" in their approach to the standard setting issue and are not directly confronting the serious issues raised by NCLB’s 100 percent proficiency mandate. In light of the significant impact that the output measure has on the results
of costing-out studies, such “muddling through” should be considered professionally unacceptable. Education finance analysts should be held responsible for articulating and justifying the output measures used in their studies, and they should not be allowed to “pass the buck” by stating that they are accepting vague or illogical output measures simply because they have emerged from the political process. A thorough discussion of these issues by the cost study researchers or through public engagement processes is necessary to allow these issues to be properly aired and to render the resulting cost studies and recommendations credible and valid.

2. ACCOUNTING FOR SPECIAL NEEDS

The early professional judgment and successful school district studies tended to ignore or minimize the question of whether substantial additional resources are needed to provide appropriate educational opportunities to students from poverty backgrounds, students with disabilities, or English language learners. More recent studies have given major consideration to this issue. Professional judgment panels now typically give extensive attention to alternative prototypes that provide additional resources for students with special needs, and successful school district analyses now add extra per-pupil allocations (“weightings”) to the base foundation amount for each student with special needs. Cost function studies also focus at length on calculating the extra resources needed to bring students with special needs to stated proficiency levels, and expert judgment models typically are taken from whole school reform practices that were designed to meet the needs of disadvantaged students.

The professional judgment approach is probably the most accurate of the current methodologies in its accounting for the programmatic requirements of students with special needs because the professionals on the panels are challenged to use their direct experience and knowledge to craft programs that are specifically geared to meeting the actual needs of at-risk and disabled students and English Language learners in the particular state or school district. The New York Adequacy Study, for example, developed a technique for determining the resource needs of students with disabilities in the kinds of inclusion settings that are favored by state and federal laws but rarely have been taken into consideration in cost studies.

The expert judgment approach also provides, at least in theory, a credible rationale for the implicit weightings it uses, since it presumably derives its resource allocations for special needs populations from model programs that have achieved demonstrable results with specific populations. As the Wyoming Supreme Court clearly determined, however, evidence that these models do achieve demonstrable results and the fit between these abstract models and needs of particular school districts often remains unstated or unconvincing.

Although much progress has been made in the techniques used to determine resource requirements for students with special needs in professional judgment studies, the importance of this issue calls for even more sustained professional attention. Specifically, to the maximum extent possible, professional judgment panels should include practitioners who have successfully worked with each major category of special needs student in the state. In addition, federal and state compliance requirements and evidence of the success of particular programmatic approaches to meeting the needs of at-risk students, students with disabilities, and English language learners should be included in the materials provided to the participants on professional judgment panels. These precedents should be openly considered in their deliberations and discussed in their reports. Practitioners who use the expert judgment methodology should be expected to demonstrate the validity of the models they use and their fit with particular local needs and conditions at the outset of their projects.

The recent Arizona English Language Learner Cost Study undertaken by the National Conference of State Legislatures is the only major study to date that has focused exclusively on the resource needs population. The Arizona study combined a core professional judgment
study, undertaken by both a state panel and a national panel, with surveys of school district personnel, analyses of state education department data on the incremental costs of providing English language learner services, school site interviews, and analysis of state audits on compliance with ELL education mandates. The members of the professional judgment panels, some, but not all, of whom had expertise in English language learner instructional issues, were provided specific information on state and federal ELL requirements. They were asked to review current costs associated with educating ELLs and to make appropriate adjustments based on compliance with these legal mandates. The state panel recommended a number of additional services that would increase spending for ELL students in grades K–2 by $1785 per pupil for students in grades 3–12 by $1447 per pupil. The recommendations of the national panel varied with the socioeconomic status and school level of the student; they ranged from $1026 for low-need high school students (a 24.3% increase over present spending levels) to $2571 per pupil for high-need elementary school students (a 38.3% increase over present spending levels).

The attempts of successful school studies to fairly meet the requirements of special-needs populations have been highly problematic —so much so that it is questionable whether this methodology may validly be used as a sole costing-out approach in any state or school district with substantial numbers of students in these categories. The main problem is that districts identified as “successful” in these studies generally are affluent school districts that have few students who are at-risk or English language learners. In order to extend findings derived from such districts to other districts that have large numbers of at-risk students and English language learners, the typical approach is to omit all services for special needs from the initial calculation of the base foundation amount, and then to add to the foundation amount an extra per-pupil amount to account for the extra needs of each at-risk or disabled student or English Language learner.

The way that these weightings are determined is often arbitrary. As the courts in New York and Ohio noted, the weightings tend to be based on “literature” reviews of extra per-pupil allocations that have been used in the past by legislatures or state education departments, or in prior cost studies. But these weightings themselves generally emerged from political compromises based on available funds or what the legislature was willing to spend, and not on any objective attempt to determine the level of resources that actually are needed to meet the needs of these special populations. Since these weightings, which may range from 20 percent to 200 percent or more for each special needs student in a district, often drive the entire cost analysis in states or districts with large numbers of these children—even to the point of doubling the ultimate calculated cost—utilization of arbitrary weightings undermines the validity of the entire analysis.

The premise of a “successful” school district analysis is that the successful results achieved by certain districts at a certain resource level should be replicable in all other districts. However, if those districts identified as successful do not have a student mix that is typical of the demographic student profile of the state as a whole, its achievement levels may not easily be replicable by other districts. In other words, the successful school district approach may not, in fact, be capable of providing an accurate picture of the cost needs of districts that differ substantially from the basic characteristics of the sample districts. Therefore, successful school district studies should be based only on districts that have a demographic mix typical of the demographic of the state as a whole (or of the districts whose cost levels are under consideration) and have “beaten the odds” by successfully educating a diverse range of students from all backgrounds. If a sufficient sample of such successful schools or districts does not exist in the particular state, there is a strong likelihood that education funding is systemically inadequate in the state, at least for districts with students who have special needs.

3. MINIMIZING POLITICAL BIAS AND MANIPULATIONS

Current costing-out methodologies have emerged in response to court orders and a perceived public concern that the success of standards-based reforms requires greater objectivity and
transparency in education finance decision-making. Most of the studies have been done by a small number of professional economists and education finance experts working under contracts with legislative committees, state education departments, and/or advocacy organizations that are the main sponsors of these studies. The fact that the main sponsors of these studies have a clear interest in their outcomes requires continuing efforts by the professional practitioners to maintain the independence and integrity of the studies. Indeed, the most scathing judicial critiques to date, those in New Jersey, New York, Ohio, and Texas, all focused on blatant legislative or executive manipulations of costing-out methodologies.

Although practitioners cannot fully control the manner in which their professional work product will be used by clients who commission the studies or others who cite or rely on their recommendations, they can take a number of steps to enhance their credibility and limit possibilities for manipulation. First, all contracts should specify that, although input from clients is welcome during planning stages and as reactions to preliminary drafts, decisions regarding the final work product must be based solely on the independent professional judgment of the researchers. Clients should not be permitted to direct a mid-course shift in the core methodology, as the legislative leaders in Texas did when they “requested” that the researchers omit the costs of meeting alternate performance standards from the final report because they “were concerned that the higher costs associated with the higher performance targets would be the focus of attention.” Nor should clients be permitted to direct professionals to redo the study using different variables, as occurred in Ohio, simply because they are likely to result in higher costs.

Second, researchers should include in their reports only techniques and data for which they are willing to take full professional responsibility. A costing-out study should not provide data on the extent to which expenditure recommendations might be reduced by use of “cost reduction filters” or other questionable “efficiency” procedures that have no validity in the professional literature, and which no professional researcher has personally been willing to support, simply because a client requests application of a procedure for the sole purpose of reducing the cost of the calculations. Even if the results of these questionable procedures are reported with appropriate qualifications, there is no justification for education finance experts including the results of procedures that they do not, in their professional judgment, consider fully valid in a professional report.

Third, real or perceived conflicts of interest among participants in costing-out activities should be avoided to the maximum extent possible. In Massachusetts, the court was right to reject the deliberations that emerged from panels drawn solely from the school districts that are the prime plaintiffs in the lawsuit. Although a call for higher expenditures from those who truly and directly know children’s actual needs should not be unexpected, the possibility or the perception that professional judgment panels are compiling unjustifiable “wish lists” should be countered through 1) clear instructions to the panel that candidly speak to this issue; 2) alternative justification for panel recommendations in empirical research; 3) review of the panel recommendations by diverse “stakeholder” groups.

Fourth, “in-house” cost analyses conducted by the staff of legislatures or state education departments should adhere strictly to the established cost-study methodologies. Although economists and education finance experts who work for legislatures and state agencies may be as competent as outside consultants, they bear an inherent burden of persuasion to establish the credibility of cost analyses. Veering from established professional practices obviously deepens this credibility gap. If a legislative or state education department study is to adopt innovative techniques, those techniques should, at the least, be publicly vetted through an independent peer-review process before being implemented.

Finally, as a general rule, every costing-out study should incorporate multiple methodologies. Since costing out is not an exact science and each of the costing-out methodologies is based on series of explicit or implicit judgments, the best way to highlight and resolve differences in these
judgments or in the results that they yield is to juxtapose the results of the application of one methodology with the results of an alternative approach.

Using multiple methodologies makes sense. Where separate studies reach similar results, policymakers can take comfort from that fact in issuing their recommendations, as did the panel of Special Judicial Referees in New York. Where the results differ, both the experts and the policymakers will have fertile fields available to them for comparative analysis. The credibility of the report of the Thornton Commission in Maryland was strongly enhanced by its analysis and synthesis of the differing results of two professional judgment studies and one successful schools study that had been conducted in that state. Providing a variety of perspectives in this way promotes greater understanding of the issues by professionals and the public alike, and use of multiple methodologies undoubtedly increases the reliability of the results.

The use of multiple methodologies has already become a common professional practice. Augenblick, Palaich, and Associates have undertaken parallel professional judgment and successful school methodologies in most of their recent studies, a fact explicitly lauded by the court in the Kansas case. AIR/MAP incorporated several methodologies within their single broad-scale New York Adequacy study. Whatever the precise form it takes, the logic of using multiple methodologies is so compelling that it should be adopted not merely as a recommendation for clients who are willing to fund an extra study, but as a requisite standard operating procedure in the field.

4. EFFICIENCY

Most of the costing-out studies that have been undertaken to date have recommended substantial increases over current expenditure levels, on average 20–40 percent, as calculated by William J. Mathis in his article “Two Very Different Questions” (Bethesda, MD: Education Week, April 21, 2004). This should not be surprising, since the predominant thrust of the studies is to determine an appropriate level of resources to meet the challenging achievement expectations for all students that have been established by new state standards and federal NCLB requirements. In fact, a basic premise of these policies is that the needs of many of these students have been neglected in the past. Nevertheless, these recommendations for substantial spending increases inevitably generate calls for greater efficiency and accountability to reduce these higher costs. Although efficiency and accountability are obviously major public policy concerns that should be vigorously pursued, it is questionable whether cost analysis per se is an appropriate venue for pursuing these concerns. After all, the basic purpose of costing-out analysis is to determine what level of resources, using the best mix of current practices, will meet stated achievement goals. The extent to which major changes in current practices might produce acceptable results for lower costs is not part of the stated mission of these studies, nor could it be without postulating a set of hypothetical variables that would be inconsistent with the methodological premises of professional judgment panels and successful school district studies.

From this perspective, the common criticism that professional judgment panels tend to issue “wish lists” of ideal arrangements is off the mark. If a professional is asked what tools are needed, given current professional practices, to achieve a stated result, his or her conscientious answer should be respected. Past education expenditure levels were premised on high student failure and dropout rates, especially for students from poverty backgrounds, students with disabilities, and those with limited English proficiency. If society is now asking educators to provide full opportunities for all of these students, the resources needed to do the job will naturally be much greater than the resources currently being expended.

In fact, if assumptions regarding present practices are probed, it is likely that reasonable cost analyses will result in even higher expenditure levels. As Judge Botsford pointed out in the Massachusetts case, there is no reasonable basis for “assuming,” as many current cost studies...
do, that poor urban districts currently have qualified teachers, adequate facilities, or appropriate instructional materials. Such disadvantages should be reflected in costing-out calculations. Therefore, in addition to projecting the additional costs that will be required to hire extra teachers in order to reduce class size or to provide additional time on task for students with special needs, cost studies should develop mechanisms that take into account incentive pay scales that may be needed to attract truly qualified individuals to take on these assignments, or the effect on marginal wage scales that may result from a dramatic increase in demand for new teachers.

This is not to say, of course, that cost studies should not be premised on the prudent application of current practices. Professional judgment panels should be instructed to assume that resources will be used in an efficient manner, and it is reasonable to submit the panels' prototypes to review by a panel of educational stakeholders who might challenge some of their recommendations on efficiency or other grounds. Similarly, it is reasonable to expect that expert judgment studies will use prototype models that have in fact demonstrated that they efficiently utilize the best of present practices to achieve positive results.

Since the purpose of cost studies is to estimate the level of resources needed using present practices to achieve a stated result, it also should not be considered professionally acceptable to invoke arbitrary “efficiency factors” that have no empirically demonstrable relationship to the efficient use of current practices, solely for the purpose of reducing bottom-line costs. The recent attempt in New York to eliminate from the pool of successful school districts all of those districts identified as successful that were spending above the median expenditure level was a gross perversion of the basic successful schools methodology. Although it is possible through statistical techniques to identify “successful” districts according to specified output measures and to determine their average expenditure levels, the methodology has no means for determining why certain of these successful districts spend more than others.

Similar problems abound with attempts to include “efficiency” factors in cost function studies. For example, the Taylor study introduced in the recent Texas litigation attempted to estimate inefficiencies through a “stochastic frontier” technique. This procedure seeks to identify minimum spending levels among districts with similar characteristics and similar levels of student performance, and then exclude as “inefficient” all spending above these levels. This technique is, however, premised on very specific output measures. This means, for instance, that resources that districts devote to art, music, or other subjects that are not reflected in the math and reading scores that constitute the designated performance measures for the study are considered “inefficient.”

B. EXPANDED PUBLIC ENGAGEMENT

The most significant feature of cost studies is that they put a spotlight on important education finance decisions that traditionally have been made in the dark. As the previous section has made clear, however, many key judgments that are the building blocks of cost studies, including the setting of output measures, the designation of additional weights for the per-pupil costs of educating students with special needs, and the use of “efficiency” factors are made in haphazard ways that partially belie the transparency that is the major justification for the endeavor.

Since the essence of an adequacy study lies in “defining high-minimum outcomes for student performance and then gearing resource decisions to those outcomes,” the determination of the specific outcome measure that will be used in cost study is of critical importance. Generally speaking, however, these decisions tend to be made in a casual, off-the-record manner by the researchers themselves or by researchers in informal conversations with the members or staff of legislative committees. Because of the importance and the complexity of setting specific outcome measures for cost studies, this task should be done in the open, through a formal analytic process. The most credible and practical way to do this is through a probing public engagement process.
The discussion in the previous section made it clear that virtually all of the procedures used to set the output standards in current costing-out studies have failed to confront the critical conceptual challenges posed by NCLB’s 100 percent proficiency mandate. Cost-study researchers need to think through, rather than “muddle through,” their approaches to setting these standards. They must set forth specific rationales for the particular standards that they choose to use. Researchers do not, however, necessarily have any particular expertise on these highly controversial questions. “Opinions differ about what constitutes an adequate education . . . it requires cooperation among many different groups” to determine satisfactorily what the output standards should be. That is why engaging the interested public in vigorous public debate and deliberation is particularly appropriate at the initial standard-setting phase of a cost study.

The recent New York Adequacy Study utilized such a public engagement process to establish the output standard it presented to its professional judgment panel. The central standard-setting event was a day-long forum at which approximately 100 school board members, administrators, teachers, parents, business leaders, and academics from all parts of the state convened in Albany to deliberate on this question. A major debate ensued between those who favored use of a “challenging, but realistic” goal of 90 percent of all students achieving proficiency on the state’s student assessment and graduation exams, and those who said that NCLB’s 100 percent proficiency mandate, whether realistic or not, must be strictly followed.

Toward the end of the day’s discussion, a compromise standard emerged that appeared to satisfy both needs. Participants agreed that the professional judgment panels should design an instructional program that will:

. . . provide all students in the school a full opportunity to meet the Regents Learning Standards, and to attain a Regents diploma. For students in the early grades and preschool, this means designing an instructional program that will seek to address any learning problems with which students enter school. For students further along in their educational career, it means addressing any deep-rooted educational deficiencies that may have developed as thoroughly as possible and minimizing dropout rates.

In essence, this approach meant that substantial resources would be provided to students in the early grades in an attempt to eventually achieve 100 percent proficiency for those students. After a few years, the actual achievement level of those students who had been provided such a full opportunity could be assessed, and based on that empirical data further consideration could be given to whether 100 percent or some other figure should be the realistic cost-setting target for future years. At the same time, serious efforts would also be made to address the current needs of older students to improve their achievement, even though 100 percent proficiency would not be considered a legal requirement or a realistic expectation.

Although some may differ with the premises, the logic, or the language used in this standard, unlike virtually every other method for establishing output measures currently being used in cost studies, the New York public engagement approach directly confronted the output measure dilemma posed by NCLB’s 100 percent proficiency standard, and it articulated a plausible policy that both professional judgment panels and ultimate decision-makers could understand and address. Similar public engagement approaches should be used to consider mid-course changes in the goals or methodology of major cost studies, and to deliberate about the effectiveness of accountability or efficiency reforms for which there is not currently definitive research validation.

The importance of integrating public engagement into costing-out procedures is increasingly being recognized. For example, the first stage of Augenblick & Myers’ recent Kansas study involved a series of meetings around the state “with 60 or so people to discuss the strengths and weaknesses of the school finance system.”
In Maine, the costing-out study was conducted by a 17-person committee, chaired by the head of the State Board of Education. The Committee hired consultants to undertake the technical work and held over 25 public forums and meetings across the state at which over 420 individuals commented on the study’s draft report. In Georgia, the state has adopted a promising public engagement process that, among other things, seeks to define the level of educational excellence that the state should seek to achieve and to develop the indicators by which this outcome standard should be assessed. The process features a series of simultaneous facilitated community conversations on educational excellence linked through a statewide telecast, as well as town-hall type meetings, focus groups, and other events to incorporate public input into the work of an overall Education Task Force.

In a number of states, such as Missouri, Montana, and Nebraska, costing-out studies have been conducted under the auspices of coalitions of school board associations, unions, professional associations, municipalities, and business groups. The broad membership of these coalitions establishes a natural starting point for conducting the type of wide-ranging, open discussion of key policy issues that should accompany any extensive costing-out endeavor. Involvement of interested advocacy groups, of course, raises a question concerning the impartiality of the public engagement process that they are sponsoring. The same issue arises, however, if a cost study and a public engagement component are sponsored by a legislative body, which also has a strong cost-containment interest in the outcome. Certainly, whether public engagement is part of a study being sponsored by a governmental entity or an advocacy group, there is a danger that the public’s involvement will merely be “window dressing” for decisions that actually have been made by the sponsors of the study behind closed doors. For this reason, it is important the public engagement procedures adopted for any cost study explicitly speak to this issue and articulate the steps that are being taken to promote transparency and objectivity.

One method for promoting objectivity is to include representatives from a range of groups with varying interests in the team that is organizing and sponsoring the public engagement activities. For example, the Executive Committee of the “Council on Costing-out” that sponsored the AIR/MAP New York Adequacy study consisted of the Campaign for Fiscal Equity, the New York State School Boards Association, and the Business Council of New York State. The researchers had insisted that a clause guaranteeing their independence be included in their contract. A prime example of how that independence operated in practice was the fact that although CFE and a majority of Council members repeatedly expressed strong objections to aspects of the methodology the researchers utilized for the Geographic Cost of Education Index, after considering these objections, the researchers nevertheless fully maintained their original approach. CFE had sought the involvement of the business council for the express purpose of promoting balance and credibility for the public engagement process. Another means for promoting objectivity is for the governmental entity or advocacy group sponsoring the cost study to hire an independent agency, like Public Agenda, to facilitate the process.

An alternative method for promoting public engagement in conjunction with a costing-out study is through a “Quality Education Model” (“QEM”). A QEM is a mechanism for determining both the amount of money and the effective educational practices that will lead to high student performance in accordance with established state standards. The most extensive implementation of the QEM approach thus far has been in Oregon, where a Quality Education Commission was established by the governor and the legislature in 1999. Over the past eight years, the commission has developed a detailed set of educational prototypes and cost analyses and has regularly updated the model and issued reports on a range of cost analysis and best-practice recommendations based on its model.

The Oregon commission’s basic membership consists of 11 business leaders, State Board of Education officials, superintendents, principals, and teacher representatives. The Commission has also established three panels (a “cost panel,” a “best-practices panel” and an “accountability” panel) to assist them in their work. Forty-four individuals, representing a diverse range of
governmental agencies, business groups, school districts, and academic researchers, serve on these panels.\textsuperscript{142}

Although the Oregon Commission has not directly confronted the NCLB 100 percent proficiency mandate,\textsuperscript{143} a QEM can potentially promote wide-ranging public deliberation on this issue, and on all of the other issues discussed in the previous section. The fact that the scope of its mandate includes not only costing-out studies but also close examination of best practices means that public engagement that is carried out through a QEM process can systematically confront the issue of efficiency in an appropriate manner, without resorting to cost-reduction filters or other arbitrary or unproven practices. Under the QEM approach, separate cost studies and best practices reviews can be conducted, and then their results compared, through expert panel and public engagement deliberations to determine what changes in current practice should be recommended and what the cost implications of those changes might be.\textsuperscript{144}

To accomplish these purposes, the legislation establishing a QEM should go beyond the appointment of representative stakeholders to designated work panels; it should affirmatively establish a thorough-going public engagement process. Full public involvement not only expands the range of information and insight that can be applied to the issues at hand, but it also educates the public and tends to promote their support for the expenditure increases and best-practice reforms that may result from the process.\textsuperscript{145}

QEM legislation adopted in California in 2002 also included a number of significant references to such public engagement procedures. The bill provided that, in addition to consulting with “expert panels for advice relating to research based, best practices,” the commission will “solicit public comments, criticism and suggestions” and will “provide the public with information sufficient to enable interested members of the public to understand the processes being undertaken in constructing the model.”\textsuperscript{146} Precisely what type of public engagement procedures would have resulted from this broad statutory directive for public involvement remains unknown, however, since Governor Arnold Schwarzenegger decided not to implement the QEM that his predecessor had initiated.

Ultimately, then, the QEM, like other costing-out and public engagement procedures, is subject to the vicissitudes of the political process. One means for injecting a heavy dose of impartiality into a QEM process might be for an independent foundation or consortium of foundations to sponsor the QEM, ideally with the active support and involvement of a governor, legislative committee, and/or state education department, as well as interested advocacy groups. A variation of such an approach is currently being undertaken in California, where a consortium of four foundations is sponsoring the “Getting Down to Facts” project. This extensive project will involve approximately 20 studies at the state, district, and school levels that will analyze a series of probing, interrelated questions regarding the sufficiency of current levels of funding in relation to the state’s education goals, and ways in which resources can be used more effectively to improve student outcomes. The study is being undertaken with the bipartisan support of the Governor and the Legislature and includes a variety of public engagement processes.\textsuperscript{147}

An alternative means for promoting impartiality in a public engagement process might be for a court to encourage and oversee the convening of a QEM process in order to ensure that both adequate funding and maximum accountability and efficiency are assured.\textsuperscript{148} Whether or not courts will, in fact, take action to ensure implementation of effective QEM procedures, it is clear that continuing judicial involvement in monitoring cost studies and ensuring their integrity is both appropriate and necessary, for reasons that will be explored in greater detail in the next section.

\textbf{C. THE NECESSARY ROLE OF THE COURTS}

The overview of the current state of the cost study art presented in the previous sections has highlighted two central concerns: 1) every cost analysis is grounded in a series of fundamental
judgments, and 2) these judgments necessarily are forged in a highly charged public-policy context in which differences of billions of dollars hinge on the outcome of these decisions. Courts have played an enormously important role in making these judgments transparent and in exposing excesses and unjustifiable manipulations when they have occurred. In fact, in recent years, the courtroom has been the only place where focused dialogue on the validity of major costing-out studies has actually taken place.

Although conventional wisdom often bemoans active judicial involvement in social policy issues, in regard to the oversight of cost studies a continued pro-active judicial stance is vitally needed. The opportunity for an adequate education is a fundamental constitutional right, which past experience has indicated will not be fully and fairly respected in most states without active judicial oversight. Moreover, in regard to cost studies, which constitute a critical element in developing an effective remedy in these cases, there simply is no other authoritative, impartial governmental entity that is capable of monitoring and regulating the delicate mixture of expert and political judgments that is involved in this enterprise.

The fact that 75 percent of the judges in cases involving more than half of the states in the union (both “red” states and “blue” states) have in recent years invalidated state educational finance systems that were denying students their constitutional rights to an adequate education testifies both to the importance of the constitutional issues involved and to the fact that without judicial involvement, these rights would largely be ignored. Legislatures in most states are dominated by suburban majorities, and, therefore, the legislative process, left to its own natural political propensities, will tend to create education finance systems that disfavor urban and rural school systems. Although both state and national policy now strongly proclaim the importance of providing affirmative opportunities for all students in order to overcome achievement gaps, in fact, the resource needs of minority students are not likely to be met unless the courts continue to carry out their constitutional responsibility to vindicate the rights of under-represented minorities.

In regard to the effectiveness of remedies in these cases, the simple fact is that in the absence of judicial oversight, there often will be no legitimate, impartial review of the validity of cost studies. Critics of judicial involvement, like Eric Hanushek, posit as an alternative to the judicial decision-making in this area, a “scientific” approach that would answer the question “What level of funding would be required to achieve a given level of student performance.” But precise answers to this question cannot be furnished by economics or any other natural or social science. Cost questions in education inherently involve a judgmental dimension, and since the legislatures, which often seek to maximize cost-containment concerns at the expense of students’ constitutional rights to an adequate education, are at times also “interested parties” in the resource allocation decisions that are involved in this process, the only authoritative governmental institution that has both the legitimacy and the ability to tackle this task is the judicial branch.

The courts’ continuing involvement in the costing-out context does not mean that every study needs to be subjected to judicial review. In many situations—especially where there are multiple studies whose results tend to confirm each other, or public engagement processes that have worked effectively—differences may be suitably resolved without resort to litigation. In fact, the
realization that the courts will accept jurisdiction of a controversy if it is not suitably resolved may motivate a greater degree of professionalism and reduce the incidence of political manipulation in the first place. Where good faith differences persist on critical judgmental issues, invocation of judicial review will provide credible final resolution of controversial issues.

Judicial oversight has, in fact, done much to hone and improve professional practices, as the discussion in Part II of this article has demonstrated. Judicial review has validated the use of certain methodologies in Wyoming and Arkansas, rebuked attempts to grossly manipulate costing-out techniques in Ohio, New Jersey, and New York, and provided helpful suggestions for improving professional practices in Kansas, Massachusetts, New York, and Texas.

The degree of scrutiny the courts have used in these situations has varied enormously from the exacting inspection—some might say micro-management—approach taken by the Wyoming courts to the conclusory approval mode of the courts in Kansas. How then should the role of the courts in these situations be conceptualized? What is the proper role for the courts and what are the implications of continuing judicial involvement for the role of the legislative and executive branches in these matters? In order to answer these questions, we first need to consider some basic separation of powers issues.

1. SEPARATION OF POWERS: CONTEMPORARY CONSIDERATIONS

Confrontations between federal courts and state and local agencies—especially school districts—in the '60s and '70s led to a lengthy debate on “judicial activism” concerning the legitimacy of the courts' involvement in extensive institutional reform processes, and their capacity to intervene effectively. The literature on judicial activism emphasized the separation-of-powers problems created by the active involvement and even management of local school districts by federal judges in desegregation cases.

Recently, a number of scholars have begun to focus specifically on the experience of state courts, especially in fiscal equity and educational adequacy litigations. They have drawn important distinctions between the role of state courts and the role of federal courts in the remedial stage of institutional reform litigations. For instance, they have recognized that state court judges are closer to the local political process than their federal counterparts because many state court judges are elected and most state constitutions can be amended more easily than the federal constitution. Moreover, state constitutional issues often involve “positive rights” that call for the affirmative governmental action in contrast to the “negative restraints” of the federal constitution: “Judicial review in such a regime must serve to ensure that the government is doing its job and moving policy closer to the constitutionally prescribed end.” Finally, institutional conflicts that may arise from the dynamics of federalism, when federal courts order state legislatures or state governors to take actions that they consider foreign to the local political culture, are not relevant in the state separation-of-powers context.

In short, state courts operate differently from federal courts in the remedial stages of class action litigations, and much of the criticism of “counter-majoritarian” judges in the judicial activism literature is misplaced in the state-court context. In contrast to the aura of usurpation of authority by an outside power that often occurs in federal desegregation cases, state fiscal equity and adequacy cases, as in Kentucky and Vermont, can involve a shared sense of purpose among the branches in solving a common problem. As Yale Professor Paul Kahn has put it, “When the political will is there, courts have proven useful in mobilizing a response to the problem. They do not usually stand against the political branches, but along side them in a common endeavor.”

George D. Brown, recognizing a pattern of “implicit dialogue” between the branches of state government in school finance cases has described the differences between federal and state court interventions in the following terms:
Brown’s description aptly summarizes the positive colloquy that can and should ensue between courts and the legislative and executive branches in regard to developing and implementing costing-out methodologies.\footnote{160} As we have seen in the discussion of judicial review in Part II, the state courts can provide an important corrective to blatant political manipulations of expert judgments, and they can also enter into an important technical dialogue to refine acceptable professional models. Explicit acknowledgment of the importance of an inter-branch colloquy in developing and monitoring appropriate costing-out methodologies could lead to further development of the capacity of courts, legislatures, and executive agencies to oversee cost studies, to the promotion of enhanced professional practice in regard to cost studies, and to more effective remedies in education adequacy cases in general.

2. COMPARATIVE INSTITUTIONAL ANALYSIS AND THE CONTEMPORARY ROLE OF THE COURTS

One of the major shortcomings of the judicial activism debate was its myopic focus on the limitations of the judicial branch, while ignoring the comparable institutional shortcomings of the legislature and the executive branch. For example, one of the foremost critics of the court’s new role, Donald Horowitz, catalogued a bevy of examples of alleged judicial incompetence, ranging from receiving information in a skewed and halting fashion, to failing to understand the social context and potential unintended consequences of the cases before them.\footnote{161} As Prof. Neil Komesar has forcefully pointed out, however, Horowitz’ critique, like that of many of his current disciples, was unreasonably one-sided:

\ldots Horowitz’s study can do no more than force us to accept the reality of judicial imperfection. By its own terms it is not comparative, and that is far more damning than Horowitz supposes. All societal decision makers are highly imperfect. Were Horowitz to turn his critical eye to administrative agencies or legislatures he would no doubt find problems with expertise, access to information, characterization of issues, and follow-up. Careful studies would undoubtedly reveal important instances of awkwardness, error and deleterious effect.\footnote{162}

Accordingly, separation of powers in regard to state constitutional issues should be viewed from a comparative institutional perspective. In order to enforce properly important positive constitutional rights like the opportunity to an adequate education, the three branches of government should divide the enforcement responsibilities in accordance with their relative institutional strengths. Two of the areas in which the courts have substantial comparative institutional strengths are in evaluation of complex factual issues and in ensuring compliance with specific remedies over extended periods of time.\footnote{163}

Empirical investigations of how courts and legislatures actually performed in regard to specific educational issues, which Arthur Block and Michael Rebell undertook in the 1980s, revealed that the evidentiary records accumulated in the court cases were more complete and had more influence on the actual decision-making process than did the factual data obtained through legislative hearings. These tended to be “window dressing” occasions organized to justify political decisions that had already been made.\footnote{164}

With regard to remedies, these studies concluded that judicial remedial involvement in school district affairs was both less intrusive and more competent than is generally assumed, largely because school districts and a variety of experts generally participated in the formulation of
reform decrees, with the courts serving as catalysts and mediators. Courts also proved more effective in enforcing remedies that called for phased-in implementation over a number of years than was the federal Office of Civil Rights, whose ability to respond flexibly to changed circumstances was markedly less effective than the courts’.165

The assumption in the initial judicial activism debates that “generalist” judges would not be capable of dealing adequately with complex statistical and economic evidence166 has been largely belied by the courts’ successful resolution of extensive social science data issues in complex employment discrimination, education, anti-trust and product liability decisions167 in recent years. The courts’ proficient handling of complex statistical data and methodological issues in the cases discussed in this article further substantiates this point.

The implications of these findings are that courts are the governmental institutions best suited, from a comparative institutional perspective, to regulate cost studies. In addition to their general institutional strengths in fact evaluation and remedial oversight, they have additional specific institutional advantages in regard to cost studies. First, their processes are inherently transparent: courts deliberate through open hearings and “on the record” procedures. Second, courts utilize a “rational-analytic” decision-making mode, which requires explicit justification for each element of a controverted methodology.168 Finally, the multiple layers of appeal that are usually pursued in major public-policy cases provide a built-in corrective to any errors that may occur at the trial.

These inherent institutional attributes mean that courts are uniquely capable of closely reviewing the methodologies and complex factual analyses involved in adequacy studies in an open, accountable manner. Furthermore, they are capable of monitoring the implementation of cost-based reforms over time and of overseeing any necessary corrections or amendments. Accordingly, in order to promote the proper use of appropriate and valid cost studies, courts generally should a) require that the actual cost of a constitutionally adequate education be determined through a rigorous, professionally validated cost study; b) scrutinize the validity of a study after it has been completed, if a controversy has arisen in that regard; and c) determine whether future costing-out studies will be necessary.169

Because an objective determination of the actual costs involved in providing the opportunity for an adequate education to all students is the central constitutional issue in education adequacy litigations, remedial orders issued by the courts in these cases should contain an explicit direction to undertake a costing-out study or studies that will accomplish this task. The court’s mandate should be simple and direct: it should require use of a professionally valid methodology (or, preferably, multiple methodologies170), insist that the process be transparent, include public engagement procedures to the maximum degree feasible, and set a timeline for its completion.

Although a general call for professional rigor and transparency would be appropriate, courts should not attempt to impose a specific methodology or micro-manage the technical details of the process. In the first instance, these matters should be left to legislative and executive agencies who, in most cases, should and will use their appropriate discretion to choose the proper methodologies and implement appropriate studies. An end-date is also needed to motivate prompt compliance and to establish the starting point for further judicial involvement if the job is not successfully done.

If controversy does arise regarding the validity of a costing-out study, the court should then closely examine the methodology of the study and the manner in which it has been executed. Judicial scrutiny of this sort will provide guidance not only to the parties before the court in the litigation, but also to the development of professional practice in the field as a whole, since, as discussed above, the “battles of the experts” in the courtroom tend to provide the most probing professional dialogue on the state of practice in the emerging field, and the court precedents will help drive future practices in a positive direction.
Finally, since economic conditions and student needs constantly change, the court should ensure that appropriate procedures are in place for undertaking new costing-out analyses on a regular basis in the future. If appropriate procedures that cover all known future needs have been adopted by the state, continuing judicial oversight may not be necessary. When regular updating of actual cost needs has not been clearly established through specific state procedures, however, the court should issue an appropriate order and maintain jurisdiction to see that it is enforced. 171

IV. CONCLUSION

Plaintiffs’ success in the vast majority of state court education adequacy litigations over the past two decades has led to an explosion in the use of education cost studies. In place of the backroom deals that traditionally dictated how billions of dollars in education funds would be allocated, professional cost studies have now been conducted in over 30 states in recent years, and these analyses have added transparency, regularity, and scientific insight to a previously vague, secretive process.

Ironically, however, the transparency of the cost studies has also put a spotlight on flaws that have developed in each of the four basic methodologies currently in use. Despite a veneer of scientific precision, at bottom, each of the current methodologies—professional judgment, expert judgment, successful schools, and cost function—involves core judgments that often raise questions and controversies. A review of the literature in the field and of the extensive analysis that courts have undertaken in about a dozen cases in which cost studies have been scrutinized has led to a number of specific recommendations for improvement in professional practice. These include explicit articulation of the premises behind the adoption of particular outcome standards, more precise means for identifying the extent to which students with special needs require extra resources, mechanisms to minimize political bias and political manipulations such as the use of multiple mechanisms, and the use of “quality education models” to integrate efficiency and accountability considerations within the basic cost analysis.

Even if all of these recommendations were to be adopted, however, cost studies will continue to be highly controversial because of the enormous issues involving millions of young lives and billions of dollars in expenditures that are at stake in these decisions. Accordingly, extensive public engagement and continuing judicial oversight will be necessary to ensure the credibility, the legitimacy, and the adequacy of the ultimate judgments that result from these studies.

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Notes


3 Id: 533. The State has hit or come very close to this target percentage in each of those years. Id: 534. See also, Montoy v. State of Kansas. 2003 WL 22902963 (Kansas District Court 2003): 30. “The current financing scheme was never based upon costs or even estimated costs to
educate children, but was, in fact, the result of a ‘political auction’ where various funding levels were proposed until, finally, a political majority could be achieved in the legislature.”


8 See, e.g., Maryland: Maryland Commission on Education Finance, Equity, and Excellence. “Final Report” (Annapolis, MD: Report to the Maryland Legislature and Governor, 2002) and Bridge to Excellence in Public Schools Act of 2002 (Maryland Senate Bill 856). Massachusetts: Massachusetts Business Alliance for Education. Every Child a Winner (Boston: Massachusetts Business Alliance for Education, 1991) and Education Reform Act of 1993 (Massachusetts


11 Eric Hanushek takes the extreme position that since none of the existing cost study methodologies can definitively define the minimum expenditure that is necessary to achieve a specified outcome standard, they all should be abandoned. Eric A. Hanushek. "Pseudo-Science and a Sound Basic Education" Education Next 5 (2005) and Eric A. Hanushek. “Science Violated: The Reality of ‘Costing Out’ an Adequate Education” in Courting failure: How School Adequacy Lawsuits Pervert Judges’ Good Intentions and Harm Our Children. Eric Hanushek, ed. (Stanford, CA: Education Next Press, 2006). The “scientific” precision that Hanushek seeks is, however, an illusion, because no type of economic analysis can establish a definitive causal connection between a precise funding amount and a specific educational outcome since the educational process inherently involves an array of judgmental and environmental factors. Hanushek himself does not offer any alternative “scientific” methodology that would be superior to the existing approaches. Moreover, Hanushek’s position ignores the fact that the only available alternative decision making process for determining the adequacy of school funding, namely arbitrary back room political deal-making, is even less “scientific” and less focused on actual student needs than any of the existing cost study methodologies. Accordingly, the only credible approach for meeting constitutional requirements in this area is to enhance the “validity” (in the standard dictionary sense of “well-grounded, and sound” conclusions) of current education adequacy studies, which unlike traditional political deal-making, are performed in the open and are based on clearly stated objectives and methodologies that can be fairly critiqued and improved. See also, William Duncombe. “Responding to the Charge of Alchemy: Strategies for Evaluating the Reliability and Validity of Costing-out Research” (Paper Presented at the O’Leary Symposium, “Funding of Public Schools: The Economic and Social Value of Adequate Funding,” Chicago, February 17, 2006): 4. “To argue as Hanushek does that there is no role for technical analysis in the costing out process is akin to arguing that there is no role for technical analysis in forecasting state revenues, because forecasts by different methods and organizations can vary significantly.”

12 The original pattern of local funding of education emerged in an agricultural economy when wealth was relatively evenly distributed and land provided the visible, tangible, and predominant basis for taxation. Ellwood P. Cubberley. Public Education in the United States (2nd ed.) (New York: Houghton Mifflin Co., 1934): 734.


14 For example, in 1979, the Tennessee School Finance Equity Study, a two-year in-depth independent analysis of tax and equality issues, found that the educational needs of the average

In New York State in 1997–98, the foundation amount was $3900. At that time the average district expenditure was $9800 and even the lowest spending district in the state spent $7700. New York State Education Department. “The State of Learning, A Report to The Governor and the Legislature on the Educational Status of the State’s Schools” (Albany: New York State Education Department, 2000).


16 Id: 48.


19 DeRolph v. State. 667 N.E. 2d 733 (Ohio Supreme Court 1997).

20 These methodologies are described in more detail in Kern Alexander et al. Proposals for the Elimination of Wealth-Based Disparities in Public Education (Columbus, OH: Report to the Ohio Legislature, 1995), and John Augenblick. Recommendations for a Base Figure and Pupil-Weighted Adjustments to the Base Figure for Use in a New School Finance System in Ohio (Columbus, OH: Report to the Ohio Department of Education, 1997).


22 See, e.g. William H. Clune. “The Shift from Equity to Adequacy in School Finance” Education Policy 8 (1994): 376, which describes the thrust of the cases as calling for a high minimum level. This “high minimum” approach focuses on what would be necessary to ensure that all children have access to those educational opportunities that are necessary to gain a level of learning and skills that are now required, for example, to obtain a good job in our increasingly technologically complex society and to participate effectively in our ever more complicated political process. Paul A. Minorini and Stephen D. Sugarman. “Educational Adequacy and the Courts: The Promise and Problem of Moving to a New Paradigm” in Equity and Adequacy in School Finance: Issues and Perspectives. Helen F. Ladd, Rosemary Clark and Janet S. Hansen, eds. (Washington, D.C.: National Academy Press, 1999): 188.


These public engagement processes are discussed further below.


These examples are based on utilization of the New York Geographic Cost of Education Index and certain specified special-needs weightings. Use of an alternate cost of education index and different special needs weightings would yield different adequacy gap figures. See discussion below.


37 West Orange Cove v. Neeley. No. GV-100528 (Travis County District Court 2004): 56–63. Reversed on Appeal, 176 S.W.3d 746 (Supreme Court of Texas 2005). After considering at length the methodological and judgmental differences between the studies, the trial court accepted the Reschovsky/Imazeki study. See discussion below. See also, Jennifer Imazeki and Andrew Reschovsky. "Assessing the Use of Econometric Analysis in Estimating the Costs of Meeting State Education Accountability Standards: Lessons from Texas" Peabody Journal of Education 80 (2005). A cost function analysis by William Duncombe and John Yinger was recently commissioned by the Kansas Legislative Division of Post-Audit, see, Kansas Legislative Division of Post Audit. Elementary and Secondary Education in Kansas: Estimating the Costs of K-12 Education Using Two Approaches (Topeka, KS: Kansas Legislative Division of Post Audit, 2006).

38 A particularly significant exchange of this sort occurred in March 2005, when leading adherents of each of the four methodologies participated in an American Education Finance Association-sponsored, four-hour workshop entitled “Alternative Approaches to Measuring Adequacy in K-12 School Finance: A Comparison” (American Education Finance Association Workshop, Louisville, KY, March 17, 2005.) At this workshop, the pros and cons of the successful schools approach were addressed by John Augenblick, professional judgment by Jay Chambers, expert judgment by Mark Fermanich, and cost function analysis by William Duncombe. The author of this article also provided an overview of the courts’ perspective on these issues.

39 The judicial reviews involved five separate professional judgment studies (plus a variation on professional judgment, which I would describe as a “governmental judgment” study), one expert judgment study, three successful school district studies, two cost function analyses, and one combined professional judgment/successful schools study.

40 Specifically, the courts approved two of the professional judgment studies, but disapproved of the three other professional judgment studies. They rejected two of the successful schools studies and substantially revamped the other; endorsed the expert judgment study; validated one of the cost function studies while rejecting the other; and approved the combined professional judgment/professional schools methodology. They also rejected one legislative cost analysis and issued a directive specifying how another legislative study needed to be carried out.


42 Although professional judgment panels are often said to have internal biases toward higher cost, an overview analysis of 21 professional judgment studies between 1999 and 2004 found that the cost recommendations for professional judgment studies “were the most centrist group of estimates.” William J. Mathis. “Estimating the Costs of Adequacy: Correlations and Observations from 46 Recent State Adequacy Studies” (Paper Presented at “Schools for Our Future” Conference, Washington, D.C., June 13, 2005): 3.

43 State v. Campbell County School District. 19 P. 3d 518 (Wyoming Supreme Court 2001). The Supreme Court held that “the cost-based model...chosen by the legislature is capable of supporting a constitutional school finance system.” Id: 537.

44 Id: 546.
45 Id: 546. The Court also struck down the 150 percent concentration criterion, which it deemed "an arbitrary cutoff point." Id: 545.

46 Id: 551. Despite the plaintiffs' call for use of actual cost data in the critical area of teacher salaries, the Court upheld the consultants' judgment to use statewide average teacher salaries, rather than the actual costs for districts paying high salaries, reasoning that "the districts with higher than average salaries would presumably have paid higher salaries because of a higher cost of living, and...the model...would ultimately adjust [this salary component] upward based upon the regional cost-of-living adjustment." Id: 541.


48 Judge Botsford recommended that the State Department of Education undertake a broad-based costing-out study and specified both the outcome standard (the constitutional definition of an adequate education that the Massachusetts Supreme Judicial Court had adopted in McDuffy v. Secretary) that should be used, and a number of specific areas, such as special education and pre-k programs, that she held must be included in the study. Hancock v. Driscoll. 2004 Mass. Super. LEXIS 118 (Massachusetts Superior Court 2004): 494-502. On appeal, the Massachusetts Supreme Judicial Court declined to accept her overall recommendations regarding continuing state liability for constitutional violations and, accordingly, no order regarding further costing-out studies was issued. Hancock v. Commissioner of Education. 822 N.E. 2d 1134 (Massachusetts Supreme Judicial Court 2005): 1136–1137. The Supreme Judicial Court did not specifically review the lower Court’s detailed analysis of the costing-out studies. A bill calling for a comprehensive costing-out study in line with Judge Botsford’s recommendations was considered by the legislature. Massachusetts Senate Bill 299 (2005).


50 Id: 397–398.

51 Id: 400–402.

52 Id: 400–402.


The final professional judgment study that has been the subject of judicial review was a study done by James Smith and MAP in the recent Texas litigation, West Orange Cove v. Neeley. That study, which had been done on behalf of the plaintiffs, had been submitted into evidence in addition to cost function studies submitted by each side. The court analyzed both of the cost function studies in great detail (see discussion below) but merely stated in passing in regard to the professional judgment study that “the Court has chosen not to rely on it.” West Orange Cove v. Neeley. No. GV-100528 (Travis County District Court 2004): 56.

Proponents of the expert judgment approach acknowledge that “a strong research basis is not available for all elements of the prototypical school.” Remarks of Mark Fermanich (Louisville, KY: AFEA Workshop “Alternative Approaches to Measuring Adequacy in K-12 School Finance: A Comparison,” 2005). Also, from Bruce D. Baker, Lori L. Taylor, and Arnold Vedlitz. “Measuring Educational Adequacy in Public Schools.” Report Prepared for the Texas Legislature Joint Committee on Public School Finance (College Station, TX: The Bush School of Government and Public Service, Texas A&M University, 2005): 19. “Furthermore, there may be little connection between the outcomes such reform models are 'proven' to accomplish and the outcome policymakers hope to accomplish.”

The legislature had modified the study’s recommendations in a number of key areas. For example, although the study assumed teacher:pupil ratios of 1:15 for grades K-3, the legislative plan assumed teacher:pupil ratios of 1:20 for kindergarten and 1:23 for grades 1-3, and the legislature reduced the recommendation for early childhood education from $100 million to $40 million. Lake View School District v. Huckabee. 189 S.W.3d 1 (Supreme Court of Arkansas 2004): 10.

“Special Masters’ Report to the Supreme Court of Arkansas.” Lake View School District v. Huckabee. No. 01-836 (Supreme Court of Arkansas 2004): Question 1, page 14. The Special Masters recommended that the Court accept the legislative framework as constituting an acceptable level of compliance with its Order, but that it retain jurisdiction to monitor its implementation. The Court accepted the Special Master’s view of the legislation, but declined to retain jurisdiction. Lake View School District v. Huckabee. 189 S.W.3d 1 (Supreme Court of Arkansas 2005). When the legislature failed to follow through adequately in implementing its 2004 decision, the Arkansas Supreme Court again accepted jurisdiction over the case and issued a follow-up decision in 2005. Lake View School District v. Huckabee, 2005 Ark. LEXIS 776 (Supreme Court of Arkansas 2005).

“[M]any outcomes that policy-makers consider important may be too difficult to measure, and that which is measured well may be a biased representation of that which we hope to achieve.” D. Baker, Lori L. Taylor, and Arnold Vedlitz. “Measuring Educational Adequacy in Public Schools.” Report Prepared for the Texas Legislature Joint Committee on Public School Finance (College Station, TX: The Bush School of Government and Public Service, Texas A&M University, 2005): 20.

See discussion above.

67 *Id*: 194.

68 *Id*: 196.


70 The Supreme Judicial Court referred approvingly in *McDuffy* to the broad concept of an adequate education that had been discussed in *Rose v. Council*. 790 S.W. 2d 186 (Supreme Court of Kentucky 1989), which included skills students would need to “enable students to function in a complex and rapidly changing civilization.” *McDuffy v. Secretary of the Executive Office of Education*. 615 N.E. 2d 516 (Massachusetts Supreme Judicial Court 1993): 554.

71 *Hancock v. Driscoll*. 2004 Mass. Super. LEXIS 118 (Massachusetts Superior Court 2004): 394. Specifically, in order to consider the extra costs associated with special needs students, Myers subtracted from the total spending of the 75 successful districts their actual expenditures for special education, bilingual education, and a number of other cost categories and then adjusted the resulting base figure by adding back estimated costs for each district’s actual number of special needs students.

72 *Id*: 394. She also stated that three of the four focus districts already have “base” spending levels above the average of the 75 successful districts. *Id*. (This fact may reflect the relative success of the Massachusetts reforms credited by the Supreme Judicial Court, rather than any flaws in Myers’ methodology.)


75 *Id*.

76 “Report and Recommendations of the Judicial Referees.” *CFE v. State of New York*. Index 111070/93 (Supreme Court of New York County 2004): 17–18. The Court also noted that the 50 percent cost reduction filter approach had previously been utilized in only one state, New Hampshire, where the defendants’ own witness acknowledged that the device was invoked at the insistence of a legislative committee specifically “to drive costs down,” and such a filter had never been recommended by any education finance expert. *Id*: 18. Three of the five appellate division judges commented critically on the Referees’ analysis of the cost efficiency filter, but they did not directly rule on this or the other cost study issues. *Campaign for Fiscal Equity, Inc. v. State of New York*. 814 N.Y.S.2d 1 (Supreme Court of New York Appellate Division 2006), appeal pending, New York Court of Appeals.

77 “Report and Recommendations of the Judicial Referees.” *CFE v. State of New York*. Index 111070/93 (Supreme Court of New York County 2004): 20. In the absence of any strong contrary position from the Plaintiffs, the Referees did, however, accept the State’s recommended 2.1 weighting for special education students because it was “in line with what other states have used for these students,” and the state’s weighting of 1.2 for ELL students, which was “more conservative” than the weightings used in other states. *Id*: 22–23.
78 See discussion above.

79 "Report and Recommendations of the Judicial Referees." CFE v. State of New York. Index 111070/93 (Supreme Court of New York County 2004): 15. The Panel noted that the fact that this figure "converged" with the $5.6 billion figure which resulted from the AIR/MAP analysis and other figures recommended by the state Regents and the New York City Department of Education "provides comfort that our $5.63 billion costing-out recommendation to the court is indeed sound." Id: 16. Eric Hanushek, apparently misunderstanding the analytic process utilized by the Referees, complained that they failed to give "at least equal consideration to the report submitted by the [Zarb] Commission," when, in fact, the overwhelming bulk of their analysis was focused on that document and the related S&P report (13 pages), compared to only 3 pages that were devoted to the AIR/MAP Study. See, Eric A. Hanushek. "Pseudo-Science and a Sound Basic Education" Education Next 5 (2005): 67, 69.


84 West Orange Cove v. Neeley. No. GV-100528 (Travis County District Court 2004): 56. On appeal, the Texas Supreme Court upheld the trial court’s decision that the state education finance system constituted a statewide property tax in violation of the Texas Constitution, and affirmed its injunction invalidating the current system. Although the court warned of an “impending constitutional crisis,” it reversed the trial court’s adequacy holding because the majority of Texas school districts meet current accountability standards. The Supreme Court did not discuss the trial court’s analysis of the cost studies in its opinion. Neeley v. West Orange Cove Consolidated Independent School District. 176 S.W.3d 746 (Supreme Court of Texas 2005).


86 West Orange Cove v. Neeley. No. GV-100528 (Travis County District Court 2004): 57–58. The omitted analyses indicated that a 90 percent performance target would require an additional $3.6 billion. Id.

87 Id: 60.

88 Id: 61–62. Disaggregation by student groupings is required under both state law and the federal No Child Left Behind Act.

89 Montoy v. State of Kansas. 102 P.3d 1160 (Supreme Court of Kansas 2005).

Id: 39.

Montoy v. State of Kansas. 102 P.3d 1160 (Supreme Court of Kansas 2005): 1164.

Montoy v. State of Kansas. 112 P.3d 923 (Supreme Court of Kansas 2005): 940. The legislature directed its post-audit unit to conduct a new study to cover future years. The Court held that if that study is not completed in a reasonable amount of time, or is judicially or legislatively determined not to be a valid cost study, the court will consider ordering the remaining two-thirds of the amount recommended by the A&M study for implementation in 2006–2007. Id.: 940-941.


The classroom component is funded 75 percent by the state and 25 percent by local districts, while the non classroom component is funded 50 percent by the state and 50 percent by the localities. Theodore Meyers, Thomas C. Valesky, and Marilyn A. Hirth. “K-12 Education Funding in Tennessee: Equity Now—Adequacy Coming” Journal of Education Finance 20 (1995): 407.

Kansas Legislative Division of Post Audit. Elementary and Secondary Education in Kansas: Estimating the Costs of K-12 Education Using Two Approaches (Topeka, KS: Kansas Legislative Division of Post Audit, 2006). In addition to this input analysis, the Division of Post Audit also retained consultants to perform an “output analysis” based on a cost function methodology. The “input” analysis concluded that an increase of at least $316.2 million in foundational funding would be needed for the 2006–2007 school year, while the outcomes approach yielded a recommended increase of $399.3 million.

The Kansas Supreme Court in Montoy v. State of Kansas. 112 P.3d 923 (Supreme Court of Kansas 2005): 938–939, had reviewed the statute which authorized this study and had ordered a number of specific modifications to its methodology. After the study had been completed, the Legislature adopted a new funding system that increased appropriations, but not in the amounts recommended by the study. The Court held that since the Legislature had considered the study in its deliberations, it had satisfied the Court's previous order for purposes of the present compliance review. If plaintiffs believed that the failure to accept fully the cost study's recommendations meant that the new system was not based on the “actual costs” necessary to provide an adequate education, they could initiate a new action and create a trial record regarding actual costs which might then be reviewed by the Court at a future date. Montoy v. State of Kansas. 2006 Kan. LEXIS 479 (Supreme Court of Kansas 2006).

New Jersey Department of Education. “Comprehensive Plan for Improvement and Financing” (Trenton: New Jersey Department of Education, 1996). Although many affluent districts were spending at levels above those deemed adequate by the study, the New Jersey legislature enacted a new funding system based on this study that limited the spending of low performing districts with high need students to the study amounts. The New Jersey Supreme Court held that this new system was unconstitutional because “the supplemental aid provided by the new act bears no demonstrable relationship to the real needs of the disadvantaged children attending school in the special needs districts.” Abbott v. Burke. 693 A.2d 417 (New Jersey Supreme Court 1997): 421.

Id: 431.
100 Id: 431.

101 Kansas House Bill 2247, section 3 (b) (2) and (3), cited in Montoy v. State of Kansas. 112 P.3d 923 (Kansas Supreme Court 2005): 938.

102 Id: 939. After the study had been completed, the Legislature adopted a new funding system which increased appropriations, but not in the amounts recommended by the study. The Court held that since the Legislature had considered the study in its deliberations, it had satisfied the Court’s previous order for purposes of the present compliance review. If plaintiffs believed that the failure to accept fully the cost study’s recommendations meant that the new system was not based on the “actual costs” necessary to provide an adequate education, they could initiate a new action and create a trial record regarding actual costs which might then be reviewed by the Court at a future date. Montoy v. State of Kansas. 2006 Kan. LEXIS 479 (Supreme Court of Kansas 2006).

103 John Augenblick. Recommendations for a Base Figure and Pupil-Weighted Adjustments to the Base Figure For Use in a New School Finance System in Ohio (Columbus, OH: Report to the Ohio Department of Education, 1997): 5, 8


105 A few studies, like the Standard and Poor’s New York successful school district analysis and the I&R cost function analysis in Texas, do provide explicit data for a range of alternative output measures. In theory, this information should have sparked a vigorous policy debate on the validity of the different outcome measures. In fact, however, the availability of this data did not lead to any such debate in either New York or Texas. Instead, politicians simply seized on the lowest figures of those that had been set forth and relied on that figure for their policy positions.

106 No Child Left Behind Act of 2001. 20 USC 6301 et seq.

107 Justice DeGrasse, in his decision in CFE v. State of New York (719 N.Y.S. 2d 475 [Supreme Court of New York County 2001]: 492), noted that “education is cumulative...a student’s result on a sixth grade reading examination reflects her experience in grades one through five, and not merely of what she has learned in sixth grade.”


109 See, e.g., Oregon Quality Education Commission. “Quality Education Model, Final Report” (Salem, OR: Oregon Department of Education, 2004): 1. “In this report and under the charge of the Commission, we have not determined the impact of the federal No Child Left Behind (NCLB) mandate in achieving at least 99 percent of students meeting state standards. The report and gaps cited reflect the 90 percent standard adopted by the original Quality Education Commission based on a consensus reached when it was formed in 1999.”

111 See discussion below.

112 Hanushek glosses over the seriousness of these issues by dismissing the attempts to define constitutionally appropriate output measures in current costing out measures as “arbitrary choices.” Eric A. Hanushek. “Science Violated: The Reality of ‘Costing Out’ an Adequate Education” in Courting Failure: How School Adequacy Lawsuits Pervert Judges’ Good Intentions and Harm Our Children. Eric Hanushek, ed. (Stanford, CA: Education Next Press, 2006). One particularly glaring error in his analysis is his assumption that the standard utilized in the AIR/MAP New York Adequacy Study was “all students meet[ing] the full Regents Learning Standards.” Eric A. Hanushek. “Pseudo-Science and a Sound Basic Education” Education Next 5 (2005): 67, 71. In fact the AIR/MAP consultants, based on an extensive public engagement process, explicitly rejected such a full proficiency standard and posited as their output standard the concept of providing every student a full “opportunity” to meet the Regents diploma standards. See discussion below.

113 National Conference of State Legislatures. Arizona English Language Learner Cost Study (Denver: National Conference of State Legislatures, 2005). The study was ordered by the Court in Flores v. Arizona. 160 F. Supp. 2d 1043 (U.S. District Court for the District of Arizona 2000). After the cost study was released, the state was taken back to court for failing to implement the findings.


115 Id: 31–37. The national panel members assumed that all teachers would be highly qualified under NCLB, and they agreed that the recently adopted state standards for ELL training are insufficient. Id: 38.

116 The proportion of students with disabilities in affluent districts generally approximates the proportion of such students in poor districts.


118 See discussion of New York successful schools analysis, above.

119 One caveat to this conclusion is that in situations where a successful school district study is being undertaken in conjunction with a professional judgment study (see discussion below), there may be a valid rationale for using the implicit weightings that emerge from the professional judgment study in the parallel successful school district study. Some current successful school district studies that are conducted in conjunction with parallel professional judgment studies already do. See, e.g., Augenblick & Myers. Calculation of the Cost of an Adequate Education in Maryland in 1999–2000 Using Two Different Analytic Approaches (Denver: Augenblick & Myers, Inc., 2001), discussed above. See also, use of implicit weightings from the AIR/MAP professional judgment study by the Judicial Referees, discussed above.

120 West Orange Cove v. Neeley. No. GV-100528 (Travis County District Court 2004): 58.

121 If, in fact, there are justifiable methodological reasons for re-doing all or part of a study, those justifications should be fully aired in a public engagement process and objective criteria—not
simply mechanisms for lowering or raising costs—for the revisions should be determined through public deliberation. See discussion, below.


123 Maryland Commission on Education Finance, Equity, and Excellence. “Final Report” (Annapolis, MD: Report to the Maryland Legislature and Governor, 2002). The two professional judgment studies in Maryland, undertaken by differing groups of consultants—one hired by Thornton Commission, and one hired by an advocacy coalition—yielded roughly comparably recommendations, as did the Commission’s successful schools study, after pupil weights (largely taken from the professional judgment study) had been added to the base amount. “There was a lot of credence lent to [the Commission’s recommendations] because professional judgment and successful schools came out with relatively similar numbers...” Qtd. in Thomas Saunders. “Settling without ‘Settling:’ School finance Litigation and Governance Reform in Maryland” Yale Law & Policy Review 22 (2004): 605. The commission’s recommendations were subsequently largely accepted by the Maryland legislature. Id.

124 “Quality Education Models” and other new techniques that attempt to combine accountability and cost studies in this manner are discussed below.

125 The AIR/MAP study in New York convened a day-long “stakeholders” meeting at which about 40 representatives of diverse stakeholder groups, along with key legislators and representatives of the Governor’s Office and the State Education Department, analyzed the preliminary report that had emerged from the adequacy study and offered comments. Suggestions that resulted from this meeting were then considered by the researchers and the summary professional judgment panel, and some of them were used to modify the final report. Jay G. Chambers, Jesse D. Levin, and Thomas B. Parrish. “Examining the Relationship Between Educational Outcomes and Gaps in Funding: An Extension of the New York Adequacy Study” Peabody Journal of Education 81 (2006): 5–6.

Cost-effectiveness themes were considered, but perhaps not sufficiently emphasized at this meeting. Interestingly, the major change in the draft report that resulted from this stakeholders’ meeting involved additional resources for English language learners. The professional judgment panels had concluded that ELL students did not require additional teachers or resources as much as they needed teachers and other personnel with specialized qualifications. The participants at the stakeholder sessions felt strongly that there should be a modest additional allocation to meet the needs of ELL students, especially to take into account situations where a multitude of different languages were spoken, thus putting an extra strain on available resources. Statement of Thomas Parrish. Campaign for Fiscal Equity, Inc. v. State of New York. Index 111070/93 Record of hearing before Judicial Referees, Plaintiff Examination (Supreme Court of New York County 2004): 7, 19.


128 For a detailed discussion of the approach to public engagement that was put into practice by the Campaign for Fiscal Equity in New York in conjunction with its litigation, see, Michael A. Rebell. “Adequacy Litigations: A New Path to Equity” in Bringing Equity Back. Janice Petrovich and Amy Stuart Wells, eds. (New York: Teachers College Press, 2005).


130 The author, as the former Executive Director of the Campaign for Fiscal Equity, had a substantial role in organizing this public engagement process.

131 The Albany convening had been preceded by a series of statewide local forums that had informed the public about the study and had solicited input on three basic issues: 1) what programs are effective, especially for students with special needs; 2) what unique challenges do the schools in each part of the state face in meeting state and federal standards; and 3) what output measures should be used in the adequacy study. A report summarizing the views expressed at the forums on the first two questions was presented to the Professional Judgment Panels. The input received on the standard-setting question was then reviewed more extensively by representatives from each of the local forums and representatives of statewide organizations at the state-wide standards-setting forum.


133 The Judicial referees in the CFE litigation declined to recommend future use of this standard, mainly because of its emphasis on the Regents’ Learning Standards, which the court had held may exceed constitutional adequacy requirements. "Report and Recommendations of the Judicial Referees." CFE v. State of New York. Index 111070/93 (Supreme Court of New York County, 2004): 32. The irony here is that the alternate standard the Judicial Referees accepted, an unweighted average of 80 percent of all students in the district passing seven designated Regents exams, is also based substantially on the same Regents Learning Standards, but the standard as written does not make that clear—nor does it provide any rationale for why an 80 percent cut-off figure should be used or how this approach can be justified in relation to the 100 percent federal proficiency mandate.

The Rhode Island Legislature specifically adopted an analogous “opportunity” output measure in directing its joint legislative committee to undertake an analysis to calculate “the amount of per pupil funding necessary to support an effective and efficient educational system.” See, The Education Equity and Property Tax Relief Act. Rhode Island Statutes, Title 16 §16-7.2-2 (c) (2004). (Charging the committee with “Identifying specific resources and least cost options to provide every child the opportunity to…meet education performance standards.”)

134 See discussion above.


137 Information about the Georgia process is available from the website for the Governor’s Education Task Force, www.ie2.org. Some states are also using statewide surveys to determine
what most citizens “consider to be the components of an appropriately sufficient basic K-12
education program in the public schools.” New Mexico Public School Funding Formula Study
Task Force. Request for Proposals For An Independent Comprehensive Study of the New Mexico
Public School Funding Formula (Santa Fe: State of New Mexico, 2006): 7. The New Mexico RFP
also indicated that after the survey data have been compiled, the professional consultants and
Legislative Task Force staff “shall determine appropriate focus groups and individuals to be
interviewed for the collection of additional data regarding a sufficient educational program.” Id.

138 The full membership of the Council consisted of 31 education advocacy, parent, business,
union, and civic groups. The Council held periodic public meetings with the researchers
conducting the study to review the implementation of the project, discuss problems that had
developed or unforeseen issues that had arisen along the way, and to offer suggestions on how
to deal with them. Throughout all of these discussions, the operating principle was that input from
the council would be considered, but not necessarily accepted, by the researchers, who insisted
on their sole responsibility for the final professional product.

139 Greg Winter noted in his article on the price of education, “Decent Education, Figured in
Dollars” (New York Times. [New York: October 2, 2002]) that the objectivity and balance of the
costing-out study as a whole was also enhanced by the fact that the two principal researchers for
MAP, one of the two prime consultants, had testified on the state’s side in the litigation.

140 Public Agenda is a non-partisan public opinion and civic engagement organization that seeks
to create momentum for change by building common ground, managing differences and creating
new partnerships. It has conducted extensive public engagement campaigns on education issues
in California, Connecticut, New York, Nebraska and a number of other states. See

141 Legislative Council on the Oregon Quality Education Model. The Oregon Quality Education
Model: Relating Funding and Performance (Salem: Oregon Legislative Assembly, 1999). Oregon
Quality Education Commission. “Quality Education Model, Final Report” (Salem, OR: Oregon
Department of Education, 2004). Although the governor and the legislature created the QEM, it
apparently has not adhered to the results that emerged from the QEM process. The QEM
Commission’s latest report concluded that the Legislature would need to appropriate $7.1 billion
for the 2005–2007 biennium to meet the K-12 quality goals established by law, but the budget
approved for that period was just under $5.3 billion, a $1.8 billion shortfall. Pendleton School
District 16R v. State of Oregon. No 0603-02980. First Amended Complaint (Circuit Court, County
of Multnomah 2006): sections 5-6.

142 Oregon Quality Education Commission. “Quality Education Model, Final Report” (Salem, OR:

143 See discussion above.

144 A QEM can be sponsored by an advocacy coalition as well as by an official governmental
entity. For example, the Rainier Institute, an independent think tank, together with the University
of Washington School of Education and 16 statewide education, parent, academic, and civic
stakeholder groups several years ago developed a Washington Quality Education Model
("WQEM"). The WQEM identified an education vision, adequacy costs related to a series of
prototype schools, characteristics of quality schools, and specific performance measures that
included achievement scores, student behaviors, and student, parent, and community attitudes
and satisfaction with the public schools. The WQEM is described in The Rainier Institute. “What
Will It Take?” (Seattle: The Rainier Institute, 2003).

The Washington legislature has not, however, adopted this model or authorized a WQEM based
on its methodology, although the Washington Legislature did recently adopt a bill that established
a “comprehensive education study steering committee,” to be chaired by the Governor and whose
members consist of legislators, executive agency staff, and some community representatives, to study and report on a range of education finance and related issues. \textit{Washington Senate Bill 5441}. Chapter 496, Laws of 2005. The bill does not include a full costing-out study among the committee’s specific charges.


146 \textit{California Assembly Bill 2217}. Chapter 1026, sec. 64201 (c) (4) (2002).


148 As part of the remedy in future education adequacy cases, courts could also include provision for appropriate public engagement procedures in any cost studies or QEM processes that they order. Courts in some education adequacy cases have expanded traditional class action hearing procedures and invited the public to participate in the debates about remedial proposals See, e.g. “High Court Open to Public’s ABC Comments.” (Concord, NH: \textit{Union Leader}, May 22, 1998). For a discussion of a detailed proposal for a court-initiated public engagement process in the context of a school desegregation case in Connecticut, see Michael A. Rebell and Robert L. Hughes. “Efficacy and Engagement: The Remedies Problem Posed by Sheff v. O’Neill—and a Proposed Solution” \textit{Connecticut Law Review} 29 (1997).

149 See note 1, above.


156 See, e.g., Bert Neuborne, “State Constitutions and the Evolution of Positive Rights” *Rutgers Law Journal* 20 (1989), discussing the “enhanced democratic pedigree” of state courts resulting from the fact that many state court judges are elected, state constitutions are easier to amend, and many state constitutions explicitly provide for judicial review. See generally “Developments in the Law—The Interpretation of State Constitutional Rights” *Harvard Law Review* 95 (1982).


160 Of course, in practice, not all judicial/legislative interactions in the state courts fit Brown’s dialogic model; as the costs of providing all students an adequate education rise, so does the resistance to complying readily with judicial mandates in some states, as exemplified by recent developments in Kansas, New York, and Ohio.


As discussed above, courts also might play an important and creative role in promoting QEM and public engagement processes, although no courts have in fact done so to date.

See discussion above.

See, e.g., Campbell County School District v. State. 19 P.3d 518 (Wyoming Supreme Court 2001): 549. “As long as the state continues to rely upon a cost of education model based upon historic actual costs to determine the appropriate funding for schools, regular and timely inflation adjustments are essential to funding the real cost of education. We adopt the opinion of the state's experts and hold that the model and statute must be adjusted for inflation/deflation every two years at a minimum." “Report and Recommendations of the Judicial Referees." CFE v. State of New York. Index 111070/93 (Supreme Court of New York County, 2004): 39. “We recommend, on a going-forward basis, the simultaneous use of complementary costing-out studies, on a cycle to be repeated every four years. These complementary costing-out studies should be designed and supervised by the Regents, with input from the parties, and should incorporate both the successful school district methodology and the professional judgment methodology....” Montoy v. State of Kansas. 112 P.3d 923 (Kansas Supreme Court 2005): 941. Retaining jurisdiction to ensure, inter alia, that a new costing-out study is completed in time for the legislature to act on it in the 2006 legislative session and that the study is “a valid cost study.”

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