

 The **Campaign** for **Educational Equity**

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**TEACHERS COLLEGE** COLUMBIA UNIVERSITY

**STUDENTS' CONSTITUTIONAL RIGHT TO A  
SOUND BASIC EDUCATION:  
NEW YORK STATE'S UNFINISHED AGENDA**

**Part 3.**

**Utilizing a Constitutional Cost Methodology**

November 2016

## **STUDENTS' CONSTITUTIONAL RIGHT TO A SOUND BASIC EDUCATION: NEW YORK STATE'S UNFINISHED AGENDA**

- Part 1. A Roadmap to Constitutional Compliance Ten Years after CFE v. State
- Part 2. Filling the Regulatory Gaps
- Part 3. Utilizing a Constitutional Cost Methodology
- Part. 4. Ensuring Resource Accountability

### **ABOUT THE CAMPAIGN FOR EDUCATIONAL EQUITY**

The Campaign for Educational Equity is a nonprofit research and policy center at Teachers College, Columbia University that champions the right of all children to meaningful educational opportunity and works to define and secure the full range of resources, supports, and services necessary to provide this opportunity to all children. CEE pursues systems change through a dynamic, interrelated program of research, legal analysis, policy development, coalition building, curriculum development, and advocacy dedicated to developing the evidence, policy models, curricula, leadership, and collaborations necessary to advance this agenda at the federal, state, and local levels.

This report was prepared by Michael A. Rebell and Jessica R. Wolff. It draws heavily on the analysis and recommendations in Rebell, M.A., Levin, H.M., Shand, R., & Wolff, J.R. (2016). *A new constitutional cost methodology for determining the actual cost of a sound basic education*. Paper presented at the 41<sup>st</sup> Annual Conference of the Association for Education Finance and Policy, Denver, CO, available at [www.equitycampaign.org](http://www.equitycampaign.org)

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## *Part 3. Utilizing a Constitutional Cost Methodology<sup>1</sup>*

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<sup>1</sup> This is the third in a series of reports that are the culmination of two years of research by the Campaign for Educational Equity, a policy and research center at Teachers College, Columbia University, and significant input from the Safeguarding Sound Basic Education Task Force, a statewide group made up of representatives from New York’s leading statewide education associations, parent organizations, school business officials, and advocacy groups (see appendix in the overview report for membership). The series includes an overview entitled, *A Roadmap to Constitutional Compliance Ten Years after CFE v. State*, and three specific proposals: *Filling the Regulatory Gaps*, the revisions to education regulations needed for constitutional compliance; the present report, *Utilizing a Constitutional Cost Methodology*, an innovative new method for calculating education costs; and *Ensuring Resource Accountability*, the mechanisms needed to monitor and enforce the provision of constitutionally required educational resources. The Campaign for Educational Equity is grateful to the Booth Ferris and Robert Sterling Clark Foundations for their support of this research. Although this report was prepared with guidance from the Safeguarding Sound Basic Education Task Force, the views and conclusions expressed here do not necessarily reflect those of task force participants or of Teachers College.

## EXECUTIVE SUMMARY

In the landmark school-funding and educational-rights case *Campaign for Fiscal Equity (CFE) v. State of New York*, the New York Court of Appeals, the state’s highest court, held that New York City’s 1.1 million public school students were being denied sufficient funding to provide them “the opportunity for a sound basic education,” their right under the education article of the New York State constitution. The court affirmed that New York’s government had an obligation to guarantee that opportunity to all New York students—not only in New York City, but throughout the state. A sound basic education, the court said, consists of the knowledge and skills students need to be prepared for capable civic participation and competitive employment, and this requires students to have the opportunity to complete a “meaningful high school education.”

The court ordered the state to remedy this violation of students’ rights. Specifically, it ruled that the state must (1) determine the actual cost of providing a sound basic education; (2) reform the current funding and management structures to ensure that all schools have the resources they need to provide a constitutionally adequate education; and (3) develop “a new... system of accountability to measure whether the reforms actually provide the opportunity for a sound basic education.”

Over the past 25 years, numerous cost studies have estimated the amount of funding needed to provide all students an opportunity for an adequate education. The widespread use of these studies stemmed from court orders that have required states to determine the “actual cost” of providing an adequate education.

Use of the four established methodologies for undertaking these studies (professional judgment, evidence based, successful schools, and cost function) has made education-funding decisions more transparent and more systematic. Nevertheless, each of the established methods has shortcomings that can be remedied. A constitutional cost methodology that is implemented with systematic research and analytic support can eliminate many of the deficiencies that affect each of the established methodologies, while retaining many of their positive aspects.

The constitutional cost methodology we describe (a) systematically applies constitutional standards, relevant state statutes, regulations, and other legal requirements related to education to the cost-analysis enterprise; (b) incorporates into the analysis evidence of resources and practices that have proved effective; and (c) is overseen by a permanent commission composed of policymakers, educators, and researchers that undertakes systematic cost-effectiveness analyses and recommends necessary revisions to the state’s cost analyses every two years.

## INTRODUCTION

In the landmark school-funding and educational-rights case, *Campaign for Fiscal Equity (CFE) v. State of New York*, the New York Court of Appeals, the state’s highest court, held that New York City’s 1.1 million public school students were being denied sufficient funding to provide them “the opportunity for a sound basic education,” their right under the education article of the New York State constitution.<sup>2</sup> The court affirmed that New York’s government had an obligation to guarantee that opportunity to all New York students—not only in New York City, but throughout the state. A sound basic education, the court said, consists of the knowledge and skills students need to be prepared for capable civic participation and competitive employment, and this requires students to have the opportunity “for a meaningful high school education.”<sup>3</sup>

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Following the *CFE* rulings, the findings of a cost study undertaken by the state education department formed the basis for the foundation formula adopted by the legislature to implement the decision. Fiscal-policy experts recommend that such studies be reconsidered every three to four years because of changes in education mandates and instructional strategies and increasing

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<sup>2</sup> N.Y. Const. Article XI, section 1.

<sup>3</sup> *CFE v. State of New York*, 100 N.Y. 2d 893, 908 (NY 2003).

<sup>3</sup> *Id.* at 930.

costs. New York State has not reconsidered its cost methodology since the original *CFE* study in 2006.

State statutes have codified the “successful schools” methodology that the state education department implemented following the *CFE* decision. This approach determines the core foundation-funding amount on the basis of what school districts whose students have done well on certain state examinations are currently spending.<sup>5</sup> As we will argue in this report, this methodology lacks validity for the purpose of “determining the actual cost of providing a sound basic education.” It does not attempt to identify or understand the specific resources and services these districts use to achieve these results, whether these resources and services can yield similar results with other student populations, and whether these services are being provided in a cost-effective manner. Most importantly, the methodology does not attempt to understand whether the districts deemed successful are fulfilling the constitutional right of all of their students to the opportunity for a sound basic education.

The “constitutional cost methodology” we present in this report improves on “successful schools” and other existing methodologies in a number of important ways. It systematically applies constitutional standards and other relevant legal requirements to the cost-analysis process and incorporates research in constitutionally relevant areas into identifying effective educational resources and practices. In this way, it will more accurately determine the amount of funding that schools and school districts need in order to provide all of their students a meaningful opportunity for a sound basic education.

We recognize that building the state’s capacity to undertake this type of cost analysis will take time. In the meantime, we hope that our research and recommendations will lead to

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<sup>5</sup> The existing funding formulas are based on results of state examinations that the state itself abandoned when it adopted the Common Core State Standards several years ago.

discussions about how to implement improved cost studies based upon these concepts in the near future and how to create more valid and constitutionally compliant mechanisms for determining the level of funding needed to ensure that all students are provided a meaningful opportunity for a sound basic education.

### **THE CURRENT APPROACH TO EDUCATION COST ANALYSIS**

Over the past 25 years, there has been a proliferation of cost studies that estimate the amount of funding needed to provide all students the opportunity for an adequate education (sometimes called “education adequacy studies”). Over 100 such studies have been undertaken in dozens of states. The widespread use of these studies stemmed from court orders in many of the school-funding “adequacy cases” that have required states to determine the “actual cost” of a sound basic education<sup>6</sup> or to identify the “proper educational package each...student is entitled to have.”<sup>7</sup> Virtually all of these studies are based on one or more of four established methodologies: professional judgment, evidence based, successful schools, and cost function.

The goal of these court orders has been to ensure that state education finance systems provide adequate levels of funding, based on student needs, to guarantee all students a meaningful opportunity to meet constitutional requirements and/or state standards. Objective cost analysis helps to safeguard students’ educational rights against political and economic vicissitudes by replacing the traditional practice of determining state appropriations based on the funding level that the governor and the state legislature are willing to assign to the education budget in any given year and then distributing the available funds to school districts on the basis of political deal-making. Use of cost studies can make education-funding decisions more

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<sup>6</sup> CFE v. State of New York, 100 N.Y. 2d 893, 930 (2003).

<sup>7</sup> Campbell County School District v. State. 907 P.2d 1238, 1279 (WY, 1995).

objective, more transparent, and more needs-based. However, experience has demonstrated that each of the established methodologies has a number of weaknesses, some of which are particular to the specific methodology and others of which pertain to all of them.

The current approaches to determining the actual cost of an adequate or sound basic education can be improved substantially in their objectivity, accuracy, and responsiveness to students' educational rights. To do this, we believe that cost analysis in education should return to its constitutional roots. The "constitutional cost methodology" we describe in this report is designed to calculate the costs of providing the specific resources needed to fulfill students' constitutional rights, while, at the same time, promoting improved outcomes and cost-effectiveness. This approach aims to do so by establishing definitive constitutional input and outcome parameters, promoting the systematic use of evidence of best practices and cost-effective alternatives, and utilizing a transparent process that promotes focused professional and public input under the auspices of a permanent state commission.

### *Description of Established Methodologies*

Cost-analysis methodologies aim to identify and explain the factors that should be considered in assessing resources necessary to provide all students the opportunity for an education that meets stated outcome standards. Each method uses specific evidence and particular assumptions to develop estimates of the appropriate level of funding. They utilize the knowledge and experience of experts (educators, school business officials, academics, economists, and/or statisticians, depending on the method) to identify the relevant evidence and assumptions. The recommendations that emerge from a costing-out analysis are rarely adopted *per se*, without modification; rather, policymakers use these recommendations as guidelines to



make final decisions about the level and distributions of resources that should be provided to meet student needs.

Four major methodologies for conducting adequacy studies have emerged in recent years: (1) professional judgment, (2) evidence based, (3) successful schools, (4) and cost function. The professional-judgment method relies on intensive analyses and discussions among representative panels of experienced educators, administrators, and school business managers to determine the resources, services, and supports required for schools with varying demographic characteristics (e.g., numbers of English language learners and students living in poverty), the costs of which are then calculated by economists.

The evidence-based approach uses a selection of education research to develop educational program models. Specific aggregate and per-pupil costs can then be calculated from these models.

The successful-schools approach articulates criteria for defining a “successful” school or school district and then identifies a number of schools or districts that meet these criteria. It uses the average expenditures of these schools or districts as a foundation figure upon which adjustments for extra student needs and other costs are added to develop a statewide formula.

The cost-function method uses statistical techniques based on past performance data to determine how many dollars a particular school district would need to spend per student, relative to the average district in the state, to achieve a specific performance target or targets, given the characteristics of the district and its student body.<sup>8</sup>

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<sup>8</sup> For more detailed descriptions of these methodologies and how they have been applied in practice, *see* Bruce Baker, Lori Taylor and Arnold Vedlitz, *Adequacy Estimates and the Implications of Common*

## *Shortcomings of the Established Methodologies*

Although each of these methodologies has, in practice, evidenced particular implementation problems,<sup>9</sup> they share four fundamental deficiencies. First, the desired student outcomes on which the analyses focus have often been unclear, indeterminate, or unattainable. Second, calculations used to determine the additional costs involved in meeting the educational needs of students living in poverty, students with disabilities, and English language learners have generally not been evidence based. Third cost-effectiveness factors have not been sufficiently considered or incorporated. Finally, although all of the methodologies can produce more analytic, more objective, and more transparent estimates of the costs of public education than the largely political deal-making approach that has predominated state education budget determinations in the past, all of them are open to and, in practice, have often been subject to an unnecessary degree of subjectivity and political manipulation.

The so-called “successful schools” methodology—the methodology that was used by the New York State Board of Regents to determine the funding levels used in the current foundation

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Standards for the Cost of Instruction, Report to the National Research Council (2008); *see also*, Handbook of Research in Education Finance and Policy (2014).

Professional judgment has been the most widely used of the current cost methodologies, and the predominant pattern in recent years has been for cost studies to rely on professional-judgment processes that are combined with or incorporate elements of the evidence-based, successful schools, and/or cost function approaches. *See, e.g.*, Augenblick, Palaich and Associates, *Costing Out the Resources Needed to Meet Pennsylvania’s Public Education Goals* (2007) (utilizing professional judgment, successful schools and evidence-based approaches); Allan Odden, Lawrence O. Picus and Mark Fermanich, *An Evidence-Based Approach to School Finance Adequacy in Arkansas* (2003) (combining evidence-based and professional judgment approaches); American Institutes for Research, *An Independent Comprehensive Study of the New Mexico Public School Funding Formula* (2008) (combining professional judgment with aspects of successful-schools and evidence-based approaches.)

<sup>9</sup> For a detailed discussion of the particular strengths and weaknesses of each approach, see Michael A. Rebell, “Professional Rigor, Public Engagement and Judicial Review: A Proposal for Enhancing the Validity of Education Adequacy Studies,” 109 TCHRS. COLL. REC. 1303 (2007).

formula—is particularly weak.<sup>10</sup> Successful-schools studies generally establish a base-cost figure related to the average expenditures in the schools or districts they have designated as “successful,” though these districts generally include few English language learners or students in poverty. They then add an additional percentage weighting (“weights”) to the base figure to account for the number of students in poverty, English language learners, and students with disabilities in each district and assume that all other districts, if competently administered, could achieve results similar to those achieved by the “successful” districts, if they receive funding at levels that result from the weighted cost figures.

The Regents’ methodology defined a “successful school district” in terms of whether, throughout the district and over a three-year period, an average of 80% of students achieved level-3 scores on the fourth- and eighth-grade English language arts and mathematics exams and a 65 or more on six different high-school Regents exams. This definition appears somewhat arbitrary and simplistic. No explanation or justification for the 80% figure or for the use of an average of 80% across all tests rather than on each test was provided. Nor did the Regents disaggregate these test scores to assess whether the district had been successful in improving the achievement of students with high needs in relation to the general population. Furthermore, since the Regents have now determined that student success should be measured by scores based on the new Common Core curricula in English language arts and mathematics, the scores that were used to determine “successful” schools in the calculations that still form the basis for the existing foundation formula are now out of date.

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<sup>10</sup> More detailed discussion of the shortcomings of the other existing methodologies can be found in Michael A. Rebell, Henry M. Levin, Robert Shand and Jessica R. Wolff, *A New Constitutional Cost Methodology for Determining the Actual Cost of a Sound Basic Education* (August 2016), available at [www.equitycampaign.org](http://www.equitycampaign.org). That document also discusses in more detail the technical aspects of the cost effectiveness analysis (CEA) techniques developed by Henry M. Levin and his colleagues at Teachers College, Columbia University that are discussed below.

The weights that successful schools studies have used to account for students with greater needs range from 5% to 120%, and they tend to be derived from the literature on weights that have been used in the past by legislatures or state education departments.<sup>11</sup> Generally, these weightings have emerged from political compromises or from the amount of funds available at the time rather than being determined objectively based on the actual needs of students. The Regents' formula utilized an extra weighting of 100% for each student eligible for a free and reduced price lunch, with no extra weighting for English language learners. No explanation was provided for this determination, other than a general reference to the "research literature."<sup>12</sup>

Successful-schools analyses also do not attempt to assess whether successful districts used efficient or cost-effective practices, or to control for socioeconomic or other factors that may affect expenditures and results. In New York State, the Regents also applied an "efficiency screen" that eliminated from the final calculations the highest-spending 50% of school districts that otherwise met the criteria for being "successful," apparently on the suspicion that these districts' offerings were enriched. This decision to count only the lowest spending half of successful district was made without adequate data to confirm whether this was the case or whether any or all of the higher-spending districts actually needed to provide additional services in order to afford all of their students a sound basic education. Nor did they confirm whether the

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<sup>11</sup> Supplemental support for English language learners varies from 6% in Arizona to 120% in Maryland, and supplemental support for students receiving free or reduced-price lunch ranges from 5% in Mississippi to 100% in Maryland. William Duncombe & John Yinger, *How Much More Does a Disadvantaged Student Cost?* 24 *Econ. Educ. Rev.* 513 (2005). *See also*, Massachusetts Foundation Budget Review Commission: Final Report, October 30, 2015, p.10 ("Recommended weightings for low income students in the national literature range from...40% more than the base per student rate to 100% more.")

<sup>12</sup> The New York State Regents Proposal on State Aid to School Districts, 2010-2011, p. 39, available at <http://www.p12.nysed.gov/stateaidworkgroup/2010-11RSAP/RSAP1011final.pdf>

lower-spending “successful” districts were, in fact, providing sufficient opportunities for their lower-achieving students.<sup>13</sup>

As two leading education economists recently put it:

Successful Schools (or districts) analysis simply involves taking the average expenditure of those schools or districts which currently achieve average outcomes that meet or exceed desired, perhaps adequate levels. ...[T]he method is little more than a cost function a) without any controls for student characteristics, context or input price variation, and b) devoid of any sufficient controls for inefficiency or missing these controls altogether. Put bluntly, Successful Schools analysis, in its usual application, is of negligible use for determining costs.<sup>14</sup>

In short, the use of the widely discredited successful-school-district methodology by the Regents in the past is fundamentally flawed. New York State must now undertake a new, up-to-date analysis to determine the actual cost of providing all students the opportunity for a sound basic education. We propose that the state adopt a new constitutional cost methodology that substantially eliminates many of the basic flaws of the existing methodologies and will better promote compliance with students’ constitutional right to a sound basic education.

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<sup>13</sup> The New York State Education Department undertook an analysis that indicated that the higher spending successful school districts had greater average teacher salary costs, smaller class sizes, and provided more AP courses than did the lower spending successful school districts. *See*, Regents 2007-2008 Proposal on State Aid to School Districts, pp. 53-54. What this analysis did not reveal, however, was whether, given the competitive salary levels in the local job markets and the needs of the particular students involved, these expenditures were necessary in order to provide all students in these districts the opportunity for a sound basic education. The larger class sizes and lack of AP courses in the lower spending districts also raise questions about whether their students were receiving opportunities that met the state’s “college and career ready” standards and constitutional requirements.

<sup>14</sup> Bruce Baker and Jesse Levin, *Educational Equity, Adequacy, and Equal Opportunity in the Commonwealth: An Evaluation of Pennsylvania’s School Finance System* (2014).

## THE CONSTITUTIONAL COST METHODOLOGY

### *Overview*

The basic aim of a constitutional cost methodology is to determine the amount of funding necessary to ensure that the state’s education-finance system provides *all* students *all* of the educational resources they need and to which they are entitled in order to have a meaningful opportunity to obtain an adequate education. Over the past four decades, there has been a surge of litigation in the state courts regarding the “equity” or “adequacy” of state education finance systems. Such litigations have, in fact, been filed in 45 of the 50 states. To date, the highest state courts in 23 states have held that, under their state constitutions, students have a right to an “adequate” education, a “thorough and efficient education,” or a “sound basic education.”<sup>15</sup>

The proposed constitutional cost methodology emphasizes using substantive, legally binding standards for specifying both resource inputs and educational outcomes. The use of existing state standards and requirements boosts prospects for ensuring that an appropriate range of resources will be made available to meet student needs, and reduces possibilities for subjectivity and political manipulation. The methodology also systematically incorporates into its basic procedures the use of educational research and cost-effectiveness analyses in order to enhance program effectiveness and cost efficiency. Although legislators and school officials would retain ultimate discretion to make final appropriation and expenditure decisions, the constitutional context and systematic use of relevant evidence would require them to justify substantial variations from the recommendations that emerged from the cost-analysis process.

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<sup>15</sup> For a detailed discussion of this history, *see*, Michael A. Rebell, *Courts and Kids: Pursuing Educational Equity Through the State Courts* (2009), and the 2015 Supplement, available at [http://press.uchicago.edu/dms/ucp/books/pdf/COURTS\\_AND\\_KIDS\\_2015\\_Supplement.pdf](http://press.uchicago.edu/dms/ucp/books/pdf/COURTS_AND_KIDS_2015_Supplement.pdf). For up to date information about the status of these cases, see the SchoolFunding.Info website, maintained by the Campaign for Educational Equity at Teachers College, Columbia University, [www.schoolfunding.info](http://www.schoolfunding.info).

The decisions of the state courts in New York exemplify the types of constitutionally prescribed outcome standards that are set forth in the state-court adequacy decisions. The New York Court of Appeals has held that every student in the state is entitled to a “meaningful high school education” and the “opportunity for a sound basic education” and has specified that the purpose of these constitutional requirements is to prepare students to

- 1) Function productively as civic participants with skills fashioned to meet a practical goal: meaningful civic participation in contemporary society, including voting and serving on a jury, and to
- 2) Compete for jobs that require a high level of knowledge, skill in communication and the use of information, and the capacity to continue to learn over a lifetime.<sup>16</sup>

The New York courts have also held that the following resources are essential for meeting the stated outcome goals:

1. Sufficient numbers of qualified teachers, principals and other personnel;
2. Appropriate class sizes;
3. Adequate and accessible school buildings with sufficient space to ensure appropriate class size and implementation of a sound curriculum;
4. Sufficient and up-to-date books, supplies, libraries, educational technology and laboratories;
5. Suitable curricula, including an expanded platform of programs to help at-risk students by giving them “more time on task”;
6. Adequate resources for students with extraordinary needs; and
7. A safe, orderly environment.<sup>17</sup>

A cost methodology based on these constitutional standards, and the state laws and regulations that emanate from them, can ensure that the range and quantity of resources provided to students

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<sup>16</sup> *CFE v. State of New York*, 100 N.Y.2d 893, 905-908 (NY 2003).

<sup>17</sup> *CFE v. State of New York*, 187 Misc. 1, 114-115.

is consistent with their right to a sound basic education, and, at the same time, enhance the rigor, validity, and legitimacy of the cost methodology itself.

The primary implementation approach we envision is the convening of professional-judgment panels operating under the auspices of a standing commission that would promote the effective use of programmatic and cost-effectiveness research, as well as focused cost-function studies. We omit any use of the “successful schools” methodology because, as discussed above, this approach fundamentally lacks validity and reliability, and is incapable of ensuring that the constitutional rights of all students are effectively implemented.

### *Application*

#### Utilizing Constitutional and Statutory Standards

To provide substantive input and outcome criteria for determining costs, the constitutional cost methodology employs the constitutional standards articulated by the state courts to define the expected outcomes of education; the state statutes and regulations issued by the state department of education to implement the constitutional standards; and the essential programs and supports that students need in order to obtain the opportunity for an education that is consistent with these standards and statutes. This approach provides a more comprehensive and accurate declaration of the actual purposes and expected results of public education than the test-score-based proficiency standards that have been used to set outcomes and derive inputs in most cost studies in recent years. Students’ right to a sound basic education requires schools to provide more than what students need to achieve adequate scores on standardized tests in math and reading. The New York courts’ emphasis on preparing students for civic participation and employment reflects the enduring understanding of the basic purposes of education that date



back to the 19<sup>th</sup>-century common-schools era and continues to represent the views of educators, parents, and the general public today.

Reliance on a constitutional standard that focuses on civic functioning and employment skills clarifies for professional-judgment-panel members, researchers compiling evidence of effective educational practices, and policymakers and the public at large that a sound basic education must deliver not only proficiency in reading and math, but also the broad range of knowledge and skills in history, civics, science, the arts, technology, and other areas, as well as critical-thinking, communication, problem-solving, self-management, interpersonal, and other skills and attitudes that students need to be successful in today's dynamic, competitive world.<sup>18</sup> These emphases also highlight the importance of experiential curricular and co-curricular or extracurricular activities, career and technical education, internships, and the range of other experiences that students need to become capable citizens and competitive workers.

The constitutional approach uses both the existing quantitative assessments and additional quantitative and qualitative measurements that evaluate broader dimensions of the educational experience. Scores on standardized exams in reading and math are relevant to an assessment of a student's knowledge base, as are test scores and other quantitative measures of student progress in the other academic content and skills areas that students should be learning. Use of a constitutional standard would, in addition, encourage educators and policymakers to develop and adopt a richer range of valid quantitative and qualitative assessments of relevant but currently unassessed knowledge, skills, and attitudes. The recently enacted federal Every Student Succeeds Act specifically encourages states to develop such broader measures by including in

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<sup>18</sup> See, Henry M. Levin, *More than just test scores*, 42 PROSPECTS 269 (2012); James J. Heckman and Tim D. Kautz, *Hard Evidence on Soft Skills* NBER Working Paper 18121 (2012) and James Ryan, *Five Miles Apart*: 257 (2010) (Noting that test scores at best only assess the basics, but not real quality in education.)

their accountability systems one or more indicators of “school quality or student success” other than standardized test scores,<sup>19</sup> and a number of school districts, such as the CORE districts in California (which include Los Angeles, San Francisco, Oakland, and six other school districts), have already made significant progress in developing such indicators.

The use of constitutional standards provides more structure, objectivity, and appropriate breadth to the inputs that are considered in the cost-analysis process. Currently, the range of educational programs and resources considered by professional-judgment panels depend solely on the knowledge and experiences of the individuals who sit on these panels or on summaries of evidence or other materials that are prepared by consultants who organize the panels. Since the number of people that can sit on these panels, and the number of those who choose the materials that are used in the evidence-based model, are limited, current procedures often do not encompass the full range of necessary educational experiences and the full range of professional perspectives on how best to provide these experiences. This means that programs and resources geared to the needs of particular subgroups of students are inadequately examined.

The seven essential resource areas that the New York courts articulated provide a substantive framework that can help organize both the selection of professional-judgment panels and the range of evidence that must be considered in their deliberations. The essential resources provide a checklist that those selecting panel members can use to ensure that individuals who are experienced with resource needs in each relevant category are represented on the panels. Once panels are convened, the list provides a framework for organizing the evidence that the group will consider and the discussions that will be initiated in order to ensure that the needs of all students are considered in a comprehensive manner.

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<sup>19</sup> 20 U.S.C.A. §6311(c)(4)(B)(v)

There are, of course, many ways that the judicial requirements for “sufficient numbers of qualified teachers,” “sufficient and up-to-date books, supplies, libraries, educational technology and laboratories,” and “an expanded platform of programs to help at-risk students” can be met. In New York, as in most states, these general standards are supplemented by state statutes and detailed regulations issued by the state board or the commissioner of education that deal with all of these issues. These regulations provide specific subcategories for the panels to consider under each major heading. For example, in New York, there are specific regulatory requirements regarding teacher qualifications, and for adequate libraries and science labs.<sup>20</sup> New York has also implemented the requirement for an “expanded platform of programs to help at-risk students” by creating detailed regulations concerning “academic intervention services” that school districts must offer to all students who are not meeting state proficiency standards in core subject areas.<sup>21</sup>

Some professional-judgment panels in past studies have been instructed to consider summaries of some of the state’s legal requirements, but these instances have been sporadic and *ad hoc*. The constitutional cost methodology systematizes reliance on the full range of relevant legal requirements. Their responsibility to ensure that resources in all of the seven basic categories are available to all students will compel panelists to detail resource needs in each of these areas. Furthermore, the use of the regulations for these purposes should compel the legislature and the state education department to review current laws and regulations in order to update outdated provisions and fill in any gaps in current coverage.<sup>22</sup> For example, New York

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<sup>20</sup> 8 NYCRR, Part 100.

<sup>21</sup> 8 NYCRR §§ 100.1 (g), 100.2(ee), 100.2 (ii).

<sup>22</sup> The Campaign for Educational Equity has compiled a compendium of the constitutional, statutory and regulatory requirements regarding essential resources in effect in New York State at this time. *See* Campaign for Educational Equity, *Essential Resources: The Constitutional Requirements for Providing All Students in New York State the Opportunity for a Sound Basic Education* (2012). This compendium was developed as a model and with the expectation that the Regents and the State Education Department

currently lacks requirements regarding appropriate class-size ranges except in certain special-education categories and does not give any guidance on numbers of computers or other technology that schools should be making available to students. To ensure that all schools have the resources to provide students a meaningful opportunity for a sound basic education, state policymakers need to clarify requirements in these areas.

Although professional-judgment panels, the commission, and ultimately the legislature would be expected to comply with the state's constitutional, statutory, and regulatory requirements in each of the essential resource areas, they would still have substantial discretion to determine programmatic issues and resource-intensity questions. For example, there are numerous ways that appropriate "academic intervention services" can be provided or that technology needs can be met. By emphasizing the importance of resource needs in each of the areas that the state constitution and the state's laws and regulations have deemed most important, the constitutional cost methodology would increase the efficiency of the decision-making process by focusing the efforts of policymakers and educators on those areas that the state has deemed to be priorities and motivating them to determine best practices in these areas.

#### Appropriate Costs of Necessary Programs and Services for Students with Extra Needs

The legal framework required by the constitutional cost methodology will enhance substantially the accuracy of the process for determining the cost of providing extra services for students who are "at risk," students with disabilities, and English language learners. It compels the professional-judgment panels to determine the full range of resources required to meet the

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would issue an official version of a similar document. This review revealed that many of the current regulations are out of date or unnecessarily complex and that the current regulations are not adequately addressing a number of important constitutional requirements.

needs of each of these groups of students. There are, of course, a vast array of resources, services, and supports available that could be considered.<sup>23</sup> The complexity of meeting these students' needs has led many professional-judgment and successful-schools studies in the past simply to borrow a percentage weighting or add-on figure from other states rather than examining the actual needs of the particular students whose education is being considered.

Evidence-based studies have generally relied on analyses from other states, without demonstrating their relevance to the specific constitutional requirements in the state under consideration; cost-function studies have often used average input and outcome statistics for their analyses, without showing that the needs of each category of students are being sufficiently addressed. Neither of these practices would pass muster under a constitutional cost methodology.

All students with extra needs have a constitutional right to appropriate services. Using a constitutional cost methodology will, therefore, require selecting panel members with the appropriate expertise and experience for identifying and costing out a range of specific resources, services, and supports that would meet the actual needs of students in the particular state. Because New York state laws and regulations spell out the types of resources, services, and supports policymakers in the state have chosen to meet the constitutional requirements for “an expanded platform of services” for “at-risk” students, “adequate resources” for English language learners and an appropriate education for students with disabilities, the panel’s programmatic review can focus on the costs of implementing what the state has already deemed to be most appropriate approach for its students in each of these categories.

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<sup>23</sup> See, e.g., Patricia Gándara and Russell W. Rumberger, *Defining an Adequate Education for English Learners*, 3 EDU FIN & POL’Y 130 (2008) (discussing range of needs of English language learners and variety of programs and resources available to meet them).

For example, as noted above, New York State regulations require that the “expanded platform of services” that school districts provide to “at risk” students include “academic intervention services” (AIS) for all students who are failing or at risk of failing to meet proficiency standards in the four core academic subject areas. School districts can choose to provide AIS in a variety of ways and at varying levels of intensity depending on students’ needs, including offering small-group instruction, one-on-one tutoring, counseling, and study-skills support. In the past, school districts in New York State have tended to provide some services or supports to some of their students in some subjects, but not to provide all of the required services to all of their students, especially during times of fiscal constraint.<sup>24</sup> Students with the greatest needs in lower-wealth school districts have tended to be shortchanged most significantly. Under the constitutional cost methodology, the cost of fully complying with this regulation would have to be taken into account.

A similar approach would be followed for determining the actual costs of providing appropriate services for English language learners and students with disabilities. New York law favors bilingual education programs as well as English as a Second Language programs for English language learners,<sup>25</sup> and certain types of inclusion programs and special class settings for students with disabilities.<sup>26</sup> As with the academic intervention services for at risk students, calculations of the extra costs of educating these students can be made based on the presumption that all students who need these services will, in fact, receive them in accordance with the stated requirements of state constitutions, statutes, and regulations. .

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<sup>24</sup> See, Campaign for Educational Equity, *Deficient Resources: An Analysis of the Availability of Basic Educational Resources in High Need Schools in Eight New York State Districts* (2012), available at <http://equitycampaign.org/publications/essential-and-deficient-resources/>.

<sup>25</sup> 8 NYCRR § 154.3(g)(1).

<sup>26</sup> 8 NYCRR § 200.6(g)(1); 200.6(h).

## Cost-Effective Practices

The constitutional cost methodology requires an analysis of the full costs of constitutional compliance, that is, of providing all students meaningful opportunities to receive a sound basic education. This entails not only the human and material resources necessary for academic services but also adequate counseling and other support services as well as necessary extracurricular activities; it will result in the analysis of a broader range of programs and services, and more thoroughgoing understanding of the resources required for their implementation, than most cost studies have involved in the past. To maximize the impact of education dollars on students' educational opportunities, safeguard students' rights, and contain costs appropriately, the constitutional cost methodology also builds in cost-effectiveness analysis.

Most past cost studies have generally neglected or minimized the consideration of cost effectiveness. One cost-study approach that has incorporated substantial cost-effectiveness considerations into its basic procedures is the model that the Oregon "Quality Education Commission" has been implementing since 1999. The applicable statute specifically provides that

In determining the amount of moneys sufficient to meet the quality goals, the commission shall identify best practices that lead to high student performance and the costs of implementing those best practices in the state's kindergarten through grade 12 public schools. Those best practices shall be based on research, data, professional judgment and public values.<sup>27</sup>

Our recommendations draw on Oregon's experience.

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<sup>27</sup> Oregon Revised Statutes §327.506. The statute also provides that the biennial report to the governor and the legislature shall provide at least "at least two alternatives for meeting the quality goals."

Every two years, the Oregon commission submits a report to the governor and legislature that sets forth the amount of money needed to meet the state’s “quality goals.”<sup>28</sup> These goals are defined broadly to include academic content standards, and, among other things, providing an education that will prepare students to be capable citizens in a “participatory democracy and a multicultural nation,” and “to succeed in the world of work.”<sup>29</sup>

To prepare each biennial report, the commission’s staff (personnel assigned by the state education department) undertakes detailed analyses of new educational needs and also carries out specific research assignments regarding best practices and comparative costs for improving educational services. For example, in its 2014 report, the commission discussed the first phase of the staff’s multi-year study of college and career readiness issues. The report contained an extensive literature review of studies identified in the What Works Clearinghouse database maintained by the U.S. Department of Education,<sup>30</sup> as well as a wide range of other national and international sources on best practices for improving high school graduation rates. The report also featured detailed “matched pairs” analyses of practices in high schools with higher than predicted graduation and postsecondary enrollment (PSE) rates as compared with high schools with similar student characteristics but lower than predicted graduation and post-secondary enrollment rates. The commission proposed a new student achievement model that would better promote high school graduation, as well as further cost-effectiveness studies that should be done,

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<sup>28</sup> Oregon Revised Statutes §327.506

<sup>29</sup> Oregon Revised Statutes §329.025.

<sup>30</sup> The Clearinghouse identifies studies that provide credible evidence of the effectiveness of a given practice, program, or policy and disseminates summary information and free reports on its website. It utilizes research protocols to identify the relevant studies, and to review the validity and reliability of their methodologies. To date, the Clearinghouse has reviewed over 10,500 studies. *See*, What Works Clearinghouse, Procedures and Standards Handbook Version 3.0 (2014), available at <http://ies.ed.gov/ncee/wwc/documentsum.aspx?sid=19>.



and then specified the specific amount of funding statewide that would be needed to implement its model fully over the next two years.<sup>31</sup>

The constitutional cost methodology we are recommending for New York State would incorporate mechanisms for on-going program effectiveness and cost-effectiveness reviews, as in Oregon. As will be discussed in more detail in the next section, we envision a permanent commission overseeing such studies, which would be undertaken by its own professional staff, working in conjunction with staff at the state education department, as necessary and appropriate. Such a commission could, as in Oregon, identify areas of potential program improvements and cost savings and examine a number of these issues each biennium.

We recommend that the New York State commission utilize the specific cost-effectiveness analysis (CEA) techniques developed by Henry M. Levin and his colleagues at the Center for Benefit-Cost Studies of Education at Teachers College, Columbia University. This approach affords direct comparisons of the full costs of various alternative program options. CEA in education is used to compare alternative interventions with similar educational goals such as gains in reading or math achievement or completion of courses or other educational outcomes. Measures of outcomes among alternatives must be similar for making comparisons.

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<sup>31</sup> Quality Education Commission, 2014 Quality Education Model: Final Report, Vol I: Findings and Recommendations (2014), available at [http://www.ode.state.or.us/superintendent/priorities/final-2014-qem-report-volume-i-\(2\).pdf](http://www.ode.state.or.us/superintendent/priorities/final-2014-qem-report-volume-i-(2).pdf).

In its 2012 report, the commission included a detailed analysis undertaken by state education department staff of best practices in teacher collaboration in successful schools in Oregon and recommended greater investment in those teacher collaboration practices that were deemed most successful. The report also analyzed student performance and resource allocation data and concluded that “Adding resources in the early and middle grades appears to be more productive in reaching higher levels of achievement than does adding resources in the high school grades.” Quality Educ. Commission, 2012 Quality Education Model: Final Report (2012), available at <http://www.ode.state.or.us/superintendent/priorities/2012-qem-final-report-8-1-2012-.pdf>.

Taking into account comparative costs for similar outcomes, priority of adoption should be given to those interventions that show the highest effectiveness relative to cost.<sup>32</sup>

To demonstrate how cost-effectiveness analysis might be utilized as part of a constitutional cost methodology in New York State, we undertook a preliminary illustrative comparative cost estimate, using the *Cost Out* tool,<sup>33</sup> of three of the most common forms of providing academic intervention services (AIS) to “at risk” students in accordance with the New York State regulations (see appendix). We recognize that it is likely that the commission and the professional-judgment panels will be able to delve into cost-effectiveness analysis for only a limited number of the issues each biennium. Where data and/or resources do not presently permit application of the CEA methodology, the commission and the professional judgment panels should still incorporate program-effectiveness and cost-effectiveness criteria into their deliberations as much as possible. It is important, however, to employ cost-effectiveness analysis to the maximum extent feasible so that, over time, this rigorous methodology becomes the standard.<sup>34</sup>

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<sup>32</sup>A more extensive discussion of CEA and its applicability to the constitutional cost methodology is set forth in Rebell et al. (2016) discussed above in n. 10.

<sup>33</sup> The CEA approach utilizes “the ingredients method” that assesses the true full costs of an educational program. The ingredients method involves three main steps to ascertain accurate and consistent measures of costs: identifying and specifying the ingredients required to obtain the evaluation results, identifying their costs, and calculating total program costs and average costs per participant. The cost burden can then be distributed among multiple constituencies. *Cost Out* can be accessed at <http://www.cbcsecosttoolkit.org/>.

The *Cost Out* tool prompts the user to list all ingredients required to implement an intervention, from teachers to facilities to equipment, and to assign appropriate prices based on the quantity and quality of ingredients needed. The system then calculates the total costs and cost per student of the intervention.

<sup>34</sup> One example of how this might be done is provided by the Rapid Cycle Evaluations that Mathematica Policy Research has applied to the evaluation of educational technology interventions. This technique has been used successfully in the health field and researchers are considering adaptations to other fields, such as education. See, e.g. Cody, S. & Asher, A. (2014). *Proposal 14: Smarter, better, faster: The potential for predictive analytics and rapid-cycle evaluation to improve program development and outcomes*. Retrieved from: <http://www.brookings.edu/research/papers/2014/06/19-predictive-analytics-rapid-cycle-evaluation-improve-program-cody-asher>.

The Sound Basic Education Cost Commission

Overall responsibility for undertaking biennial cost analyses and assessing the adequacy of current education appropriations should be lodged in an independent, permanent commission, whose members should fill designated slots for staggered four-year terms. Following the model of the Massachusetts Foundation Budget Review Commission,<sup>35</sup> we recommend that the Sound Basic Education Cost Commission membership consist of both state officials and representatives of major education and business groups. These members should be representative of all regions of the state and should include people who have extensive professional knowledge of and experience with the educational needs of English language learners, students with disabilities, and students living in poverty.

The commission would be responsible for developing and revising on a regular basis a constitutional cost model for ensuring that the state's education-funding system provides all schools with the essential resources needed to offer all students a meaningful opportunity to obtain a sound basic education in a cost-effective manner. The commission would issue biennial reports to the governor and the legislature, who would maintain ultimate responsibility for making final determinations on school-funding matters and constitutional compliance. The commission would maintain its own staff and be authorized to hire expert consultants as necessary. On specific projects, its staff would work closely with the state education department and other state and local agencies, as appropriate.

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<sup>35</sup> See, MGLA ch. 70, §4, as amended by ch. 165 of the Acts of 2014.

Between biennial commission reports, the commission staff, working with the state education department and independent consultants, as necessary, would undertake analyses of best practices and cost-effective alternatives in major areas of concern identified by the commission. The commission would work with professional-judgment panels who would consider these data and the staff recommendations, as well as the applicable constitutional standards and state laws and regulations in their deliberations on resource needs for the ensuing two-year period. It would also seek input from statewide public-engagement forums. Such professional and public involvement will both expand the range of information and perspectives that are considered in developing the model, and engage educators and the public in understanding best practices and in supporting expenditure increases that may result from the process.

After each review, the commission would present a report to the governor and the legislature setting forth and explaining its recommendations regarding the specific amount of funding statewide that would be needed to provide all students the opportunity for a sound basic education over the next two years. The report would summarize the results of the professional-judgment processes it used, as well as the input received from public-engagement forms.

The governor and the legislature should give serious consideration to these recommendations in their budget analysis processes, and explain in writing any substantial differences between the appropriations they have adopted and the commission's recommendations. If parents or stakeholders believe that the funding system or annual appropriations that are finally adopted are unreasonable or do not meet constitutional or statutory requirements, they may, of course, seek judicial review. Courts in a number of states have

proved adept at closely analyzing cost-analysis methodologies, approving sound practices, and invalidating arbitrary judgments and political manipulations.<sup>36</sup>

## CONCLUSION

In the *CFE* case, the Court of Appeals ordered the state to “determine the actual cost of providing a sound basic education.” Use of the constitutional cost methodology that we describe would comply with this order by means of an up-to-date methodology that draws on the strengths of four existing methodologies and mitigating their shortcomings by providing clear standards for both “input” and “outcome” criteria, taking full account of the needs of students living in poverty, English language learners, and students with disabilities, and systematically considering cost effectiveness. Like the other methodologies, the constitutional cost methodology does ultimately depend on professional judgment of the educators and finance experts involved and the sponsoring entity, but it substantially constrains manipulation by requiring adherence to constitutional requirements, by utilizing a transparent process, and by subjecting legislative decisions under some circumstances to judicial review.

We recognize that it will take time to build the state’s capacity to undertake this type of cost methodology and that all of the potential benefits of the model we are proposing cannot be realized immediately. State statutes and regulations that are needed to establish workable criteria and benchmarks for constitutional compliance need to be fully aligned with constitutional requirements; cost-effective analyses in various resource areas depend on good data about best educational practices; and the establishment of the independent commission that we envision

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<sup>36</sup> For a detailed discussion of the courts’ role in many of these cases, see, Rebell, *Professional Rigor*, *supra*, n. 4 (discussing judicial review of specific cost studies in Arkansas, Kansas, Massachusetts, New Jersey, New York, Ohio, Texas and Wyoming.)

overseeing the process would require substantial political will and public support. Nevertheless, we think it important to initiate a conversation about these themes and to implement improved cost studies based upon them to the maximum extent feasible in the near future. Such discussions and demonstrations should lead to further improvements of the model and to more valid and constitutionally compliant mechanisms for determining the level of funding needed to ensure that all students are provided a meaningful opportunity for a sound basic education.

## **APPENDIX. Example of Cost-Effectiveness Analysis**

To demonstrate how cost-effectiveness analysis could be utilized as part of a constitutional cost methodology in New York State, we have undertaken a preliminary illustrative comparative-cost estimate of three of the most common forms of providing academic intervention services (AIS) to “at risk” students in accordance with the New York State regulations. The intervention services we have considered in this demonstration are small-group instruction in an afterschool program, reduced class size, and additional instruction time.

For these programs, the necessary ingredients—although their exact amounts would vary substantially between schools and districts based on different levels and types of need and different AIS program—would likely be:

- The principal, who would lead the development and oversight of the AIS plan;
- Other administrators, counselors, teachers, parents, and possibly students, who would serve on the committee to develop the AIS plan;
- Costs for professional service providers who execute the plan, which may include hiring additional teachers for reduced class sizes, paying teachers overtime for before- or after-school tutoring, counselors to provide non-academic support services, and community agencies, to whom students may be referred for additional non-academic services (note that AIS teachers may require special training, experience, and licensing, e.g., as a reading specialist);
- Office/conference room space for AIS committee meetings;
- Classroom space for additional small classes, before/after school tutoring, and other service provision;

- Computers and internet access for data analysis to assess students for AIS and monitor progress;
- Books, supplies, curricula, and any other materials necessary to implement additional instruction, including, e.g., supplementary reading curricula such as Wilson Reading or Reading Recovery; and
- Training for teachers and other service providers on any new curricula or other services provided as part of AIS.

For the purposes of this illustration, we assume that each of these approaches is equally effective in promoting student learning, but, at the present time, we do not have any evidentiary basis to know that this, in fact, is the case.

#### A. *Small-Group Instruction After School*

For this program, we assume that 267 students out of 800 in a large elementary school will receive AIS services, that an AIS committee comprising the principal, assistant principal, a counselor, and a teacher meet one hour per week to analyze data, refer students to AIS, and monitor and oversee AIS operations, and that fully certified teachers provide small-group instruction to groups of ten students for two hours per day, four days per week, for 36 weeks.<sup>37</sup>

Under these assumptions, the costs of providing AIS for one year are \$568,570 per school, or \$2,140 per student, using national average prices in 2015 dollars.

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<sup>37</sup> The calculations for this program, and for the other three that follow, use national average teacher salaries according to the National Education Association (\$57,379) in 2015 dollars, with 48.8% of salary added as fringe benefits. Note that average prices for many educational ingredients, especially personnel, are likely to be somewhat higher in New York State than the United States average. We use national prices because larger samples reduce idiosyncratic noise in the data and reliable sources of state/local prices are not available for all ingredients. As long as it is made consistently across programs, the choice of prices should not affect relative comparisons between programs, but local or state prices may need to be considered or adjustments made for geographic price differences if these analyses are used for budgetary projections.



### *B. Reduced Class Size for AIS Subjects*

The comparative per school costs for the reduced class option would be \$412,590 and per AIS student cost would be \$1,550, applying the same assumptions that were used for the school-level AIS costs for small-group instruction, with the following additional assumptions:

- The 267 AIS students in the school of 800 currently are in ELA and math classes of about 26 students each, roughly the average class size in elementary and middle schools in New York City in 2015-16.
- Math and ELA each meet for five 45-minute periods per week.
- A math or ELA teacher can teach five class sections within a standard, 25-period per week program
- At the initial class size of 26 students, there are the equivalent of two math and two ELA teachers needed to teach the 267 students eligible for AIS (note that the students do not necessarily need to be sorted into the classes of four specific, individual teachers by strict ability tracking)
- Therefore, to cut ELA and math class sizes in half for AIS students necessitates hiring four additional teachers and finding four classrooms (since classes will be quite small, at 13 students each, on average, they may be half-size classrooms if they exist in the school).
- The costs of classroom construction are amortized over 30 years at an interest rate of 3.5%.

### *C. Additional Instructional Blocks*

The costs of additional math and ELA blocks for AIS students are \$251,580 per school, or \$950 per AIS student, based on the following additional assumptions:

- Students will have an extra block of three periods of math and three periods of ELA. Each extra class will be taught to groups of 26 students for three, 45-minute periods per week. To cover the ten groups of students in a school of 800, 30 additional class sessions of math and 30 additional class sessions of ELA will need to be opened each week, requiring 1.2 math and 1.2 ELA teachers.

- Students will take the extra math and ELA classes in average-sized, 900-square-foot classrooms, with their new construction costs amortized over 30 years at a 3.5% interest rate.

In sum, under this illustrative demonstration, the per-student costs for small-group instruction after school would be \$2,140, for reduced class sizes \$1,550, or for additional instructional blocks \$950. Extra instructional blocks would appear, then, to be the most cost effective AIS alternatives—*but only if it were established that each of these methods achieved equivalent outcomes*. Therefore, the cost commission would need to ensure that its application of cost-effectiveness analysis is combined with rigorous research on program outcomes.