

Improving Student Performance in Times of Declining Resources



Willard R. Daggett, Ed.D.

Founder and Chairman, International Center for Leadership in Education

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Since the 1983 report *A Nation at Risk*, there has been a persistent call to improve student performance in our schools. Despite that call, it is clear that spending increases have outstripped improvement in student performance. With the recent severe downturn in the economy leading to a likely reduction of resources available to schools, this issue has risen to an even higher level of concern. As a result, school board meetings and educational administrator conferences today are dominated by two agenda items:

1. how to improve student performance especially in the shadow of renewal of *No Child Left Behind* (NCLB) and its current Adequate Yearly Progress (AYP) provision, which some considered from the outset to be an unfunded mandate
2. how to deal with declining fiscal resources.

As districts struggle with the two challenges, they often perceive that their hands are tied by the large portion of their resources that must be allocated to pre-existing mandates, such as collective bargaining agreements and the categorical nature of the state and federal funds they receive. There is growing evidence that such obligations are looked at differently in the nation's most successful schools as they seek to identify what works to improve student performance.

In our work at the International Center for Leadership in Education to identify and analyze the successful practices of the nation's most rapidly improving schools, as well as the recently released report titled *Funding Student Learning*, funded by the Bill & Melinda Gates Foundation, it has become clear that a different approach may be necessary. That approach involves focusing resources and accountability around specific tools, strategies, professional development, procedures, and policies that can be documented to improve student performance. This is a subtle but important shift — using student learning as the basis of making funding decisions, not what exists in terms of current programs. **It is a shift from a focus on inputs (programs) to output (student performance).**

This shift leads to a change in how most adults in the system would view their jobs; they are not simply responsible for providing a program, but rather they are responsible for student learning. This shift has been emerging nationwide in recent years, and it has led to more efficient and effective programs in those schools where it is most pronounced.

When we try to address the challenges of improving performance and declining resources together, we recognize a potential solution – something must come off the plate. What should come off the plate are those things that do not improve student performance and those things that only marginally improve student performance but are extremely expensive.

Using categorical funding and collective bargaining agreements as a point of departure, both of which are important, will not get us there in and of themselves. Funding guidelines and contracts need to be based on what leads to improved student performance; they should not create impediments to improving student performance. Funding rules and contracts were never intended

to impede student achievement, but on occasion they have unintentionally done so. Rapidly improving schools have taught us how to relook at them to prevent that from happening or mitigate the downside at least.

To accomplish this shift, we need a change in both our data and information systems. The data and information systems must be built around student performance. Performance that can be documented, analyzed, and tracked. It is a shift in focusing resources, data, and information, not on input (class size, categorical programs, average daily attendance, etc.) but rather to focus on output – student performance. Such a change causes a fundamental shift in what adults think about in terms of their responsibilities, how programs are evaluated, and how resources are allocated.

In effect, we are finding a growing body of evidence that allocating resources based upon student achievement leads to improved student performance. It borders on common sense!

Of course, as in most common-sense issues, the devil is in the details. Those details are grounded in three basic questions:

1. What is student performance and how do you measure it?
2. How do you determine the cost of various tools, strategies, programs, etc.?
3. How do you systematically compare improvements in student performance by tools, strategies, programs, etc. to cost?

We have found that all three of these questions can be answered, using our work with the nation's most rapidly improving schools, the work of state education departments such as Florida and New Jersey in this area, and the *Funding Student Learning* report. Furthermore, we have created a framework to guide that decision-making process. With that framework in place, we can not only evaluate the success or failure of tools, strategies, programs, etc., for a school, but also provide suggestions to other districts/schools as to what will probably work best for them. Resource allocations can then be based upon that information.

Because every school has its own DNA — from student socioeconomic characteristics, to the physical building and school culture, to available resources per student, to teacher contracts in place, etc. — this framework needs to analyze student performance from multiple perspectives. The framework must help determine what will work best given the DNA of each building and district. Thus, **the framework is a guide, not a formula.**

While every school could use additional resources, the reality is that those resources are unlikely in the foreseeable future. Thus, schools must find a way to allocate their limited resources to those tools, strategies, and procedures that will result in the most efficient and effective use of dollars.

Efficiency and Effectiveness Framework

To guide school and district decision making, the International Center has created the Efficiency and Effectiveness Framework. The E/E Framework compares the efficiency (cost) and

effectiveness (student performance) of a wide variety of tools, strategies, professional development, organizational configurations, and procedural decisions schools make.

Use of the E/E Framework will yield a rich source of successful practices that schools can use to select the tools, strategies, procedures, professional development, organizational configuration, school calendar, etc. they should implement based upon an analysis of student performance data. The data gathered from the E/E Framework can also be used to guide policy and allocation of resources at the district and state levels. The approaches and structures that produce the greatest improvements for the least cost should be given priority. This is a subtle but important difference from basing the decision-making process upon existing categorical funds and collective bargaining agreements. It leads to a reshaping of those agreements and realignment of funding sources.

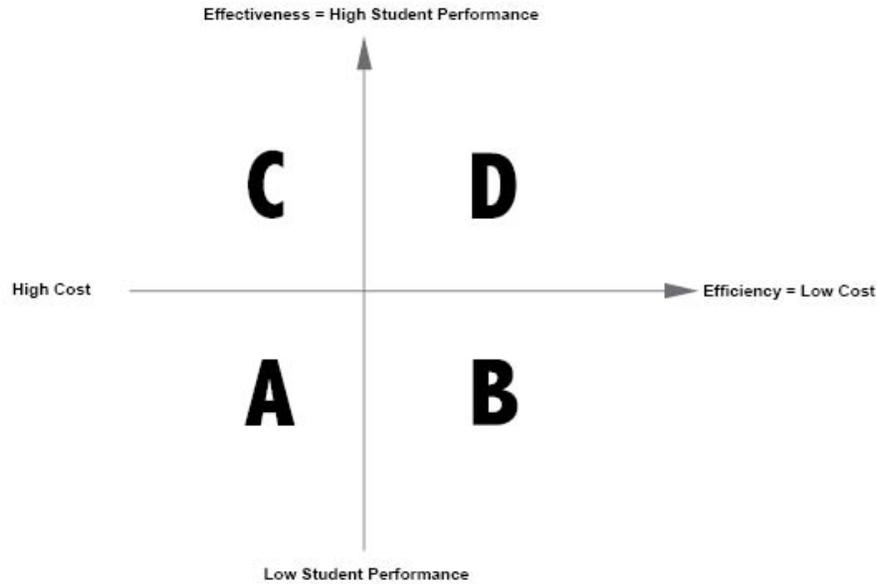
The E/E Framework is intentionally simple. There are numerous intervening variables such as the socioeconomic make-up of student populations, size of school, teacher turnover ratio, mobility of students, etc. that could be factored into a more complex index. Use of multiple databases would require the use of multiple regression analyses and other sophisticated statistical treatment of the data. We concluded that using the E/E Framework to guide decision making was preferable to the far more complex approach.

The E/E Framework has three central purposes:

1. To guide schools and districts as to which tools, strategies, professional development, procedures, organization of instruction, etc. they should use.
2. To serve as a vehicle to compile a national repository of best practices for efficiency and effectiveness.
3. Based upon #2 above, to guide policy formulation at the district and state levels.

The Efficiency and Effectiveness Framework uses the same schematic as the Rigor/Relevance Framework.

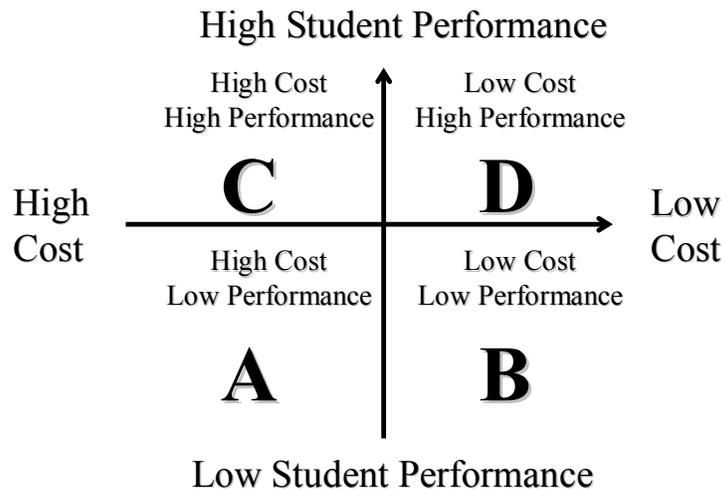
Efficiency and Effectiveness Framework



The horizontal line denotes cost of initiatives or efficiency. The vertical line represents effectiveness (student performance) of an initiative. In the framework:

- Quadrant A – represents high cost and low student performance
- Quadrant B – represents low cost and low student performance
- Quadrant C – represents high cost and high student performance
- Quadrant D – represents low cost and high student performance

Efficiency and Effectiveness Framework



Initiatives in Quadrant D should be considered and those in Quadrant A should be questioned.

To use the E/E Framework, the following questions must be answered:

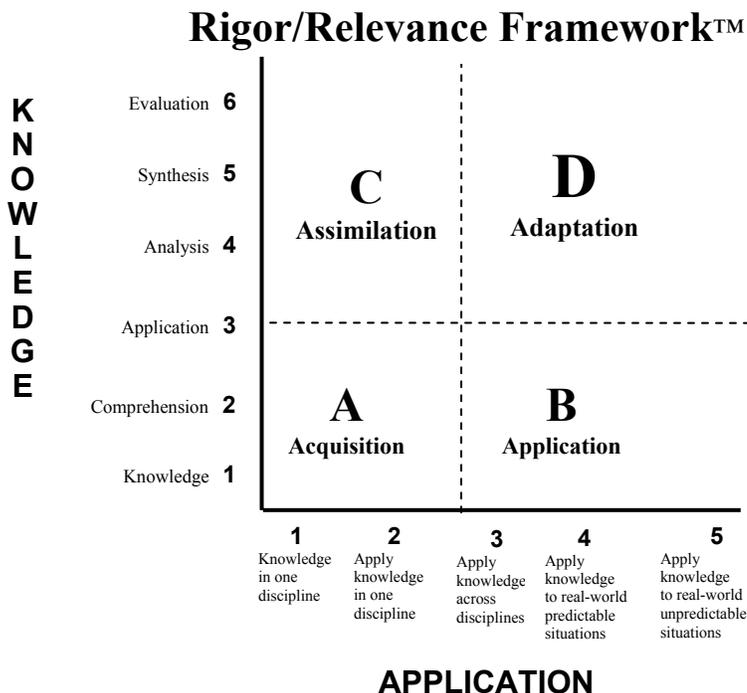
1. What is student performance?
2. How do you measure student performance?
3. What is the cost of improved student performance and how do you measure that cost?

What Is Student Performance?

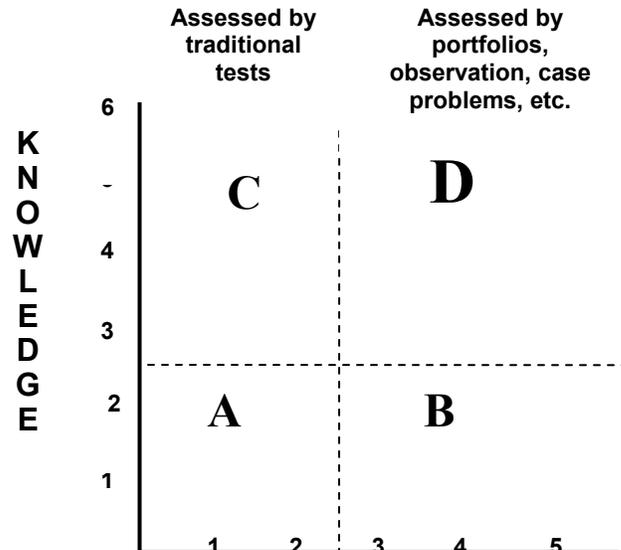
Each district must answer this question based upon its belief system and the requirements of its state education system. While NCLB —with its focus on academic achievement measured through group assessments — is likely to be renewed, the 21st century skills movement has caused states and school districts to re-visit this basic question – what is student performance? NCLB drove schools to devote extensive resources and time to the “basics” as measured by the state testing program.

The 21st century skills include the “basics” measured by the state tests and much more. They include a broad array of skills, such as problem solving, decision making, innovation, creativity, respect, responsibility, organizational skills, initiative, and perseverance. They can be developed as much by how we teach as by what we teach. That is, these skills have a great deal to do with instruction, not just content.

The International Center’s Rigor/Relevance Framework helps us understand the difference, yet interrelationship, between the more traditional skills and knowledge taught in schools and the application of those skills/knowledge.



In this schematic, Quadrants A and C are the skills and knowledge for accountability, and Quadrants B and D are the 21st century skills. The former can be tested by state tests, the latter cannot. Therefore, how should we define student performance? A and C or B and D? **High performing schools recognize all four quadrants as important.**



To help define student performance, we recommend using the four dimensions of the Learning Criteria, developed by the International Center based on

- **Core Academic Learning** - indicators of the school's fundamental academic strengths as measured by state tests, other assessment results, graduation requirements, and others.
- **Stretch Learning** - the degree to which all students are challenged to attempt rigorous coursework, push themselves to take specialized courses, and undertake interdisciplinary projects, for example.
- **Learner Engagement** - a critical aspect of the learning process that results from connectedness, seeing value in learning, feeling safe and cared about, and being actively and purposefully part of a school community. One way to begin measuring this dimension is by surveying students as to their sense of satisfaction, belonging, security, and accomplishment.
- **Personal Skill Development** - encompasses positive character traits, good work habits, and social, service, and leadership skills that not only enhance learning, but also extend to the world beyond school.

How Do You Measure Student Performance?

We recommend using data indicators such as the following:

1. Core Academic Learning — K-8 Sample Data Indicators

- Percentage of students meeting proficiency level of state testing requirements
- Achievement levels on standardized tests/assessments other than state exams, e.g., Lexile, DRA's (Developmental Reading Assessment), STAR, Scholastic Reading Inventory
- Percentage of performance-based assessments aligned with state and district standards used in reading, math, writing, and science (portfolio development, student-led conferencing, etc.)
- Percentage of ESL/LEP learners who meet district and state testing or assessment standards

Core Academic Learning — 9-12 Sample Data Indicators

- Percentage of students meeting proficiency level on state tests
- Average scores on ACT/SAT/PSAT
- Achievement levels on standardized tests other than state exams
- Percentage of students requiring English/math remediation in college

2. Stretch Learning — K-8 Sample Data Indicators

- Students making more than one year's growth in literacy
- Amount of interdisciplinary work and projects (problem-based learning)
- Student participation in enrichment courses (music, art, physical education, etc.)
- Completion of three or more years of foreign language before grade 6

Stretch Learning — 9-12 Sample Data Indicators

- Interdisciplinary work and projects (e.g., senior exhibition)
- Average number of college credits earned by graduation (dual enrollment)
- Percent of students completing career majors or career/technical education programs
- Achievement of specialized certificates (e.g., Microsoft, Cisco Academy)

3. Learner Engagement — K-8 Sample Data Indicators

- Student satisfaction surveys
- Student risk behaviors (asset survey)
- Surveys on degree to which teachers know their students

Learner Engagement — 9-12 Sample Data Indicators

- Student satisfaction surveys
- Student risk behaviors (asset survey)
- Dropout rate
- Attendance rate

4. Personal Skill Development — K-8 Sample Data Indicators

- Students holding leadership position in clubs, classrooms, school, sports, etc.

- Assessment of personal skills, such as time management, planning/organizing work, working as a member of a team, conflict resolution
- Follow-up survey of middle school students on development of personal skills

Personal Skill Development —9-12 Sample Data Indicators

- Participation or hours in service learning
- Students holding leadership positions in clubs or sports
- Assessment of skills in time management, organizing work, leadership/followership, working as a member of a team, conflict resolution
- Follow-up survey of graduates on development of personal skills

What Is the Cost of Improved Student Performance and How Is It Measured?

To determine overall cost, we recommend using per pupil expenditure. For individual initiatives, use the cost delineated in the district/school budget or the actual expenses invoiced. When such figures are not an accurate reflection of the cost, the district business office should calculate the actual cost of the initiative.

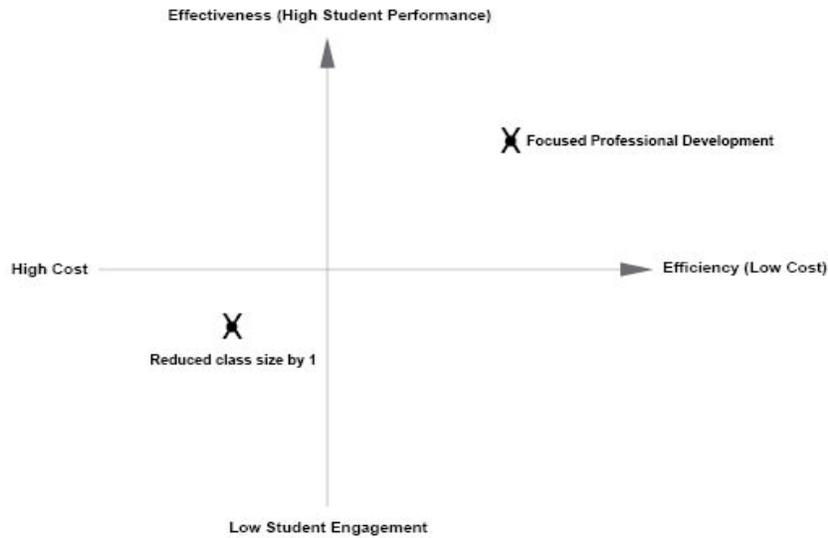
The following is an overly simplistic example of how to use the E/E Framework. If a district believed that reducing class size from 25 to 24 in a school would improve student performance, the cost could be determined by taking the teaching staff payroll and adding 4% to it (going from a class size of 25 to 24 would require a 4% increase in teachers). Assuming there are no facility or other implications to this initiative, the increase in cost is 4% of the instructional payroll plus benefits figure.

If teachers' salaries and benefits represent about 80% of the total budget in a district, $80\% \times 4\% = 3.2\%$, the actual cost of this initiative is 3.2 % of the total budget.

Compare that figure to the impact of, for example, a high quality professional development program for teachers focused on strategies to improve instruction. The cost of such a program would generally be less than 1% of the school budget, depending on school size. Moreover, our work with successful schools has shown that the laser-like professional development program would probably improve student performance substantially more than the reduction of one student per class.

This would be charted on the E/E Framework as follows:

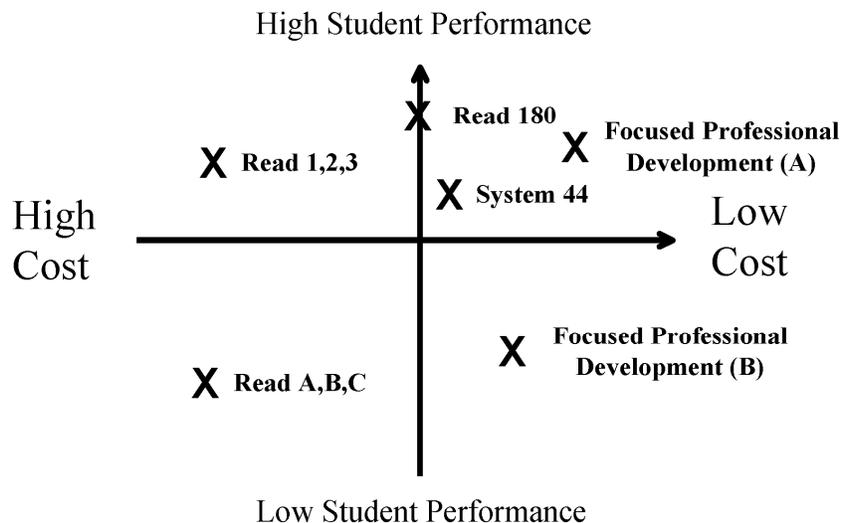
Efficiency and Effectiveness Framework



Data indicators for the four dimensions of the Learning Criteria (Core Academic, Stretch, Learner Engagement, Personal Skill Development) will enable schools/districts to evaluate the effectiveness and efficiency of a wide array of initiatives. Separate E/E Frameworks can be used for each initiative to be considered, but the ultimate power of the framework is in laying all of the initiatives together on one chart. Caution must be exercised, however, because this is a framework, not an index. Placement of an initiative on the framework is somewhat subjective, however, the framework provides powerful information to discuss in determining the direction a school/district should undertake.

An example of multiple initiatives plotted on the same chart follows.

Efficiency and Effectiveness Framework Instruction



Types of Decisions

The E/E Framework can be used to guide a wide variety of decisions in a school/district, as listed below.

1. Instruction
 - a. Types of professional development to provide to staff
 - b. Instructional technology (e.g., *READ 180*, System 44, I Can Learn)
 - c. Instructional materials (e.g., textbooks, student handbooks, online, and computer-based learning tools).
2. Organization of Students
 - a. Class size
 - b. Looping
 - c. Small learning communities
3. Time-related Issues
 - a. Block scheduling
 - b. Extended school day/year
 - c. Four-day school week

Once administrators, teachers, and board of education become familiar with the E/E Framework, it provides an efficient, timely, and more objective way to discuss important decisions about improving student performance and the prudent use of resources.

The E/E Framework also provides the basis for a powerful information system that brings instruction (student performance) and financial considerations into a coordinated system to create a more efficient and effective school system. Data collected from many schools can then help guide important policy decisions based on improving student performance rather than on existing rules, regulations, certification, contracts, and traditions.