

The Unequal Opportunity to Learn in California's Schools

Crafting Standards to Track Quality



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Children's Unequal Opportunity to Learn— Crafting Standards to Track School Quality

California policymakers have pursued various strategies for raising student achievement over the past half-century. The state's schools now advance demanding curricular standards which are among the most rigorous in the nation. These are in the form of *content* and *performance* standards. In turn, these standards inform where Sacramento sets the bar that defines student proficiency in core subjects.

But how do we know that all students benefit from a sufficient opportunity to learn and to become proficient in core subjects? In California we have weak mechanisms to ensure that all students have access to the materials, high levels of teacher quality, and other resources necessary to meet the rigorous standards.

This paper, stemming from a PACE seminar, examines the idea of crafting *opportunity to learn (OTL) standards*—how the state might collect and analyze indicators of school quality that are predictive of student achievement. The idea is not new. Such standards were put forward by Congress over a decade ago. However, questions remain regarding which quality indicators can be feasibly monitored and which are empirically related to achievement gains. Developing, implementing, and monitoring such a system would be challenging. But, as the PACE seminar participants discussed, a well-designed OTL system would provide a tool in helping parents, the public, and policymakers know whether students are receiving the resources they need to succeed.

Recent events highlight the importance of better understanding students' opportunity to learn:

- After several years of rising test scores, student performance has begun to level off in many grade levels. The reading scores of California students, as measured by the National Assessment of Educational Progress, have reached a plateau. Moreover, achievement gaps among different groups of students have changed little over the past seven years.
- In 2004, Governor Schwarzenegger settled *Williams v. State of California* and agreed that the state is responsible for meeting minimal quality standards, fixing resource shortfalls, and, in particular, boosting teacher quality in low-performing schools.
- A growing number of analysts emphasize that California has a high-standards, high-stakes system of accountability built upon an inadequate school finance structure. Yet taxpayers may be unwilling to spend more on public education without clear indications that school quality is improving.

When the standards movement was first conceptualized at the federal level it included content, performance, and OTL standards. California has implemented the first two, but not the third. We do not know if students' opportunity to learn is equitably distributed across classrooms, schools, and districts.

The analysis that follows offers a brief history of the OTL concept, and then sketches three distinct ways in which this notion can be defined and operationalized. Some scholars argue that easily-monitored indicators are most desirable, such as the share of teachers in a school or district who are not fully credentialed. Others argue that we must use classroom-level data to observe how curricula and pedagogies are delivered before we will truly observe children's opportunity to learn.

This paper is based on presentations at the PACE conference made by four leading thinkers in this field: Gary Blasi, Jeannie Oakes, Andrew Porter, and Brian Rowan. The aim of this report is to stimulate discussion of the utility of OTL standards as a possible element of the state's accountability system.

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Overview—Tracking Students' Opportunity to Learn

California has established curricular standards that are among the most rigorous in the nation. These learning objectives, specified at each grade level, have received high marks from various groups.¹ These content and performance standards represent what all students must learn and all teachers must teach. The state has also created an accountability system for student achievement that includes the high stakes California High School Exit Exam (CAHSEE), which students must pass to receive a diploma. But California has no opportunity to learn (OTL) standards to track whether the quality of schools and classrooms is adequate overall, and whether the resources needed to facilitate student learning are distributed equitably among different districts and schools.

Persisting Inequalities in School Quality

We know that many of our schools have inadequate resources. California still ranks about 30th in the nation when it comes to per-pupil spending, even after taking into account recent progress in Sacramento on the finance front. Fewer than 5% of the state's children attend school in a district that spends above the national average. A recent study by the RAND Corporation points out that California is the 13th richest state in the union in terms of per capita income, but taxes its residents at a much lower rate compared with other states, to support public schools.²

California's levels of student proficiency in reading and mathematics—despite our ambitious expectations—remain at lower levels than other states, including those with similar demographics. RAND analysts and others argue that a large number of California schools exhibit factors that are indicative of low quality, and that these factors erode students' motivation and performance. Such indicators include a higher percentage of uncredentialed teachers, high teacher turnover, shortages of basic learning materials, and classroom facilities that need repair. The RAND analysis detailed how:

- Schools with the highest proportion of underrepresented minorities are 11 times more likely to have at least 20% of their teachers under credentialed, and over 3 times as likely to report that teacher turnover is a serious problem.
- 54% of the science teachers surveyed stated that they do not have enough materials and equipment to do lab science work.
- 50% of teachers surveyed who teach social sciences reported that they do not have enough atlases, maps, and reference materials.
- 32% of teachers surveyed stated that there are not enough textbooks for each student to take one home.

Stanford legal scholar William Koski emphasizes how California's high-standards, high-stakes accountability system typically assumes that a rich mix of teachers and instructional materials is present at local schools. He writes that it's "striking (how) California requires that children have access to modern technology, including computers, software, and the Internet... no less

important, is the extent to which the state’s content standards assume that all children have access to quality facilities and instructional materials, ranging from laboratory equipment and sophisticated measuring instruments to well-stocked libraries and media centers.”³

In recent years, PACE researchers have studied the elements and effectiveness of California’s accountability policies, aiming to identify what policies are working and what’s missing from state reform efforts. In 2003, PACE hosted a day-long conference to explore the idea of OTL standards—to study its policy history and differing approaches to the definition and measurement of OTL indicators. This working paper offers an overview of these deliberations. Presentations of four leading thinkers in the field—Gary Blasi, Jeannie Oakes, Andrew Porter, and Brian Rowan—appear on the PACE website (pace.berkeley.edu/pace_otl_frames_and_indicators). They offer quite differing conceptions of how an OTL monitoring system could feasibly be built. These researchers disagree on the indicators of school quality that are empirically predictive of higher achievement. And they offer contrasting views of whether such indicators should be embedded in classrooms, utilized school-wide, or used at the district level.

Balancing Performance with OTL Standards?

The topic of OTL has long been important, but it is particularly relevant given the increased focus on accountability in California and the nation. After several years of achievement gains in the elementary grades, growth curves are flattening out. California students have made little progress since 2002, based on results from the National Assessment of Educational Progress (NAEP).⁴ A recent analysis by UCLA’s Center for Research on Evaluation, Standards, and Student Testing warned that the state’s current accountability system, in the absence of adjustments, will likely show diminishing signs in student achievement.⁵

When Governor Schwarzenegger settled the *Williams v. State of California* case in 2004, he agreed that the state is responsible for meeting minimal quality standards when it comes to the cleanliness of school facilities, the provision of textbooks, and the quality of teachers.⁶ And as policymakers return to the question of whether schools are adequately financed, some method for tracking progress and disparities in school quality may be considered.

This paper addresses several key questions related to the design and feasibility of OTL standards:

- How have OTL standards been created in other states or within schools?
- Should OTL indicators signal levels of school inputs, teaching practices, and/or achievement outcomes? Which inputs and practices are empirically predictive of student performance?
- Which public authorities should decide on valid OTL indicators, and who should monitor districts or schools?
- How would OTL indicators motivate positive organizational change, and greater equity in school quality, over time?

The paper then lays out the history and policy landscape of OTL standards. Additional details and research findings appear in the four presentations, available on the web.

History and Context: The Idea of Opportunity to Learn Standards

In 1989 the Charlottesville Education Summit, attended by 49 governors and hosted by President George H. W. Bush, lent force to the idea that states should set rigorous standards and hold schools accountable for performance. The movement to create OTL standards was prominent in subsequent congressional discussions, as federal policymakers advanced the notion that states should more clearly delineate curricular standards and then align teaching and testing to these new learning objectives.⁷

“The logic behind opportunity-to-learn standards was that neither schools nor students should be held responsible for learning if schools did not have the resources to teach their students the material that would be assessed,” wrote senior congressional staff member Christopher Cross.⁸ The idea also stemmed from research showing that writing curricular standards in a state capital did not ensure that government would provide necessary resources, or that the official curricula would be implemented evenly across classrooms.

Long before the systemic reform thrust of the 1990s, scholars and policymakers had put forward ideas on how to equalize students’ OTL. In 1963, for example, learning theorist John Carroll proposed that the most important factor for achieving OTL equity was to increase the amount of instructional time that students experienced in school, to ensure that those least well prepared could master curricular material and achieve the standard set by a school district or state.⁹ In 1967, Torsten Husen emphasized that what schools expected children to learn was often disconnected from the standardized tests that were becoming increasingly popular in the United States and Europe.¹⁰

Judicial thinking has also shaped policy interest in OTL standards. Since the 1954 Supreme Court decision in *Brown v. Board of Education*, the country has been guided by the principle that separate educational facilities are inherently unequal. Title VI of the Civil Rights Act, enacted in 1964, prohibited schools that receive federal funds from implementing policies that “treat students differently based on their race, color, or national origin or that result in disparate impacts on students.” This continuing thread of judicial logic argues that all students should have access to education of equal quality, and that a system of uniform indicators might advance more equal levels of quality and student achievement across various groups.

The federal Civil Rights Act also directed the executive branch to investigate presumed disparities in school facilities and other quality factors among schools serving primarily white students and those attended mainly by black students. The results of this investigation became known as the *Coleman Report*, issued in 1966.¹¹ Sociologist James Coleman’s team detailed gross inequities in the quality of schools attended mainly by black children. The surprise was that the facets of quality measured were not especially predictive of student achievement. The Coleman Report stimulated four decades of research on whether money matters when it comes to school finance, and which investments in quality are most likely to benefit children’s learning.¹²

In the 1980s, a RAND Corporation research team set about devising a system of indicators that could credibly monitor the quality and institutional health of public schools. The RAND system attempted to gauge OTL using indicators related to the qualifications of teachers, the rigor of state or district curricula, and overall spending levels.¹³

This work stimulated renewed interest in OTL standards among federal policymakers. Toward the end of the George H. W. Bush Administration, the president signed the federal *Goals 2000 Educate America Act* and defined OTL standards as “the criteria for, and the basis of, assessing the sufficiency or quality of the resources, practices, and conditions necessary at each level of the education system (schools, local educational agencies, and states) to provide all students with an opportunity to learn the material in voluntary national content standards or state content standards.”

However, the idea of OTL standards has proven controversial both in Washington and in the handful of states that have explored OTL indicators. For some, OTL standards have the potential to remedy disparities in school quality.¹⁴ For others, they represent another instance of centralized control over school governance.¹⁵ Support to move forward waned in the Congress, and budgetary support was eliminated by 1996.

Rising interest in how to define an adequate level of school finance, as evidenced recently by several state cases, has been one of the factors rekindling interest in OTL standards.¹⁶ Under earlier conceptions of equity, as seen in Supreme Court cases like *San Antonio School District v. Rodriguez*,¹⁷ and district court cases like *Serrano v. Priest*,¹⁸ the most salient benchmark was equal levels of per-pupil spending among school districts. One assumption was that equal spending would ensure equal levels of quality among schools situated in diverse communities. The second assumption was that equal spending would move children, regardless of family income and education levels, toward more equal achievement levels. Yet sharp disparities persist in key elements of school quality between districts with comparable spending levels, and between schools within districts. In California this includes the disproportionate concentration of uncredentialed teachers in schools that serve low-income students, even within districts that spend comparatively more per pupil than other districts.¹⁹

Devising Credible Indicators of Students' Opportunity to Learn

Much of the research in this area has focused on three approaches to devising OTL indicators. The first deals with the content of instruction, including the degree and depth of coverage of academic material for different groups of students. A second area is the pedagogical process itself, including how classroom work is organized and teachers' varying skill levels. A third area incorporates instructional resources that facilitate the delivery of instruction, including curricular materials and technology, safe and secure school facilities, and use of instructional time. These categories overlap to some extent and receive differing weight from analysts in their attempt to craft valid OTL indicators.

Two issues are key to the design of specific indicators. First, which OTL indicators reliably predict student achievement? Second, at what level of the educational system should indicators be measured. For instance, should district-level averages be reported for teacher qualifications, class size, or growth in student achievement? Or, should indicators be collected at the school level or even the classroom level? One of the presenters at PACE’s OTL conference, Brian Rowan, argued that only measures of teachers’ capacity to deliver the intended curriculum hold predictive validity, the capacity to predict student achievement over time. If we look more broadly than the classroom level, Rowan claims, general indicators may signal “quality” but fail to explain achievement differences among classrooms.

No Shortage of Possible Indicators

Scholars and policy analysts have developed many indicators at the school and classroom levels. These indicators can be divided into several categories, including:²⁰

- the instructional goals and objectives held by teachers
- the kinds of activities that take place in classrooms
- use of instructional techniques that promote the learning of English
- effective involvement of parents
- opportunities for professional development.

The academic content provided and presented to students—what some have called the implemented curriculum—is one element of school-level OTL indicators. The expectations and rigor of courses are related aspects that might be incorporated into OTL standards.²¹ Some researchers argue that tracking student into honors versus non-honors at the high school level helps to determine achievement levels. Curricular track or the availability of Advanced Placement courses could serve as OTL indicators.²²

The empirical literature is quite mixed on whether such indicators of quality are predictive of improved student performance. For example, certain instructional materials and facilities—including variable supplies of books, laboratory space, libraries, computers, and clean facilities—are not consistently predictive of children’s achievement levels, except perhaps when they fall below minimal thresholds. While some researchers have found that access to materials and appropriate school facilities are linked to students’ achievement levels, other studies cannot replicate these effects.²³ These variable research findings present policymakers with a quandary as they search for measurable OTL indicators that are most likely to facilitate student achievement.

Descriptive data shows that large disparities exist in basic instructional resources and facilities among California districts, and across schools within districts, often reflecting the wealth or poverty of surrounding communities. UCLA’s Jeannie Oakes and her colleagues detail how the number and age of textbooks, curricular materials, instructional equipment, and technology vary greatly among schools.²⁴ Teachers are far more likely to face acute shortages of these materials when they teach in poorer communities.

Differing Levels of Organizational Indicators

Designers of OTL standards disagree over the organizational level at which indicators should be specified, in part due to concerns about the cost and practicality of a sustainable indicators system. OTL indicators might be collected at the state level, or might perhaps draw from district, school, and even classroom-level indices of quality.

The OTL field encompasses two basic lines of thinking. One camp—advanced by two of PACE’s conference presenters, Andrew Porter and Brian Rowan—emphasizes that key features of classroom instruction must be measured. They argue that OTL indicators drawn from levels above the classroom will merely be proxies of quality that are unlikely to be correlated with student achievement levels.²⁵ They suggest that student and teacher surveys, teacher interviews, classroom observation, curricula covered, and teacher logs are better ways to understand the effects of teachers on students’ OTL.

Porter and his colleagues focus on assessing the curricula delivered in the classroom. They have developed tools to measure the content of instruction and related materials, and the alignment between the two. They suggest that these indicators “can be used to describe the nature of educational opportunity that a school provides, to evaluate school reform efforts, and to provide reasons why school achievement levels are not finely enough tuned to indicate students’ opportunity to learn.”²⁶

Other scholars advocate for assessing topics and content emphasized in the classroom. These data can be gathered through information reported by homeroom teachers and through analyses of the curricular material covered in the classroom. In addition, direct classroom observations 1) determine the quality of instruction, 2) assess content exposure, and 3) assess instructional coherence (e.g., the quality of interaction between the teacher and students).

Rowan and his colleagues use measures such as teacher logs to assess instructional effects. They found that many small instructional effects combine to produce relatively large classroom-to-classroom differences in instructional outcomes. A strength of this classroom perspective is the ability to understand the work of individual teachers. Weaknesses include a lack of student data connected to each teacher’s instruction, and the high cost of conducting this type of classroom research.

Rowan cautions state policymakers to think carefully about what is measured in the classroom. Collecting data from teacher logs, for example, can yield important information related to student performance. But this exercise is costly and requires careful management. On the other hand, a simple technology called third-party observations is available, based on his research and that of others.²⁷ Rowan views these third-party observations as more reliable than teachers’ self-reported practices or their coverage of curricular content, and has detailed the consistency between observers’ and teachers’ reports of curriculum coverage. Observational gauges require a great deal of observer training and, consequently, are expensive and time-consuming.²⁸

Porter adds that if the goal is to ensure more equal learning opportunities, then “OTL would need to be measured for each academic subject assessed; described for every different type of student the school served; be based on all courses, all sections, and all teachers; and reflect what happens most of the time (as opposed to one or two days when an observer is present). The information on OTL would need to be objective and replicable. In that sense, self-report from teachers and schools would not be satisfactory for accountability purposes.”²⁹

The second OTL camp, represented by Jeannie Oakes, argues that OTL indicators stemming from school and classroom-related resources can be devised and measured over time, and that such measures are more feasible than the “inside-the-classroom” measures which are prohibitively complicated and costly to administer. One example of an indicator supported by this camp involves tracking students course-taking and stratification within schools.

Oakes also argues for other indicators that are reasonable proxies for the opportunity that children have to learn the required material among schools and districts. These include the levels of teacher qualification and experience, changes in instructional time, and intensive support efforts, such as Saturday or summer tutorial programs.

Proponents of this approach emphasize the importance of establishing a minimal standard for the quality of facilities and for instructional resources. This is consistent with the financing approaches taken in the *Williams v. State of California* settlement. Post-*Williams*, a cadre of school inspectors now travel a circuit of schools, checking on the availability of textbooks and the state of repair of facilities, such as broken windows or the cleanliness of bathrooms. They also note additional indicators of a school’s or district’s resource capacity to bring all students up to the state proficiency standard.

The contemporary systemic reform movement coalesced in reaction to the earlier policy emphasis on buying additional school inputs, and investing in particular quality improvements, such as pull-out reading programs and class-size reduction. In contrast, proponents of standards-based accountability emphasize clear learning objectives and sanctions for schools that do not meet certain levels of achievement. In a sense, Oakes and fellow advocates of system-level OTL indicators suggest that a correction is required in current policy—a better balance between rules and resources. The effectiveness of this approach remains unproven, however, as the predictive validity of some of these resource indicators has yet to be established.

This camp also stresses the importance of adding OTL indicators to the current accountability system. Oakes and others stress that the exclusive focus on student test score performance is too limited. Students in poor and non-English speaking communities are not performing close to proficiency levels. OTL indicators could identify those districts and schools within districts that suffer from weak resources.

OTL Policy Options for California

A major question is how OTL standards might be useful in improving California's standards-based accountability system, or become an element of school finance reform? California's per-pupil spending has climbed significantly in recent years, but the state has no monitoring system for understanding if and how quality is improving. Nor does California have the capacity to track quality gains or decline among the state's diverse communities. As test scores begin to level off, it is in the state's interest to understand how billions of new dollars are being spent and where the public schools may or may not be improving.

Should California attempt to create an effective and sustainable system of OTL indicators, it will need to address the following policy questions:

- How might OTL indicators strengthen California's accountability system?
- Would OTL indicators help the state address equal protection and education rights for all students?
- How could OTL indicators aid local educators in addressing the learning needs of English Learners?
- Could the use of OTL indicators help to reveal gaps in the effectiveness of California's teachers?

Accountability Without Indicators of School Quality

Since 1999, California has made progress in building a coherent accountability system. It has almost achieved its objective of a system with aligned standards, assessments, textbooks, and teacher preparation curricula. Currently, California has the Standardized Testing and Reporting system (STAR), comprised of 1) the California Standards Tests (CSTs, for grades K–11), an academic performance index to measure each school based on its changes from year to year; 2) an intervention program for underperforming schools, called High Priority Schools; 3) a high school exit exam that all students must pass to graduate from high school; and 4) a nationally normed test, the California Achievement Test (CAT6).

The CSTs are based on California's content standards. Beginning with the class of 2006, California's high school students were required to pass the CAHSEE in order to graduate from high school. The English Language Arts section of the exit exam tests students through the 10th grade standards, and the mathematics section goes through Algebra I. Other tests that the state requires of some students include the California Achievement Tests, the California Alternative Performance Assessment, and the California English Language Development Test. Although there are some exceptions, almost every school is assigned an Academic Performance Index (API) score based on its students' test scores. Schools are ranked into deciles, compared to the 100 schools that are most like them, and given target API scores for improvement.³⁰

Despite this progress in building a more tightly aligned, standards-based system, just 21% of California’s fourth graders are proficient readers, according to the NAEP. This proportion inched upward by a mere two points between 1992 and 2005. According to the California Department of Education’s definition of “proficient,” almost half of all fourth graders meet this state standard. Progress is more impressive among California fourth graders in meeting both state and federal proficiency standards in mathematics.³¹

OTL Standards and Finance Reform

California’s school finance system continues to regulate the level and mix of school inputs (e.g., funds for certain programs, such as extra reading initiatives, to reduce class sizes, or to aid children with language barriers or special needs). But the state’s focus on monitoring performance outcomes in the form of student test scores remains disconnected from the finance system’s focus on inputs. As policy scholar Michael Kirst writes, “The outcome-oriented accountability system has never been aligned with the school finance system, which relies on specified inputs, processes, and categorical programs that control about one-third of local budgets. California regulates both *what* schools should produce and *how* they should do it... The finance system is an exceedingly complex historical accretion that provides neither equity nor adequacy. It is not based on the necessary funds to enable all pupils to meet the state’s high academic standards.”³²

The *Williams* case, settled between Governor Schwarzenegger and the American Civil Liberties Union (ACLU) in 2004, brought into focus the importance of unambiguous indicators when attempting to finance greater equity among schools in the state’s diverse communities. The settlement contained these basic provisions:³³

- Allocation of \$138 million in the 2004–2005 budget for instructional materials to the lowest-performing schools (deciles 1 and 2) with the requirement that textbooks be distributed during the first four weeks of school.
- Allocation of \$50 million to assess facilities and make necessary repairs in low-performing schools. Districts are required to report on the adequacy of their facilities, and there is greater oversight authority for county education offices.
- Authorization for principals in low-performing schools to have first pick of teachers in the district’s pool of new or transferring teachers.
- Closer state monitoring of districts’ reliance on under-qualified teachers.

Williams also raised objections to “Concept 6 schools” that offer instruction for less than 180 days each year. The settlement required the California Department of Education to devise a plan for financing a full school year in these institutions. Finally, the Commission on Teacher Credentialing was required to push for more stringent controls over teachers who are issued emergency credentials—a provision that remains difficult to implement, given the shortage of fully qualified teachers in many urban schools.³⁴

Most relevant to this discussion, the *Williams* settlement included an agreement to adopt certain quality standards for all schools. The legal strategy was to establish indicators that defined a quality floor and, for the first time, certain indicators were put in place and attached to the principle that the state must provide these minimal ingredients of a quality education.³⁵

English Learners

About one-quarter or 1.6 million of California’s public school children are English Learners (EL). As researchers Gándara, Maxwell-Jolly, and Driscoll conclude in their study of over 5,000 teachers of ELs in California classrooms, “Addressing the education needs of this population of students is critical to California’s future, not only because of their increasing numbers, but because the majority of these students are not thriving in California schools,” particularly in comparison to their English-fluent peers.³⁶

The data support their claim. Among 5th grade ELs, only 13% scored as advanced or proficient on the English Language Arts section of the CSTs compared to 54% of English-fluent students. A significant gap is seen in CST mathematics scores as well, with 24% of ELs scoring advanced or proficient, and more than twice that, or 57%, of English-fluent students reaching these levels. The gap persists for secondary EL students. More than one-third (37%) of 10th grade English-fluent students score as advanced or proficient on the CST English language arts section compared to 4% of ELs. And while 22% of English-fluent students who take Algebra I reach the level of proficient or advanced on the CST, only 5% of ELs do. The CAHSEE reflects a similar gap. In 2005–06, 73% of English-fluent students but only 35% of EL students passed the English language arts section of the test, and 66% of English-fluent students passed the math section, compared to 35% of ELs.³⁷

The implications for OTL with regard to ELs are clear. ELs require special teacher preparation, materials, assessments, and instructional practices. Therefore any OTL design must take this into account and include EL components.³⁸

Policy Options—Creating Sustainable and Valid OTL Indicators

Other states have crafted basic indicators of school quality that government must monitor and address over time. Wyoming’s state supreme court held that a quality education must include small schools, more manageable class sizes, low student-to-computer ratios, substantive curricula, ample provisions for at-risk students, and timely and meaningful assessments. The Idaho supreme court, instead of prescribing how to create goals and quality standards, codified the state’s standards into the constitution, thus “making their effective implementation the hallmark of constitutional compliance.”³⁹ In such cases, the courts or legislatures are crafting particular indicators of school quality or the OTL gauges that are useful to parents and policymakers and tracked over time.

Within California’s ever-evolving policy context—marked recently by an aggressive accountability regime and dissatisfaction with the current finance system—how might a sustainable system of OTL indicators be devised? This question runs throughout the short history of this discussion, and dominated many of the deliberations at the PACE conference.

A number of core issues must be addressed in the design of a practical OTL system, one that focuses on equalizing the opportunity for all learners to benefit from quality teaching and engaging learning experiences:

- At what level(s) of the school system do the most consequential quality factors operate, and which of these factors can be measured cost-effectively and tracked over time? These questions reflect the division in the OTL field between those who focus on classroom practice, and those who advance organizational indicators that are easier to measure but are more removed from the daily process of teaching and learning.
- Should OTL standards focus on establishing a floor of school quality, or include ingredients that are predictive of moving children toward proficient levels of achievement?
- Who should gather the necessary data to uphold OTL standards? The state has constructed a viable system for holding educators and children accountable. But who holds the state accountable if necessary resources and ingredients of school quality are not provided? Independent accrediting agencies offer one model for monitoring quality indicators; however, these agencies have often proven to be ineffective. Should OTL standards be mandated by the state or created as a voluntary system?
- How would a system of OTL indicators encourage or discourage certain learning aims for California's students? As Porter emphasizes, "OTL standards should be based on what the desired end results are for students, and then work backwards from there regarding the resources that are required."⁴⁰ The original version of systemic reform, advanced by scholars and policy activists in the late 1980s, called for state standards that would encourage complex, demanding pedagogy from a well-trained teaching force. If certain quality indicators were put forward—from smaller class sizes, to more counselors, to greater reliance on textbooks—would they reflect demanding learning objectives for all students?

If California policymakers decide to address the issue of OTL, they must wrangle with these questions. The participants at the forum agreed that, regardless of the way in which California implements OTL standards, it is time for the state to ensure that all students have the resources they need to meet the state's ambitious performance standards.

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Additional PACE research papers on federal and state-led school accountability appear below and on the web: pace.berkeley.edu.

- Tom Timar and colleagues (2006). *State Strategies To Improve Low-Performing Schools: California's High Priority School Grants Program*.
- Haleh Hatami (ed.) *Crucial Issues in California Education, 2006: Rekindling Reform*.
- Elisabeth Woody and colleagues (2006). *Snapshots of Reform: District Efforts to Raise Achievement across Diverse Communities in California*.
- Tom Timar (2004). *Categorical School Finance: Who Gains, Who Loses*. PACE working paper 04-2.
- Elisabeth Woody, Jennifer O'Day and colleagues (2004). *Assessing California's Accountability System: Successes, Challenges, and Opportunities for Improvement*.
- John Novak and Bruce Fuller (2003). *Penalizing Diverse Schools? Similar Test Scores, But Different Students, Bring Federal Sanctions*.



