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Raising the Bar on College and Career Readiness

A Framework for Incorporating Multiple Measures into the Academic Performance Index

SB 1458 (Steinberg) limited the proportion of the Academic Performance Index accounted for by pupil scores on the state's standards-based assessments and high school exit examination to no more than 60% of the total index score for secondary schools (beginning in 2016). It requires that the balance of the index include high school graduation rates, and authorizes it to also include "*valid, reliable, and stable measures of pupil preparedness for postsecondary education and career*." In making these changes, SB 1458 aspires to broaden the state's system of public school accountability, and align it more closely with public expectations and workforce needs

Challenges

There are several constraints within which the above aspirations must operate:

Fiscal. *"The API shall consist of a variety of indicators currently reported to the [California Department of Education]."* This is a statutory limitation, but also a practical one, because the collection and/or reporting of new data would impose a state-mandated – and state-reimbursable – cost on local districts.

Legal. By law, the API must focus on "*the academic performance of pupils*" rather than inputs or processes, and permit fair comparisons between schools and between districts.

Administrative. In order to avoid multiple years of discontinuity in API scores over time, indicator(s) of college and career readiness must be adopted quickly enough to be coincident with implementation of the new assessments aligned to the Common Core State Standards.

While these may seem insurmountable constraints, they can, with the proper framework in place, incentivize schools and districts to make use of data not currently reported to the state. Working within these constraints, it is also possible to stimulate innovation and learning through the development of varied models of college and career readiness.

Is SB 1458's Promise Confounded by Its Constraints?

While a number of college and career readiness indicators are reported to CALPADS, more robust indicators have emerged in the field; some widely collected, others not.

More robust indicators of college and career readiness that are not reported to CALPADS or universally collected, but are standardized and used by many schools and districts, could become modules in a College & Career component of the API that is built using CALPADS as its cross-cutting foundation.

Schools and districts which do not report enhanced voluntary data for more robust indicators could still achieve maximum API credit for College & Career Readiness using CALPADS course-sequence data, while districts collecting more sophisticated measures would not have to retrogress away from local accountability systems.

The framework which follows adopts the "multiple ways to succeed" approach that has been suggested by staff of the California Department of Education and endorsed conceptually by its advisory committee, as well as the department's *Guiding Principles for the API*, and then augments that approach in several ways.

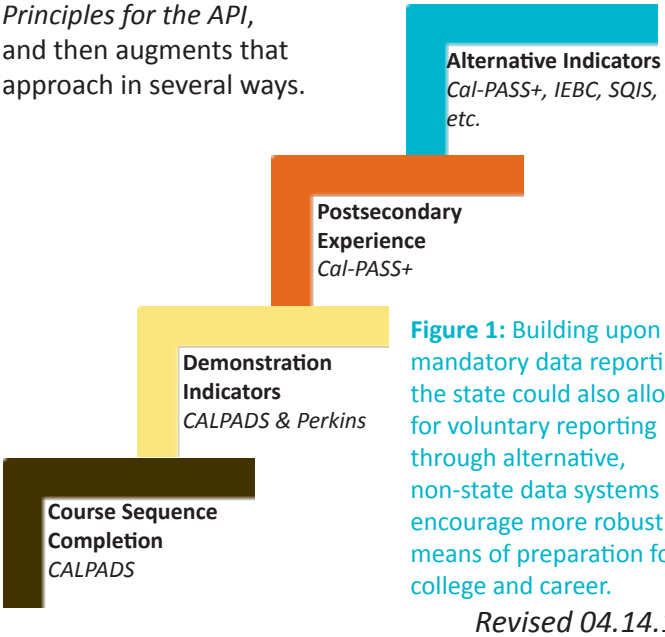

Figure 1: Building upon mandatory data reporting, the state could also allow for voluntary reporting through alternative, non-state data systems to encourage more robust means of preparation for college and career.

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The framework is intended to spur progress toward implementing the college and career readiness provisions of SB 1458 by describing how it might be possible to accomplish the aspiration within the constraints. It is not a specific proposal by the Linked Learning Alliance for the selection or valuation of specific indicators.

Key Principles and Objectives

The "And". Multiple measures must roll up into an indicator of *both* college *and* career readiness, not one or the other. This is a clear theme of state law and policy. This framework addresses the 'and' through the averaging of college indicators and career indicators, as well as through beginning to identify single 'integrated' indicators that reflect both college and career readiness.

Subsidiarity. A guiding tenet of recent changes to school funding and accountability has been the move towards greater local control, pursuant to the principle of subsidiarity. Schools and districts must respond to different local realities, including workforce needs and communnity demands. As such, they should have the flexibility to focus on those college and career outcomes which are of local relevance. This approach would see college and career indicators which can be chosen to align with Local Control and Accountabilty Plans. Local flexibility in determining which indicators are reported, and the option to include voluntary indicators, would spur innovation and increase learning about those indicators which are most relevant to improved student outcomes. Default reporting requirements could thus provide a baseline upon which voluntary options build.

Transparency and Relevance. Consistent with the prior point, indicators to be reported should be clear and meaningful to students, their families, their teachers, potential employers, and other community stakeholders. If these groups do not see the relevance of an indicator, it is hard to rally their support or engagement. This is especially vital for student motivation.

Program of Study. Completion of standards-aligned career pathways and university eligibility requirements is a coherent milestone that should not be atomized proportionately into component courses. The "sheepskin" effect of finishing a complete program of study is well-documented, both for university admissibility and persistence as well as for career success, with little value for being 9/10^{ths} college-admissible or 2/3^{rds} of a certified nursing assistant.

Student Performance > Student Participation. In addition to completion of course sequences, an accountability component should indicate the extent to which students demonstrate readiness for college and career. There are existing datasets to begin to accomplish this, and strong candidates for future inclusion.

Equivalent expectations. The top score for College & Career Ready should signify the same level of achievement as the top score on the standardized assessment and graduation rate components of the API. The highest level should indicate that a student has learned and demonstrated advanced skills and competencies relevant to college and career.

Open design and simultaneous implementation. College and career-ready indicators must be implemented coincident with addition of the graduation rate and the inclusion of the Common Core-aligned assessments to the API, in order to avoid multiple years of test data discontinuity. The structure of multiple measures for the indicator should be open, to encourage alignment with local accountability systems and to promote the development and diffusion of robust measures, which assuring stability, comprehensibility, and transparency.

Data Reporting Systems

CALPADS. California's K-12 data reporting system. Includes extensive course completion data.

Perkins. Key source of Career Technical Education reporting. Includes a variety of indicators relevant to career readiness.

Cal-PASS+. One of two key options for reporting data as part of the Career Pathways Trust. Enjoys near-universal participation in the state, and includes reporting by all three public postsecondary segments, as well as many private universities.

Institute for Evidence-Based Change (IEBC). Other key option for Career Pathways Trust reporting. Sixty-eight districts and county offices report data to IEBC, most doing so for the AB 790 Linked Learning Pilot Program.

School Quality Improvement System (SQIS). Accountability and continuous improvement system for districts participating in the ESEA waiver through the California Office to Reform Education (CORE). Data aggregation is performed by the Gardner Center at Stanford University.

Level 1: Course Sequence Completion

Student-level course completion data are reported in the CALPADS database (*Figure 2*). However, A-G completion is based on local judgment, and is known to be inaccurate as not all courses in these subjects are actually approved for A-G credit. Incorporating A-G completion into the API would likely increase positive reporting bias. Verification as a valid indicator could be achieved through procedures similar to those of the UC Transcript Evaluation Service.

Career Technical Education (CTE) Pathways, as sequenced programs of study, include discrete CTE courses that reflect incremental career preparation through technical skill development. CTE Pathway completion is used in at least half a dozen states as an option for reporting career readiness. To reflect both college and career readiness, indicators from each column would need to be averaged.

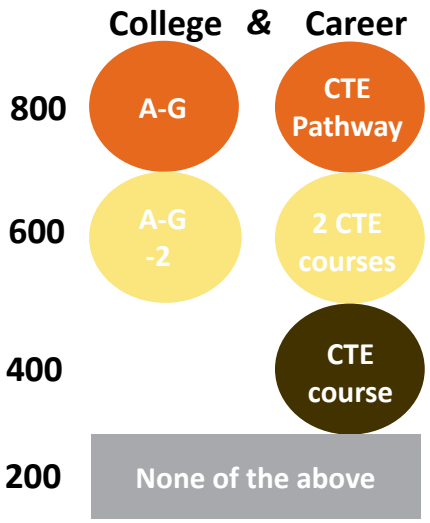

Figure 2: Default based upon course sequence completion.

Level 2: Demonstration of Experience or Competence

Building upon course sequence completion, data on student demonstration of readiness could augment the matrix. A variety of indicators which meet this criterion are currently reported in CALPADS or for Perkins funding (*Figure 3*). As with course sequences, some of this data is imperfect, and the career readiness measures do not currently cover a large majority of California high school students.

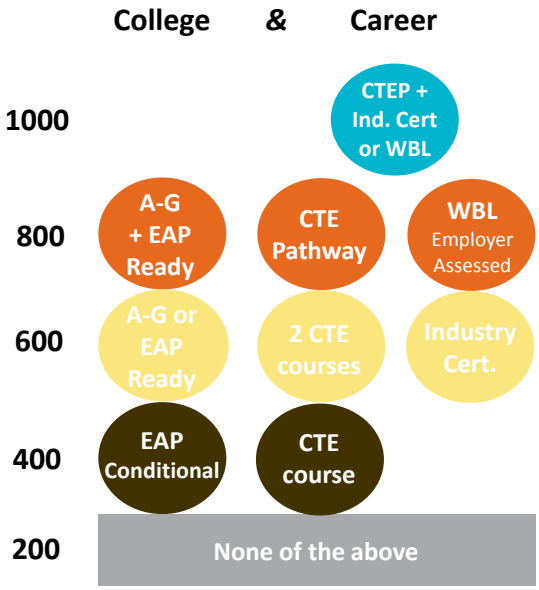

Figure 3: Default with course sequence and demonstration data.

Level 3: Postsecondary Experience

Succes in college-level coursework, as well as advanced standing upon college entry, can have a significant impact on postsecondary persistance and completion. Cal-PASS+ reporting includes dual enrollment data, which addresses the limitations of a unique emphasis on A-G completion or AP/IB courses (*Figure 4*). Also, Cal-PASS+ provides specific data on the degree or transfer applicability of courses.

While listed as a career-ready indicator, college-level CTE courses could also fulfill postsecondary credit targets for a college-ready indicator if the courses required college-level English or math as a pre-requisite. Comparable postsecondary indicators are used in almost half the country as a reporting option for state accountability purposes. In this case, they could serve as integrated measures reflected college and career, and would not require the averaging of two separate elements.

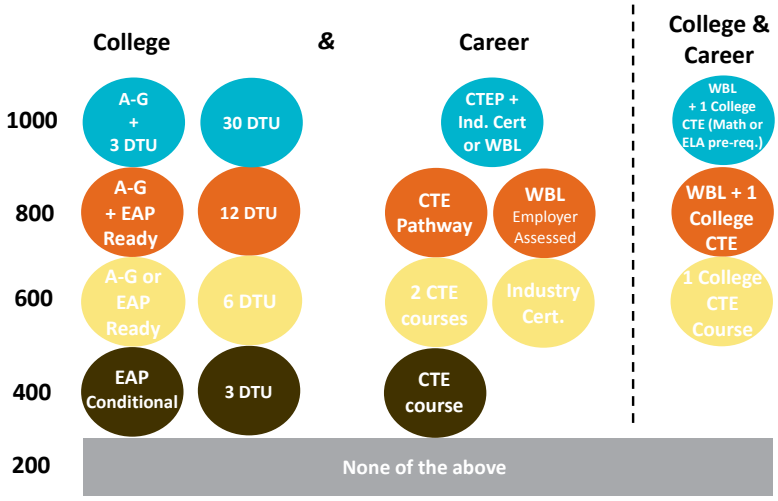

Figure 4: Default Framework with voluntary Cal-PASS+ data.

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Level 4: Alternative Standards to Drive Local Innovation and Accountability

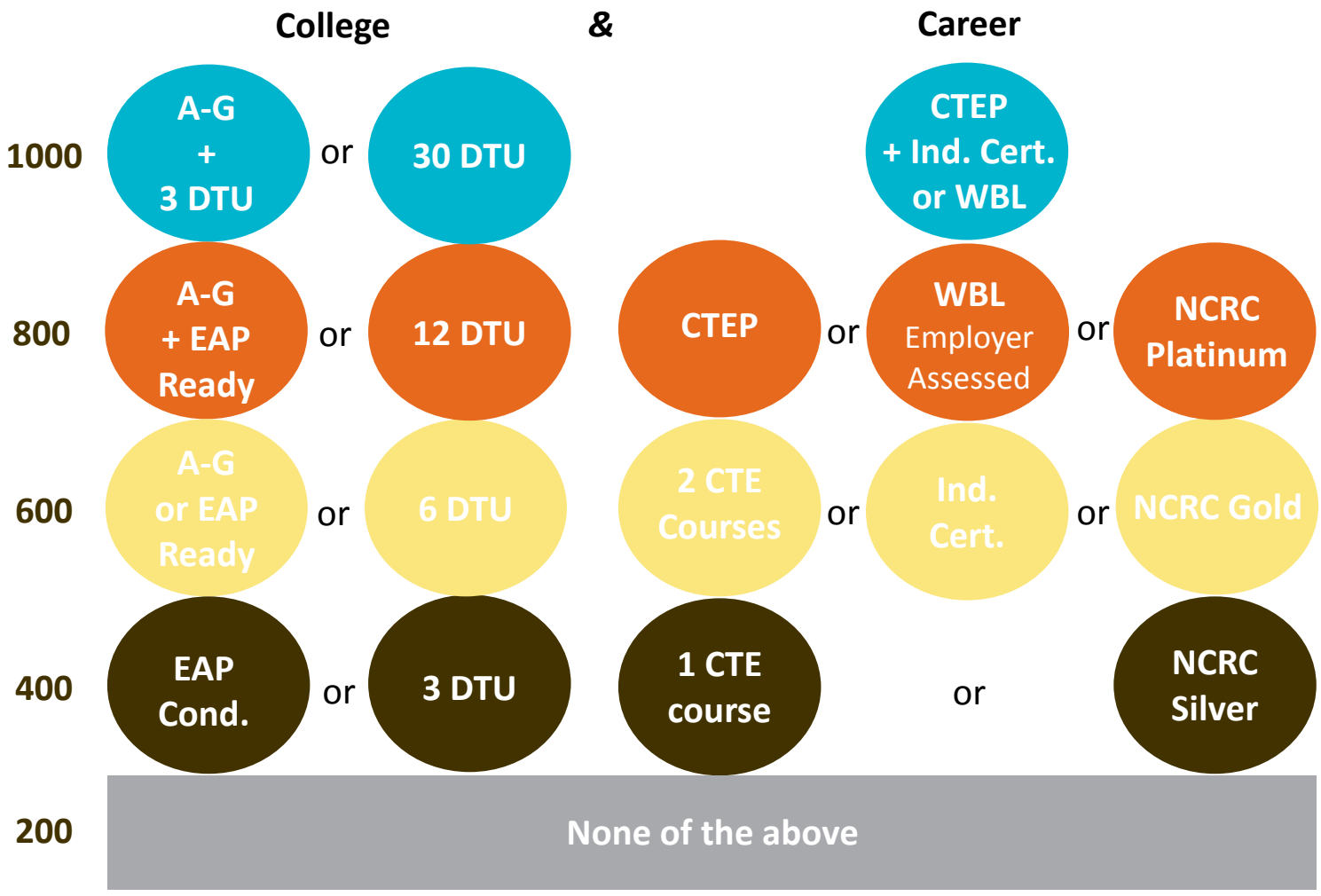
To the extent that they hold promise in reflecting the preparation of students for college and career success, based upon their alignment with research-driven outcome indicators, there is reason to allow for flexibility in the measures which schools and districts use to demonstrate the career and college readiness of their students.

While most indicators would be college or career only, and would thus need to be averaged, many of these could be designed to be integrated measures, combining both into a single indicator.

There are a number of standardized indicators currently in use across the state, which although not reported to the state, have been evaluated for their outcomes regarding college and career readiness (*Figure 5*):

California Office to Reform Education (CORE)
Districts participating in the CORE waiver from the Elementary and Secondary Education Act could elect to use their federal accountability system, wherein schools are expected to meet 90% on an index comprised of a variety of academic, socio-emotional, and culture/climate indicators, or show a certain level of improvement along the index within a set number of years (2% in two years, 4% in four years).

Career Pathways Trust
In additon, IEBC and Cal-PASS+ will be collaborating with districts receiving Career Pathways Trust funding to collect and report data on college and career outcomes. The scope of this data



Linked Learning Pathway Certification

ConnectEd, the National Academy Foundation, the College and Career Academy Support Network, the Education Trust-West, and the National Career Academy Coalition have developed and implemented a Linked Learning Pathway Certification which incorporates rigorous academics integrated with strong technical coursework and work-based learning.

National Academy Foundation Certification (NAF)

NAF and WestEd have developed a rigorous tool for assessment of student work-based learning that involves supervisors.

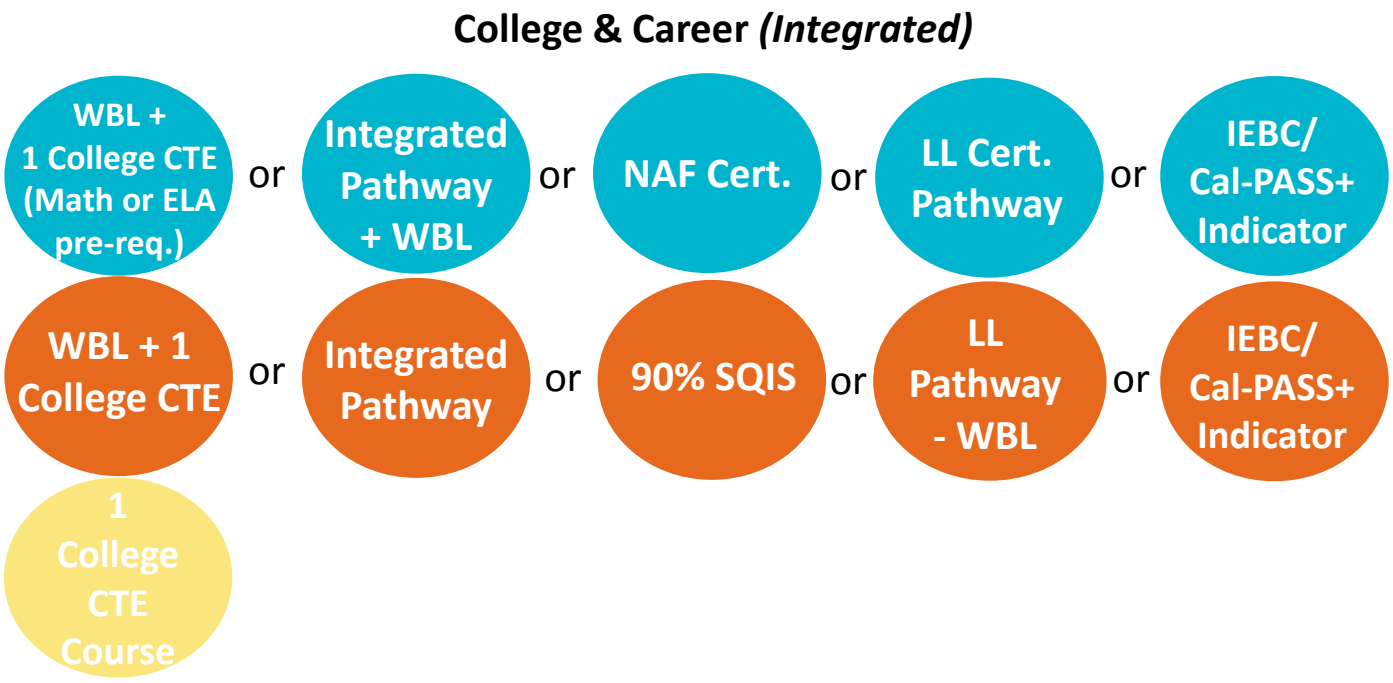
National Career Readiness Certificate (NCRC)

Many states and some California school districts recognize the NCRC, which is based on ACT WorkKeys (refer to the glossary on the following page for more information).

These emergent standards are not universal, but could provide options for schools and districts wishing to be held accountable on the basis of more robust indicators of college and career readiness than CALPADS data currently allows. This open architecture would allow the iterative inclusion of other alternative indicators beyond those used here for illustrative purposes. Those indicators, of course, would need to meet the statutory mandate that they be indicators primarily of student academic performance and that they be valid, reliable, and stable indicators of pupil preparedness for college and career.

The framework's architecture makes possible what must emerge: indicators that integrate college and career readiness. The examples described are illustrative that such indicators are possible.

Figure 5: Example of default framework and voluntary alternative data from standardized badges and milestones.



Glossary of Terms *(with reporting sources)*

A-G (*CALPADS*)
Completion of A-G sequence.

College CTE (*Cal-PASS+*)
California Community college CTE course. Student participation can be linked through K-12 admit status, and apprenticeship or occupational course codes.

CTE Pathway or CTEP (*CALPADS*)
Completion of a career technical education pathway by a CTE concentrator.

CTE Course (*CALPADS*)
Completion of a career technical education course within a pathway sequence.

DTU (*Cal-PASS+*)
Degree or transfer-applicable post-secondary units. These can be tracked through a variety of data in the CALPASS system: (1) K-12 admit status, (2) transfer course, (3) credit/degree bearing course, (4) discipline of study, and (5) units earned.

EAP Ready (Cal-PASS+/Gardner Center/IEBC)
Determined "Ready"for CSU & participating CCC English and math coursework as determined by performance on all components the Early Assessment Program. Reflects the readiness of students to pursue credit-bearing, non-remedial mathematic and English courses.

EAP Cond. (Cal-PASS+/*Gardner Center/IEBC*)
Determined "Ready – Conditional" by performance on any portion of the EAP.

IEBC/Cal-PASS+ Indicator *(IEBC/Cal-PASS+)*
This refers to an aggregate indicator that may be derived from data reporting to either of these sources by districts and schools, especially those participating in the AB 790 Pilot Program and/or receiving funds through the Career Pathways Trust.

Industry Cert. or Ind. Cert. (*Perkins*)
Attainment of an industry-recognized certification or licensure, which prepares a student for entry into employment, or is a pre-requisite for a post-secondary industry training program. There is currently authoritative list of approved certifications, so inclusion would require this to be developed.

Integrated Pathway (*CALPADS*)
Completion of A-G sequence and a CTE pathway, with at least 2 CTE courses also fulfilling A-G requirements.

LL Cert. Pathway (*IEBC*)
Completion of course of study in a Linked Learning Certified Pathway. To become certified, a pathway must meet and maintain specified criteria, and exhibit ongoing improvement relating to (1) pathway design; (2) the integration of academic and technical education with work-based learning; (3) system support, and (4) data-driven impact on student outcomes.

NAF Cert. (*NAF*)
Completion of National Academy Foundation (NAF) Student Certification. Requires (1) completion of supervisor-assessed internship, (2) satisfactory performance on end-of-course examinations in four pathway courses, and (3) satisfactory performance on four project assessments.

NCRC *(ACT)*
Earned a National Career Readiness Certificate at Platinum, Gold, or Silver level, each representing a level of attainment in foundational workplace skills. Requires completion of exams in Applied Mathematics, Locating Information, and Reading for Information. Used as an option for career readiness in over a dozen states.

SQIS *(Gardner Center at Stanford University)*
School Quality Improvement Index, the accountability system utilized for the ESEA waiver by districts belonging to the California Office to Reform Education.

WBL *(various sources)*
Completion of an employer (or site supervisor) assessed work-based learning experience. Could include:

- ***Apprenticeships*** *(Perkins):* The Division of Apprenticeships Standards (Department of Industrial Relations) has developed minimum industry training criteria in collaboration with relevant industries.
- ***NAF Supervisor Assessments*** (*NAF):* NAF has developed and implemented supervisor assessments which align students' work-based learning experiences with rigorous academic content and workplace skill outcomes. These assessments could serve as voluntary indicators for WBL reporting, and provide potential models for the development of state work-based learning assessments.
- ***Work Experience Education (WEE)*** *(CALPADS):* If WEE or other work-based learning options are considered, consistent reporting standards must be implemented across the state. This could be achieved through the development of standards-based employer evaluations such as those developed by NAF.

Further Considerations

This framework outlines the foundation of how the College & Career Ready component of the Academic Performance Index might be built using stepwise iteration. Additional work on key development and implementation issues would remain, including:

English Language Learners, Special Education, and Socioeconomically Disadvantaged Students

The Department of Education and its Public Schools Accountability Act Advisory Committee are likely to recommend a Graduation component for the API which provides supplemental points for students in these demographic groups. Similar adjustments could be appropriate for the College & Career Ready component. Just as there are modified exams for ELL and Special Education students, for instance, there is also a career preparation program for special education students – WorkAbility – which aligns career and academics relative to a student's IEP through direct work experience.

Algorithm for Blending College & Career Indicators

The most critical attribute of the framework, compared to other pending proposals, is the combination of college and career, so that achieving 1,000 points requires bringing a student to a high standard of college readiness and career readiness. In most cases, however, a student will achieve different levels on the two related dimensions. One way to blend them might be to use the average achieved by the student, so that earning a National Career Readiness Certificate at the Silver level and completing A-G with a "Ready" passage on the EAP would generate a score of 600, as would an NCRC Platinum combined with A-G completion without EAP. The algorithm used should (1) allow for a shift over time in progress toward integrated college and career indicators and (2) strengthen the "and" by using a multiplier of college and career readiness to magnify the score when students achieve both at high levels.

Authorizing and Calibrating Voluntary Measures

This framework would require a procedure for the Department of Education or State Board of Education to review and approve voluntary measures proposed by districts, and to calibrate them to the 1,000-point scale.

Acknowledgements

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About the Linked Learning Alliance

The Linked Learning Alliance is a statewide coalition of education, industry, and community organizations dedicated to improving California's high schools and preparing students for success in college,career, and life.

Established in May 2008, the Linked Learning Alliance aims to build a collective voice and coordinate efforts to expand access to Linked Learning in California—an approach to high school that integrates rigorous academics with real-world learning opportunities in fields of engineering, health care, performing arts, law, and more.

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