POLICY BRIEF

JANUARY 2016

More than One C:
Educating Students to be Ready for Careers and College

Michael Thier • Paul Beach • Sarah Collins Lench • Ellie Austin • Matt Coleman, DEd

epic

Educational Policy Improvement Center

www.epiconline.org

College and career readiness (CCR) has become a ubiquitous term among educators, policymakers, and stakeholders. Equally pervasive are the demands that educators prepare students for careers that don't yet exist, a goal that creates at least two problems. First, the CCR agenda has not recognized its fundamental bias: treating four-year universities as the gold standard for K–12 success. That standard has marginalized students who prefer careers to college in their immediate postsecondary plans. Equally important in California, systemic blinders point districts toward college-only outcomes, denying district leaders their newfound autonomy under the Local Control Accountability Plans (LCAPs). Instead, leaders could use LCAPs to best serve the diverse aspirations and needs of students and their communities.

In previous policy briefs, the Educational Policy Improvement Center (EPIC) showed district leaders how to define a new North Star by aligning their LCAPs to CCR[1] and then use multiple indicators to measure success toward that goal.[2] This policy brief outlines why definitions of K–12 success should balance the relative emphasis of each C (college and career) in its CCR approach. We also show the related pitfalls of districts failing to attend to the issues that are most salient for their communities and how districts can avoid these dangers. We recommend democratizing postsecondary pathway access to ensure equity, localizing districts' definitions of success to suit community needs, and personalizing educational experiences so students can become ready on their own terms.

As we examine CCR, we should note how the order of Cs in the acronym prioritizes college. Several factors explain why career readiness is the neglected half:

- Career readiness is a complex construct without a single list of knowledge and skills to predict success in all careers.

- Researchers and policymakers disproportionately know, relate to, and study college readiness.

- U.S. history is filled with social and economic inequalities that have placed college atop a hierarchy of postsecondary outcomes.

This policy brief discusses the U.S. bias toward college and how to counteract it. We recommend that district leaders use LCAPs to broaden their definitions of success and to prevent students' aspirations from being left behind. We endorse an integrated pathway within which all students receive options and support for career and college readiness. Balancing the Cs is particularly important in California, which recently invested a historic amount—$1.2 billion—for career pathways and career and technical education (CTE) programs.[3]

DOES CCR = CR + CR?

Most schools systems subtly or explicitly endorse a two-tiered system, pitting college as the path for winners and careers as an "alternative." Emphasizing college has helped grow high school graduation and college enrollment rates, which boosts individuals and systems. However, an unfortunate byproduct

of privileging college over career has been denying legitimacy to students who desire to and can succeed without four-year degrees.

One should not translate our call to emphasize career readiness as a rejection of college readiness. Five straight years of steady increases in California's statewide cohort graduation rate demonstrate positive momentum. Career-readiness data is less frequently available, and graduation rates alone do not tell the full story. About 81% of Californians graduate high school with 41.9% having completed the a-g course requirements for admission to a University of California or California State University campus. What about the readiness of the 40% who do not meet a-g standards?

A bleaker picture emerges when examining a-g disparities between females and males (46.9% to 36.7%) or among inequities for students facing socioeconomic disadvantages (32.7%), or students who are Hispanic/Latino (32.4%), African American (31.2%), or English language learners (9.9%). Examining aggregated and group-specific graduation rates remains a critical exercise, but districts should also scan their data for potential gaps between graduation and a-g completion (see Table 1).

Meanwhile, increasing students' readiness for both *career and* college would ensure that every high school student graduates with a full range of options.

Many factors contribute to the disconnect in the CCR agenda, but perhaps the greatest influence comes from an educational system that has defined matriculation at four-year institutions immediately after high school as the apex of postsecondary plans. Experts often lump college readiness and career readiness into a single bucket, typically leading with college readiness and deemphasizing career readiness.[5] Given the prevalence of that approach, should we label as failures the 24% of high school completers that the National Center for Education Statistics (NCES) identified as immediately entering two-year colleges[6] or those who enter the workforce or enlist in the military? Does postsecondary success require four-year commitments (actually 5.9 years on average)[7] and six-figure investments? Though we need a national conversation about the escalating costs of college tuition, another useful strategy would be to build a broader spectrum of what readiness means, a spectrum that assigns equal and unique value to each C.

Table 1. California High School Graduation and a-g Course Completion Rates (2009-14)		
Year	Cohort graduation rate	a-g course completion rate
2009–10	74.7	36.3
2010–11	77.1	36.9
2011–12	78.9	38.3
2012–13	80.4	39.4
2013–14	81.0	41.9

Benny Gooden, president of the American Association of School Administrators, noted a systemic blind spot by which the skills learned at universities do not satisfy societal needs for highly skilled technicians and other career-oriented pursuits. Meanwhile, career-prepared high school graduates do not receive the same prestige as their college-bound peers.[8] Gooden's insights cast light on a related issue: some students go to college simply because they feel obliged to do so. The pursuit of a college degree should be a function of intentionality, not inertia. But vague reasoning for college-going behaviors is not uncommon. Equally uncommon might be critical dialogue among educators, students, and their families asking, "Readiness for what?" One-size-fits all dialogues are suitable for very few places, so communities where attention is paid to preparation for careers that do not require bachelor's degrees would be best positioned to serve an array of students' needs. Note in Table 2 the median salaries and 2022 hiring outlooks, which surpass those of some outcomes that depend upon four-year degrees. Perhaps schools would do well by their students if guidance offices posted these attractive options alongside the more typical display of college banners.

Fortunately, in California the LCAPs empower educators to elevate the career element through increased availability of CTE programs and by using multiple pathways to define success in ways that are locally relevant. Districts should not assume they are alone in this difficult work. Three quarters of states are wrestling with defining and measuring career readiness[10] because preparing for careers has changed dramatically since the early 1900s when 3 in 4 employed Americans worked in manufacturing or agriculture[11] (see How We Got Here: Factors). Available jobs in the modern economy value problem solving, creativity, and other metacognitive skills. Such skills foster "learners' automatic awareness

Table 2. 2022 Median Salary and Hiring Estimates for Careers that Do Not Need 4-Year Degrees		
Career	Median salary in USD	Hiring outlook
Dental hygienist	70,210	+22%
Registered nurse	65,470	+19%
Web developer	62,500	+20%
Multimedia artist	61,370	+ 6%
Respiratory therapist	55,870	+19%
Electrician	49,800	+20%
Computer service technician	48,900	+17%
Paralegal assistant	46,990	+17%
Appliance repair	43,460	+21%
Carpenter	39,940	+24%

Source: *U.S. Bureau of Labor Statistics[9]*

of their own knowledge and their ability to understand, control, and manipulate their own cognitive processes"[12] at least as much as highly measurable, discipline-specific, cognitive skills (e.g., literacy and numeracy).[13] Unfortunately, balancing career and college readiness to have equal emphasis on a district's definition of success and, by extension, its plans for local accountability requires more than a growth mindset toward the broad utility found in developing metacognitive skills.

POTENTIAL PITFALLS

At least four barriers stand in front of districts that seek to elevate career readiness:

- choosing a definition that might not be locally relevant

- exacerbating the effects of tracking that already exist in many schools

- leaning on influential voices that favor the type of readiness that served them well

- selecting measures that do not match a commitment to serve college- and career-bound students equitably

Defining CCR to Resonate Locally. What some authors have called a "preponderance of evidence" indicating that career and college readiness are not the same,[14] has not translated into coherent policy. When McMurrer et al. examined accountability models in 14 states, they found 11 states defined

HOW WE GOT HERE: HISTORICAL FACTORS

The gulf between career readiness and college readiness is a logical consequence of American education's historical arc. Henry Ford's world-altering invention of the assembly line offers an analogy that mimics the stated purposes of our experiment in universal public schools. From the 1850s, immigration and urbanization pressured local, state, and federal governments to provide burgeoning industries with a stream of workers who were

- socialized enough to arrive on time and move from task to task as assigned,
- educated enough to comply with managerial instructions,
- civic-minded enough to vote (often as suggested by management), but
- not thoughtful enough to upset the social order.

For those goals, Fowler (2013) calls the period from 1900 to 1982 the Scientific Sorting Machine, in which secondary education served societal needs. This period witnessed a rise in regulatory practices, dependence on test scores, and tracking of students. Throughout the 20th century, American schools provided only 20% of students with college-preparatory curricula. The other 80% received basic education meant to align with workforce needs.

Given this context, a bell schedule that moves students—like products on an assembly line—from classroom to classroom, from teacher-manager to teacher-manager, to complete a discrete task and move on to another is a logical design. In 1983, however, the controversial report *A Nation at Risk* renewed conversation about the purpose of schools. One could argue that we spent the next three decades debating whether schools should sift students into categories, lead them to common expectations, or provide them with unique opportunities. We still have not decided if schools should be incubators of American democratic ideals, economic development, or individual aspirations.

Source: Fowler, F. C. (2013). *Policy studies for educational leaders: An introduction* (4th ed.). Pearson Education.

Fashion and Interior Design
- Fashion Design and Merchandising
- Interior Design Personal Services

Manufacturing and Product Development
- Graphic Production Technologies
- Machining and Forming Technologies
- Welding and Materials Joining
- Product Innovation and Design

Arts, Media, and Entertainment
- Design, Visual, and Media Arts
- Performing Arts
- Production and Managerial Arts
- Game Design and Integration

Agriculture and Natural Resources
- Agricultural Business
- Agricultural Mechanics
- Agriscience
- Animal Science
- Forestry and Natural Resources
- Ornamental Horticulture Plant and Soil Science

Marketing, Sales, and Services
- Marketing Professional Sales
- Entrepreneurship/ Self-Employment

INDUSTRY SECTORS

Building and Construction Trades
- Cabinetry, Millwork, and Woodworking
- Engineering and Heavy Construction
- Mechanical Systems Installation and Repair
- Residential and Commercial Construction

Health Science and Medical Technology
- Biotechnology Patient Care
- Healthcare Administrative Services
- Healthcare Operational Support Services
- Public and Community Health Mental and Behavioral Health

Energy, Environment, and Utilities
- Environmental Resources
- Energy and Power Technology
- Telecommunications

Information and Communication Technologies
- Information Support and Services
- Networking
- Software and Systems Development
- Games and Simulation

Education, Child Development, and Family Services
- Child Development
- Consumer Services
- Education
- Family and Human Services

Business and Finance
- Business Management
- Financial Services
- International Business

Engineering and Architecture
- Architectural Design
- Engineering Technology
- Engineering Design
- Environmental Engineering

Transportation
- Operations
- Structural Repair and Refinishing
- Systems Diagnostics, Service, and Repair

Public Services
- Public Safety
- Emergency Response Legal Practices

Figure 1. Career technical education course pathways in California.[18]

the constructs identically.[10] The definitional landscape of the CCR agenda has been scattered. Some authors stress a strict binary in which college readiness prepares students for credit-bearing coursework and career readiness leads to industry certifications.[15] Others describe a shared process emphasizing transferable skills with college readiness as one stop on the path to career readiness.[16] Still other authors have disentangled career and college readiness, recognizing their inherent overlaps. For example, college readiness could be defined as the ability to succeed in credit-bearing courses without needing remediation. Meanwhile, career readiness might be defined as the knowledge, skills, and learning strategies necessary to begin studies in career pathways.[17]

At EPIC, we recognize that some definitions suit some communities more than others. Universally, though, we believe LCAPs hold the opportunity to enable a district to define success on its own terms, incorporating whatever measures it requires

for serving every student well. Without a cogent CCR definition, systems of accountability depend upon assumptions about what "good" students or schools should do. An unintended consequence might be ignoring many needs and creating perverse incentives to push all students toward possible futures that limit the aspirations of some.

Tracking Effects. Elevating the status of career readiness does not require schools to narrow students' school experiences. In fact, if present-day schools and systems continue to operate as assembly lines that sort students into either college or vocational preparation, schools will resemble Lucille Ball in the chocolate factory rather than engines of productivity. Instead, as we present in Figure 1, a universe of possibilities now stems from CTE.

In the last decade, national CCR expert Dr. David Conley revised his Four Keys to College and Career Readiness model (see Figure 2) to include both college readiness, which privileges
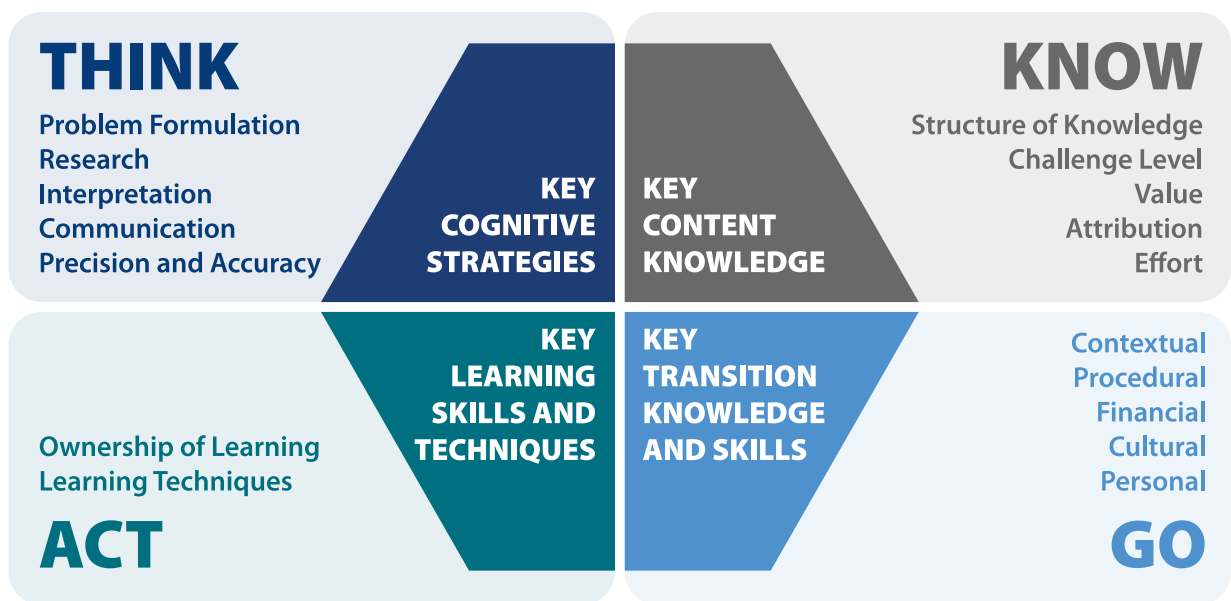

THINK				KNOW
Problem Formulation Research Interpretation Communication Precision and Accuracy	**KEY COGNITIVE STRATEGIES**	**KEY CONTENT KNOWLEDGE**		Structure of Knowledge Challenge Level Value Attribution Effort
	KEY LEARNING SKILLS AND TECHNIQUES	**KEY TRANSITION KNOWLEDGE AND SKILLS**		Contextual Procedural Financial Cultural Personal
Ownership of Learning Learning Techniques ACT				GO

Figure 2. The Four Keys to College and Career Readiness.

mastery of English and math, with three levels of career readiness (work, job, and career) that carry pathway-specific knowledge and skills.[19] Admittedly, Dr. Conley and colleagues at EPIC focused early research on the knowledge, skills, and experiences students need to succeed in college, most notably with the creation of the country's first set of college readiness standards. Yet the most recent iteration of the Four Keys addresses the thinking skills, content knowledge, learning strategies, and transition skills all students need, and it arms them with ownership over their own learning. Two fundamental components of the Four Keys should be highlighted: an intentional dissolution of the strict separation between career and college readiness and simultaneous recognition of the multiple pathways students should be ready to pursue.

Leaning on Laureates. It should not be surprising that success definitions in schools tend toward college rather than careers. Almost all K–12 educators received at least one degree from a four-year university. The same is true of decision makers at the highest levels of education governance. EPIC analyzed the membership of boards of education in the 32 states that compiled all members' biographies online. Among 337 voting members, 324 had received at least a bachelor's degree (96.1%), with 249 having at least one graduate degree (73.9%). Among the 11 voting members on California's board, only the high school student representative does not have multiple university degrees.[20] Similarly, education practice often leans on research, which has focused on indicators of college readiness exponentially more often than career readiness,[21] likely because college graduates

conduct most research, including the authors (and perhaps readers) of this policy brief.

The danger in creating or perpetuating systems that only know one definition of success is the tendency to sort students into piles of winners or losers, often by factors unrelated to their potential for favorable life outcomes. Avoiding systemic production of winners and losers evokes a web of complex questions:

- How feasible is a system that supports multiple pathways to success?

- What are the equity implications of various definitions of success?

- Can an economy sustain a system in which everyone attends four-year colleges?

- Can fair comparisons be made when college-readiness measures have shown greater technical adequacy to date than career-readiness measures?[21]

As district leaders consider these questions, it is useful to remember that answering any one of them sufficiently might contradict a valid answer for another. However they approach those questions, educators will likely create the widest, and best, opportunities for all students as individuals when they do not sort people according to insufficient default criteria.

Measurement Issues. In the age of accountability, indicators have become our default definitions of success. For example, the California Department of Education posts on its website robust data on students' readiness for college admissions, but reveals no data

Table 3. New Mexico's Paths to Readiness		
College-readiness measures	**Career-readiness measures**	**Potential to measure both**
PSAT / National Merit	CTE course pathway	Dual enrollment
SAT		
ACCUPLACER		
ACT		
ACT Compass		
Advanced Placement exam		
International Baccalaureate exam		

explicitly regarding career readiness (though the Department is working to capture CTE completion rates and industry certifications). Measurement of college readiness has received much more attention from psychometricians (i.e., test designers), researchers, and policymakers. Across the nation, state systems of accountability have incorporated college-going indicators far more readily. For example, New Mexico's 10 *paths to readiness* together make up an indexed indicator that combines multiple measures of CCR to provide districts and schools with the flexibility to implement programs that best address student needs (see Table 3). Yet only one of the paths specifies career readiness.

Unfortunately, as accountability systems are designed to not just reflect the status of schools but to influence the behaviors within them, the imbalance in favor of college-going measures encourages districts to focus resources toward (and as a result, numbers of students pursuing) that pathway. It is highly unlikely that the architects of New Mexico's accountability system intentionally designed its CCR index to function this way, given the potential flexibility afforded by multiple measures. It is far more likely that the

measures selected were those available to the state given policy constraints of validity, reliability, and feasibility.

In California, LCAPs provide flexibility that state-level accountability systems cannot. With that in mind, a district in California can design a more nimble system than any state, offering greater opportunity to honor the aspirations of career-oriented students. Measures of career preparedness—and also metacognitive skills—are improving rapidly, but they still pale in comparison to both the number and validity of their college-oriented or cognitive counterparts. Still, educators who want to provide equitable outcomes for their career-oriented students should not wait until new tests are invented or existing ones are improved. Table 4 displays an array of measures that are currently available, though EPIC does not suggest that these measures are of equal technical quality, stakeholder relevance, or system utility. We explored each of those three concepts in a series of white papers for the California Department of Education's Public School Accountability Act Advisory Committee.[21]

Table 4. Measures of Readiness for Career, College, or Both		
Career-readiness	**College-readiness**	**Usable for both**
CTE course pathways	College admission exams	Integrated course pathway
Career preparedness tests	Advanced coursework	Metacognitive assessments
Industry certifications	College preparatory coursework (a–g)	Some performance assessments
Other career readiness certificates (IB Career-Related)	College remediation rates	World language or art pathways
Dual enrollment	Dual enrollment	Dual enrollment
Work-based experiences	SmarterBalanced Consortium of Assessments (SBAC)	Graduation rates
	Partnership for Assessment of Readiness for College and Careers (PARCC)	Graduation portfolios or culminating projects

CONCEPTUALIZING AN INTEGRATED PATHWAY

An integrated pathway provides broad utility both for students who do not envision college as part of their postsecondary plans and for students bound for four-year colleges who want to expand their skill sets. Imagine a student who has an aptitude for and interest in engineering. She should take not only chemistry and physics, but also applied CTE courses that make theoretical knowledge come alive through project-based learning. Though some effective teachers of academic subjects offer project-based learning in their courses, CTE offers the additional benefit of transferable outcomes such as dual enrollment completion or industry certificates. The future engineer could decide as a senior what postsecondary option she found most appealing, not feel compelled to make a life-shaping decision as a middle school student. An integrated pathway would prepare her for myriad postsecondary options on a college campus and/or in the workforce. At the same time, an integrated pathway provides additional options for a student who comes to high school set exclusively on pursuing a trade. An integrated pathway would not distract either student from planned pursuits and provide more choices along the journey.

The Linked Learning Alliance provides an option for districts seeking to integrate rigorous academics with career-based and workplace learning. Seeking to prepare students for a variety of postsecondary pathways, Linked Learning has been associated with increased high school graduation rates, increased eligibility for university admission, and increased lifetime earnings. International Baccalaureate offers another integrated pathway option, its Career-Related Programme (IBCP), which debuted in 2013 and requires students to complete 2–3 university-preparatory courses alongside a CTE track. Think of the array of possibilities offered to a high school graduate who has completed college-level coursework in mathematics, a science, and a language other than English and who is also certified as an automotive technician. With proper coordination, schools could create a similar course

of study that offers students 2–3 Advanced Placement classes that align to a CTE track. More important than which college-preparatory coursework to provide is an intentional effort to build partnerships. Partnering with local industries or service providers (e.g., fire houses) can foster out-of-school learning environments and engage community stakeholders who could then become school advocates.

In another example, EPIC recently facilitated collaboration between CTE instructors in Washington state and experts in science and mathematics. The collaboration produced course-equivalent frameworks that enable students to take CTE courses while pursuing areas of interest, developing career skills, and learning in applied settings to meet basic graduation requirements. The collaborators also designed or identified sample performance assessments to evaluate students according to those frameworks. The Washington State Board of Education adopted the frameworks in May 2015.

RECOMMENDATIONS TO INTEGRATE PATHWAYS

EPIC recommends a three-phase process for California districts to *democratize*, *localize*, and *personalize* their LCAPs. Districts that can *synthesize* what they learn from the three phases should develop systems that can achieve equity, reflect community wants and needs, and offer integrated pathways.

Democratize. Educators should begin with LCAP Priority 3 (parental involvement). By design, the LCAP document follows an expectation that stakeholder collaboration is the foundation of local control. Priority 3 prompts districts to seek parent input for decision making and promote their participation. One effective strategy would be to host listening sessions in which schools intentionally convene the most diverse grouping to gather a breadth of stakeholder views. In those sessions, students, parents, and community members could offer insights about:

- What postsecondary pathways do our students *typically* follow?

- What postsecondary pathways do our students *aspire* to follow?

- How can we bridge gaps between where we *typically* point our students and what our students *aspire* to do?

Informed by responses to those questions, districts should perform 360-degree evaluations at each school to determine the extent to which they guide, nudge, or shove their students, or even certain students, toward particular directions. If schools detect any one-size-fits-all or other default approaches to postsecondary outcomes, they can conclude that at least some students' aspirations have been ignored. Such findings might be disconcerting, but would be highly informative. The next step would be to court an engaged community of allies around common, yet expansive, definitions of success. When such findings are made, districts would need data to show the number and profiles of students who felt left out of college-or-bust success models. Interviewing alumni would be a strong practice. Additionally, districts would need plans to meet the needs of students who do not or cannot articulate their own aspirations.
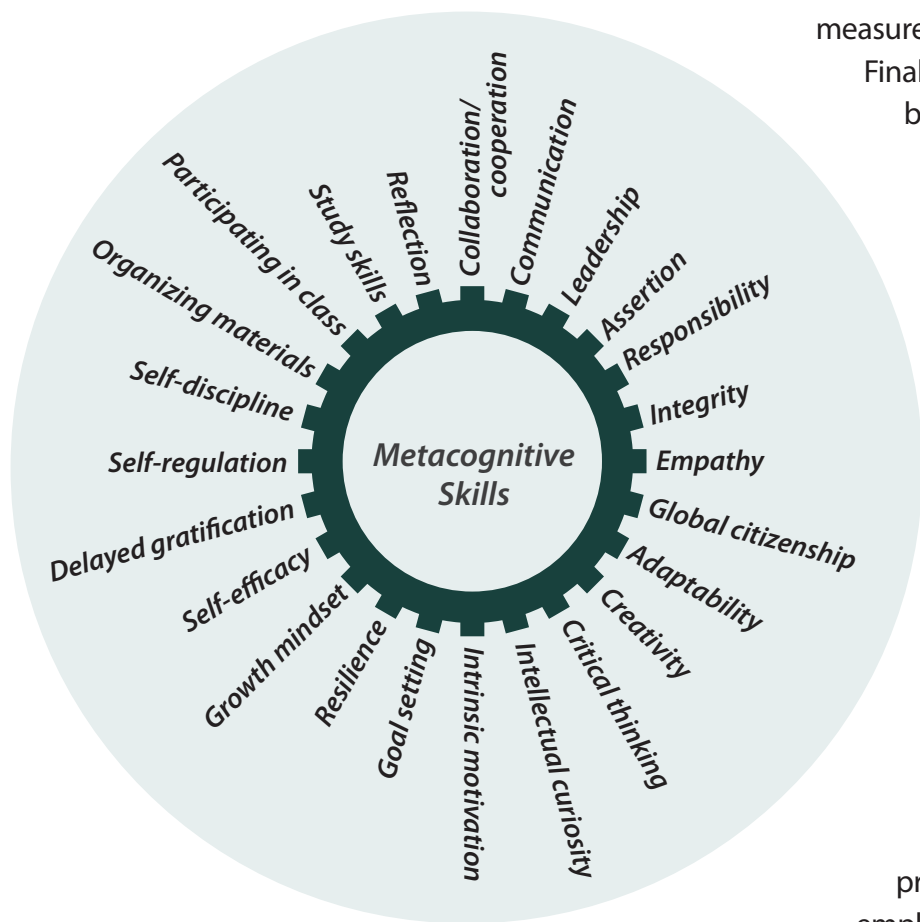
Figure 3. A sample of metacognitive skills.

The wheel diagram shows "Metacognitive Skills" at the center, surrounded by: Collaboration/cooperation, Communication, Leadership, Assertion, Responsibility, Integrity, Empathy, Global citizenship, Adaptability, Creativity, Critical thinking, Intellectual curiosity, Intrinsic motivation, Goal setting, Resilience, Growth mindset, Self-efficacy, Delayed gratification, Self-regulation, Self-discipline, Organizing materials, Participating in class, Study skills, Reflection.

Localize. In the meantime, California educators can exploit the flexibility inherent in Priority 8 (other pupil outcomes). In contrast to Priority 4, which examines pupil achievement narrowly through cognitive measures geared toward college (e.g., the Early Assessment Program), districts can choose Priority 8 indicators that extend beyond "the subject areas schools are required to offer." In Table 4, we presented indicators that districts can use to capture career readiness or both career and college readiness simultaneously. In particular, metacognitive skills (see Figure 3) have been associated with both career and college preparedness, so adopting metacognitive measures would be one healthy step. Finally, to track progress toward building a culture of career and college readiness, districts could triangulate data on the diverse needs they have found with longitudinal trends on Priorities 5 (pupil engagement) and 6 (school climate). More expansive definitions of success that permeated districts would likely pay the additional dividend of improving pupil engagement and school climate.

Personalize. Good news: None of California's eight priorities preclude a district from emphasizing career readiness or constructing pathways that integrate career and college preparation. Bad news: Unsurprisingly, given our systemic tendency toward college, the LCAP template does not provide explicit guidance for districts looking to embrace more expansive success definitions. None of the state's 24 indicators specify career readiness. However, Priority 4 (pupil achievement) creates the vague expectation that "a share of pupils" become college and career ready. Presently, it is more common to adopt a binary view of CCR that forces students to follow one pathway[22] rather than developing curriculum and instruction that support an explicit integrated pathway, a decision with crucial equity implications (see We Are Here: Social Factors).

Using LCAPs as catalysts for change requires educators to adopt the view that students' college aspirations operate on a continuum. There might be just as many students who want to go to college but are told and/or believe they cannot as there are those who meet admissions requirements but do not find value in that particular postsecondary pathway. Education in the 21st century must be about individuating opportunities so that students can optimize their outcomes or at least minimize risk (see Can We Afford to Stay Here? Economic Factors).

Synthesize. Armed with the findings that will likely show diverse needs, whole faculties should engage in conversations about district approaches to Priorities 2 (implementation of state standards) and 7 (course access). On paper, the Common Core State Standards lean toward college preparation, and California's prescription for course access focuses predominantly on a–g courses. To avoid perpetuating a college bias, districts must examine all their schools to determine if they provide a breadth of pedagogies and curricula that facilitate pursuit of various aspirations and prepare students for multiple and/or integrated postsecondary pathways. These aims require deep knowledge of schools, their students, and resources. For those reasons, the LCAP is an ideal instrument to leverage system change given that policymakers in Sacramento cannot know a school like its educators can.

WE ARE HERE: SOCIAL FACTORS

Annually, a barrage of movies sells teenage audiences on the allure of the collegiate lifestyle. Many parents seek college acceptances as if they are family trophies. In school districts filled with affluent families, home values rise or fall when U.S. News & World Report and other outlets release annual high school rankings that depend mostly on college-readiness indicators. When students and parents in middle- and upper-class families clamor for college, and nearly all the analysts and decision makers descend from a single definition of success, it does not matter which group is the chicken or the egg. The result: college readiness becomes the standard and career readiness an afterthought.

Meanwhile, we must not ignore profound equity implications that attend college-only definitions of success. Top students in communities where college attendance has been less routinized experience a phenomenon that Canadian rural education expert Michael Corbett (2007) has called "learning to leave." Our analysis of data from collegeboard.org revealed that only 19% of four-year colleges are in rural areas. By contrast, Johnson et al. (2014) found that 33% of K–12 schools are in rural areas. It seems that students in rural contexts face decisions far more complex than "Which college should I attend?" The act of attending college can represent a rejection of home.

Additionally, structural barriers confront students who want to return home after receiving four-year degrees. Labor realities in many rural settings do not align with the expected career trajectories of many college graduates. In communities of color, the learning to leave effect can be confounded at the intersections of place, race, ethnicity, sex, and other key variables.

Sources:
Corbett, M. (2007). *Learning to leave: The irony of schooling in a coastal community.* Black Point, Nova Scotia: Fernwood.
Johnson, J., Showalter, D., Klein, R., & Lester, C. (2014). *Why rural matters 2013-2014: The condition of rural education in the 50 states.* Washington, DC: Rural School and Community Trust.

CAN WE AFFORD TO STAY HERE? ECONOMIC FACTORS

As college acceptances and tuition rise, graduation rates have been relatively static and quite low. Across California State University campuses, 19% of full-time students who began their undergraduate careers in 2010 completed "four-year degrees" by 2014.

From 2004 to 2013, five-year graduation rates ranged from 40–45%. Only 61% of students completed within a decade. Therefore going to college carries a risk for 2 out of 5 enrollees. Each year beyond the no-longer standard four years brings another tuition and fees bill that could run anywhere from a San Diego-Imperial Valley student living at home ($14,598) to a San Jose student in off-campus housing ($25,511). If one couples tuition price tags with a year's lost wages at even the low end of the National Association of Colleges and Employers starting salary ranges for college graduates, $32,750, then each extra year of college represents an opportunity cost of about $50,000. One benefit college graduation clearly offers is some protection against being underemployed, which describes 37% of high school graduates, but also 15% of college graduates.

By contrast, many careers (see Table 1) that do not require a four-year degree pay salaries exceeding the U.S. median household income ($43,585) and dwarf the median per capita income ($15,480).

Data sources:
California State University graduation (http://asd.calstate.edu/csrde/ftf/2013htm/sys.htm); Tuition and fees (http://www.calstate.edu/sas/costofattendance/); Starting salary (http://www.naceweb.org/about-us/ press/average-starting-salaries-class-2014.aspx); Unemployment (http://www.epi.org/publication/the-class-of-2015/)

CONCLUSION

Districts that unlock the power encased in their LCAPs by attending to unique, local needs will create integrated pathways that produce full-option graduates, those who can pursue a career, college, or both. The potentially indefinite suspension of California's Academic Performance Index creates an ideal moment for districts to construct their own local systems of accountability and avoid missteps.

For districts seeking systems of accountability to emulate or adopt, treat Georgia and Kentucky as case studies for integrated pathways. With 24 separate indicators, Georgia's system is America's most comprehensive state-level approach to career and college readiness (see Table 5). Of course, Georgia's expansive metric comes with a trade-off. A district must balance its potential to provide an awesome amount of information with district capacity to monitor that much information. Still, Georgia has created clear measurement opportunities that incentivize districts to foster their students' pursuit of any of the following pathways: Career Technical and Agriculture Education, advanced academics, fine arts, or world languages.

Similarly, Kentucky considers students to be college prepared if they meet a benchmark score on the ACT, ACT's Compass (college placement test), or the Kentucky Online Testing Program (KYOTE). To be career prepared, students must meet a benchmark on either WorkKeys or Armed Services Vocational Aptitude Battery in addition to meeting the benchmark on the Kentucky Occupational Skills Standards Assessment (KOSSA) or earning an industry certificate.

Table 5. Career and College Readiness Measures in Georgia's Accountability System			
Category of measures	Career Readiness	College Readiness	Both
Course-taking behavior	Career Technical/ Agricultural Education (CTAE) pathway; International Baccalaureate (IB) career-related certificate	Advanced academic pathway(s)	Fine arts or world language pathway(s)
Test scores	End-of-CTAE pathway assessment	Advanced coursework	Metacognitive assessments
National industry-recognized credential	SAT/ACT; Advanced Placement; IB College remediation proportions; Georgia American literature test	Georgia high school writing test	Some performance assessments

However, students who meet the benchmark for the ACT, Compass, or KYOTE and the KOSSA benchmark or earn industry certification are considered career and college ready. Kentucky's approach depends heavily upon standardized exams, but it does provide a blueprint for how to emphasize career and college equally, while incentivizing support for integrated pathways.

Both states use multiple measures and facilitate students' pursuits of multiple outcomes. This level of flexibility benefits all stakeholders. Students can rediscover the freedom to aspire widely and deeply. Family members can exercise political will in the decisions of how schools serve their community's children. Educators can engage in visionary leadership that aligns local practices to contextual needs. Local business leaders can expand their reach into schools that seek partnerships in which students might become apprentices. And districts can trade racial, ethnic, socioeconomic, and geographical opportunity gaps for educational equity. At a minimum, districts that use their LCAPs strategically to develop career and college readiness cultures will not decide students' futures. Instead, those districts will provide students with the widest possible range of options to explore.

Our recommendation is intended to empower educators to address the factors they can control: sincere examinations of educators' assumptions, intentional efforts to engage diverse communities, and expanding definitions of success. Those activities can ferret out many biases that prevent students from aspiring, whether they tend toward careers, college, or both.

ACKNOWLEDGEMENTS

ENDNOTES

[1] Beach, P., Thier, M., Lench, S. L., & Coleman, M. (2015). *Defning a new North Star: Aligning local control accountability plans to college and career readiness.* Eugene, OR: Educational Policy Improvement Center.

[2] Beach, P., Thier, M., Lench, S. L., & Coleman, M. (2015). *From accountability to actionability: Making sense of multiple measures in Local Control Accountability Plans.* Eugene, OR: Educational Policy Improvement Center.

[3] Maitre, M. (2015, Jan. 28). Governor proposes boost for career education. *EdSource.* Retrieved from http://edsource.org/2015/governor-proposes-boost-for-career-education/73624

[4] See California Department of Education Data Reporting Office at http://dq.cde.ca.gov/dataquest/StGradNum.asp?cChoice=StGrdEth&cYear=2013-14&cLevel=State&SubGroup=Ethnic/Racial&cTopic=Graduates

[5] e.g., Evans, M. B., & Clark, S. K. (2015). Finding a place for CCSS Literacy Skills in the middle school social studies curriculum. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 88*(1), 1-8; Venezia, A., & Jaeger, L. (2013). Transitions from high school to college. *The Future of Children, 23*(1), 117-136.

[6] See NCES (2015) at https://nces.ed.gov/fastfacts/display.asp?id=51

[7] See NCES (2012) http://nces.ed.gov/pubs2013/2013150.pdf

[8] Gooden, B. L. (2013). College and career readiness: Synonymous or separate?" *School Administrator, 70*(5), 47.

[9] See U.S. Bureau of Labor Statistics at http://www.bls.gov/opub/mlr/2013/article/occupational-employment-projections-to-2022.htm

[10] McMurrer, J., Frizzell, M., & McIntosh, S. (2013). *Career readiness assessments across states: A summary of survey findings.* Washington, DC: Center on Education Policy.

[11] Conley, D. T., Beach, P., Thier, M., Lench, S. C., & Chadwick, K. L. (2014). *Measures for a college and career indicator: Career preparedness assessments.* Eugene, OR: Educational Policy Improvement Center.

[12] Vockell, E. (n.d.). *Educational psychology: A practical approach.* Calumet, IN: Purdue University–Calumet.

[13] Conley, D. T. (2013). Rethinking the notion of "noncognitive." *Education Week, 32*(18), 20-l2.

[14] Gaertner, M. , Kim, J. , DesJardins, S. , & McClarty, K. (2014). Preparing students for college and careers: The causal role of Algebra II. *Research in Higher Education, 55*(2), 143-165.

[15] Turner, J., & Danridge, J. (2014). Accelerating the college and career readiness of diverse K-5 literacy learners. *Theory into Practice, 53*(3), 212-219.

[16] Dewitz, P., & Graves, M. (2014). Teaching for transfer in the Common Core era. *Reading Teacher, 68*(2), 149-158.

[17] Lombardi, A., Conley, D. T., Seburn, M. , & Downs, A. (2013). College and career readiness assessment: Validation of the key cognitive strategies framework. *Assessment for Effective Intervention, 38*(3), 163-171.

[18] See California Department of Education at http://www.cde.ca.gov/ci/ct/sf/documents/ctecpwposter.pdf

[19] Conley, D. T. (2013). *Getting ready for college, careers, and the Common Core: What every educator needs to know.* John Wiley & Sons.

[20] See California State Board of Education members at http://www.cde.ca.gov/be/ms/mm/

[21] Conley, D. T., Beach, P., Thier, M., Lench, S. C., & Chadwick, K. L. (2014). *Measures for a college and career indicator: Final report.* Eugene, OR: Educational Policy Improvement Center.

[22] McClarty, K., Way, W., Porter, A., Beimers, J., & Miles, J. (2013). Evidence-based standard setting: Establishing a validity framework for cut scores. *Educational Researcher, 42*(2), 78-88.