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Advancing Research and Policy for K-12 and Postsecondary Education

# Searching for Measures of College and Career Readiness:

## The Perspectives of Students, Teachers, Administrators, and State and County Officials

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# Executive Summary

Over the next three years, the California State Board of Education (SBE) and the California Department of Education (CDE) will refine the college and career readiness (CCR) measures in the state's school accountability system. Determining which measures to use, given that they need to be robust, useful, equitable, and cost effective—and effectively measure a complex set of factors—has proven to be a challenging process for these state agencies to date.

To inform their work, this report captures how state and county officials, high school teachers, community college instructors, CCR program administrators, high school students, and community college students view California's current CCR measures. It focuses particularly on what teachers and students think makes certain CCR programs successful, based on their experiences. Our study answers two questions: How do officials from the state and county offices of education view CCR programs and the state's College/Career Indicator (CCI)? What are students', teachers', and administrators ' perspectives on CCR programs? While this qualitative study reflects only the views of a small number of stakeholders, their ideas and concerns warrant consideration by policymakers.

## Findings: State Officials and County Offices of Education

### Interviewees expressed a desire for more state guidance about CCR.

Both state and county office of education (COE) interviewees noted the challenge of trying to understand what constitutes CCR in the absence of a statewide definition. As many interviewees noted, school districts and COEs are creating their own definitions and designing their own CCR programs. Most interviewees expressed support for additional, though modest, state guidance and an interest in obtaining examples of effective CCR programs. In addition, interviewees urged the state to expand the kinds of readiness programs included in the California Longitudinal Pupil Achievement Data System (CALPADS) for use in determining students' CCR program completion.

### The term "college and career readiness" often bifurcates the concept of readiness.

Across the board, interviewees indicated that all students need the knowledge, skills, and dispositions to succeed in the contemporary workplace. Several interviewees, however, expressed concern that the term "college and career readiness" separates college preparation from career preparation. Rather than describing an integrated whole, the term often implies two separate entities.

### Interviewees want more frequent and improved collaboration between K-12 and higher education.

Nearly all interviewees agreed that collaboration between K-12 and postsecondary education is essential to implementing effective CCR programs. Several COE interviewees noted that COEs often serve as the conveners of regional school districts, institutions of higher education, and representatives of the business community. These efforts, they said, rely on the leadership and initiative of local individuals rather than on statewide policies, practices, or incentives. This finding raises a concern about the ability of COEs in all 58 counties playing this role effectively.

### Measuring CCR effectively and constructively is complex.

Measuring the knowledge, skills, and dispositions needed for success in the workplace is complex and controversial. It is easier to devise large-scale proxies for academic readiness; doing so for some facets of applied learning and other kinds of knowledge and skills, such as communication and teamwork, is complicated. In talking about the development or refinement of a state CCI, interviewees across the board were keenly aware of these challenges. While some interviewees thought that existing assessments, such as ACT's WorkKeys, might be able to determine workplace skills, they also pointed out that it is not clear what should be measured, and how and when. Others voiced concern about adding more standardized tests into the mix, both for students and for the educators who would administer them.

## Findings: Students, Teachers, and Administrators

### Applied learning opportunities are essential for effective CCR programs.

The students, high school teachers, community college faculty, and administrators we interviewed emphasized the importance of providing ample opportunities for a wide range of students to participate in applied, or work-based, learning opportunities in high school and college. These interviewees reported insufficient availability of these opportunities. Nearly all the students we interviewed who participated in internships described the value they received in being exposed to the world of work. Students we interviewed who did not participate in a CCR program regretted they had not done so, and explained that either they were not aware of CCR opportunities, or their high schools did not offer such programs.

### Students and teachers expressed deep concern that their high schools did not adequately prepare students to succeed in college.

Many students we interviewed reported that they were inadequately prepared to succeed in postsecondary programs. They were surprised by the demands of college, including the challenges of studying independently and the rigors of the coursework. Teacher interviewees largely echoed the students' perspectives, particularly noting the difference between preparing students for college eligibility, which the teachers said high schools do well, and supporting them in high school to do well in college, which has not met with the same success.

### Measuring CCR skills is challenging.

When asked about measuring CCR skills, teachers noted that many tools are available to assess academic proficiency, but they were skeptical about the availability and effectiveness of tools to assess career readiness. They also cautioned the state about trying to measure these skills for high-stakes purposes.

### Relationships are key.

Students' experiences at school often are shaped by the presence of a caring adult who helps them feel safe, believes in them, and shows a commitment to their success. Therefore, we were not surprised to find that students thought this type of relationship was key to their educational journeys. Students told us they faced significant challenges related to poverty, family, and their need to work while attending school. Support from a concerned high school faculty or staff member working within a CCR program or elsewhere in the school was critical to these students.

## Policy Implications

Considering the findings above, the state, as it works to refine the CCI, should:

1. **Determine who has access to high-quality CCR programs and then broaden that access.** To ensure access to CCR programs for traditionally underserved students in varying parts of the state, the SBE should: (1) request an analysis to gain a better understanding of current access to high-quality CCR programs, and (2) support the expansion of programs for geographically and demographically underserved groups.
2. **Identify and disseminate information about exemplary CCR programs.** The list of these model programs ideally would include descriptions of the various elements that make them exemplary. School districts and COEs could draw on this information as they develop and implement their own CCR programs.
3. **Expand the kinds of CCR programs included in CALPADS.** Both locally developed programs and national programs need to be included in the California Longitudinal Pupil Achievement Data System (CALPADS) or in other reporting mechanisms captured by the state's accountability system.
4. **Incentivize cross-system collaboration.** Greater cross-sector collaboration between K-12 and higher education and among the education and business sectors will enhance opportunities for regions to develop more coherent CCR infrastructures. This type of collaboration is evident in pathway programs, but it must be integrated or aligned across systems more effectively. Investments in cross-system collaboration, particularly in helping COEs to play a convening role, are critical to the sustained development of CCR supports for students.
5. **Refine the CCI, but proceed with caution in several areas.** First, our interviewees expressed serious concerns about the burden of additional testing on an already test-heavy system. Second, our interviewees questioned the accuracy of tests that measure many of the critical skills, and the knowledge and dispositions, that are needed to prepare students for college and careers. Finally, researchers and advocates have

repeatedly expressed concerns about the fairness of using CCR measures for anything with high stakes attached.

6. **Strengthen the focus of school climate in the CCI.** Students in our study were nearly unanimous in asserting the centrality of having a caring adult guiding their educational careers and their CCR. Relationships are a clear, enabling factor in students' readiness and should be part of any state indicator. Currently, measuring school climate is a separate component of the accountability system and one of the multiple measures of school effectiveness. Our research suggests that a school climate measure focused on student perceptions of the existence of a faculty or staff member concerned about them at school should be central to the CCI.

# Introduction

By adopting the Common Core State Standards in 2010, the California State Board of Education (SBE) signaled to educators that the state's K-12 system would support greater levels of college and career readiness (CCR).[1] For example, the 11th grade Smarter Balanced assessment signals to high school students if they are ready for college-level courses in California's public colleges and universities. But what it means in practice to support greater levels of readiness—for students, teachers, and schools—has taken some time to evolve, particularly in the realm of career readiness. For example, the SBE is working to determine how best to measure readiness as part of the state's new accountability system.[2] But it faces challenges in developing and refining a College/Career Indicator (CCI) that is practical, affordable, and useful to track students over time while also being robust in capturing the breadth of knowledge, skills, and dispositions associated with readiness; equitable in accounting for the range of effective CCR programs in school districts statewide; and comparable across districts.

Over the past decade, California has supported many initiatives designed to improve CCR in high schools, including those focused on providing students with rigorous college preparatory courses and courses that integrate academics and career-related knowledge and skills. As a result of these kinds of investments, school districts have been implementing a range of strategies to support readiness, including various kinds of career pathway programs, internships, and work-based learning initiatives.[3] In March 2016, the SBE adopted an initial CCI. In September 2017, the Board adopted a revised CCI and plans to continue to refine this measure over time. To the extent that what gets measured tends to affect program development, the refinement and use of the state indicator could have important effects on the distribution and strength of CCR programs statewide, and on equitable opportunities for CCR across California.

The state's implementation plan for the CCI over the next three years includes consideration for adding additional measures to the indicator.[4] The primary purpose of this report is to inform the state's refinement of the indicator by sharing the perspectives of state and regional officials, K-12 and community college teachers, CCR program administrators, and students.

This report is based on a research study that sought to answer two key questions:

1. How do officials from the state and county offices of education view CCR programs and the CCI?
2. What are students', teachers', and administrators' perspectives on CCR programs?

To answer these questions, we first interviewed state and county office of education (COE) officials and then conducted interviews and focus groups with high school and community college students, teachers, and administrators in six programs throughout California.

The following two sections of this report provide brief descriptions of relevant CCR research (page 8) and of the California policy context (page 9). Starting on page 12, we present the study's findings from interviews with state and COE officials, followed by the findings from interviews and focus groups with students, teachers, and CCR program administrators (page 15). The final section offers the policy implications that emerge from this research (page 21).

# Relevant CCR Research

The literature on CCR is vast,[5] so we narrowed our scope to three key issues of particular relevance to this study. First, there is widespread agreement among researchers that the knowledge, skills, and dispositions associated with college readiness and career readiness are interconnected, though not identical, and that readiness is best understood and applied through integrated approaches to teaching and learning (see What Is College and Career Readiness? sidebar). These researchers warn against conceptualizing CCR as two entirely separate sets of knowledge, skills, and dispositions.[6] A major issue that educators grapple with is ensuring that students are not tracked by demographic factors into either academic or applied courses. They also face challenges in expanding students' access to high-quality applied options.

Second, several studies identified key elements of effective CCR pathway programs and documented student experiences associated with such programs. For example, SRI's seven-year examination of the California Linked Learning District Initiative identified several benefits of this CCR pathway program.[7] Other studies also documented the opportunities, challenges, and other experiences that students in CCR programs have faced.[8] Third, many researchers who explore readiness measurement have emphasized the significant challenges of this endeavor, while others have suggested indicators to assess readiness among high school students.[9]

### What Is College and Career Readiness?

There appears to be growing consensus about what students who are deemed college and career ready should know and be able to do, but less clarity about the best ways to demonstrate proficiency. The concepts that undergird readiness encompass core academic subject matter as well as other factors, such as cooperation, communication, critical thinking, synthesizing and integrating information, problem solving, and managing time well.[10] Those seeking training and education beyond high school also must learn how to navigate and pay for their postsecondary experiences. In this report, we refer to those skills beyond core academic subjects as "knowledge, skills, and dispositions."

We also refer in this report to CCR "programs." By this we mean programs that integrate the knowledge, skills, and dispositions described above, with the purpose of supporting student readiness for some form of postsecondary education or training. The programs might range from sets of courses to complete curricular pathways. The term "CCR program" is not intended to capture a precise way of teaching or learning or a particular kind of program. Rather, it is intended to convey the range of courses of study that might prepare students to pursue postsecondary education and training. Examples of CCR programs are provided in "The California Policy Context" section below.

# The California Policy Context

California has enacted a set of policy initiatives for K-12 education that provide important context for understanding CCR efforts in the state. These reforms include the Common Core State Standards, the Smarter Balanced assessments, the state's new California Career Technical Education Model Curriculum Standards, the Local Control Funding Formula (LCFF), the Every Student Succeeds Act (ESSA) state plan, and new state school accountability measures. Over the past eight years, the SBE has been focused and deliberate in adopting and aligning this series of major reforms for K-12 education.[11]

California adopted the Common Core State Standards in 2010. These standards identify the knowledge and skills that students should achieve in order to graduate from high school and be ready to succeed in postsecondary education and training. In 2013, the state adopted a new statewide assessment system, the Smarter Balanced assessments, aligned to the new state standards. Since then, many campuses of the California Community Colleges and the California State University (CSU) have accepted a score at or above Level 3 on the 11th grade Smarter Balanced assessments in math and English language arts/literacy as conditional evidence that a student is ready for college-level coursework.[12]

The SBE also adopted newly revised state Career Technical Education (CTE) Model Curriculum Standards in 2013. These detailed standards organized by industry sector are accompanied by the Standards for Career Ready Practice, a more general list of 12 standards designed to identify the fundamental knowledge and skills that students need for postsecondary education and training, as well as for the workforce. These standards could be helpful for both academic and CTE teachers, but they have not been well publicized for such purposes, and training on the standards has been limited primarily to CTE educators.

The LCFF, enacted in 2013, substantially altered education finance and governance in the state. The LCFF shifts many key decisions about allocating education dollars from the state to local school districts, requires that local stakeholders (including parents and educators) be involved in these decisions, and aims to narrow the achievement gap by providing additional funding for historically underrepresented student groups (including low-income students, English learners, and foster youth). The LCFF also removes most categorical programs and provides districts with greater control over their budgets, including decisions about CCR programming.

Part of the state's efforts to enhance local decision-making includes a new state accountability system. District-level performance results now are part of the state's Accountability and Continuous Improvement System and reported as multiple measures through the new California School Dashboard. The Dashboard, implemented in fall 2017, includes seven state indicators (chronic absenteeism, suspension rates, English Learner progress, graduation rate, college and career, English language arts, and mathematics), as well as four local indicators (basic condition, implementation of standards, parent engagement, and local climate). The performance results on each of the state measures are comparable across school districts, reflect each district's current status, and will reflect change on the measure over time.

## California's CCR Efforts

High school students seeking to be eligible to attend the CSU or the UC must complete a series of courses called a-g course requirements. In addition, the state supports a variety of other ways to help prepare students for postsecondary education and training, including the Early Assessment Program, Early Start, and state-level concurrent/dual enrollment. More recently, the state has also provided direct support to programs that offer explicit CCR readiness experiences for students. For example, California has provided significant state support for the following CCR programs over the past decade:

- **California Career Pathways Trust (CCPT) Grants.** Competitive grants totaling $500 million, beginning in 2013, for regional consortia to support career-oriented pathways leading to postsecondary education, primarily two-year degrees and certificates.
- **Career Technical Education Incentive (CTE) Grants.** Competitive grants totaling $900 million over three years for education, economic, and workforce development initiatives to create new and to sustain existing CTE programs to assist students' transition to employment and postsecondary education.
- **CTE Model Curriculum Standards.** Revised and adopted in 2013, standards designed to help schools and districts develop high-quality curriculum and instruction so that students are college and career ready.
- **California Partnership Academies.** Small high school learning communities that combine academic and technical education with a career focus. This initiative has received state funding since the late 1980s.
- **Linked Learning pilots.** Twenty pilot sites throughout California organized as district-led initiatives that integrate career-themed pathways with high schools' organizational and instructional practices.
- **Expansion of approved a-g courses.** Work by the University of California Office of the President (UCOP) and funded by the California Department of Education (CDE) to expand the list of approved a-g courses so that it includes more CTE offerings that integrate academic and career content.

These and other programs, designed to help improve CCR, represent an evolution in the state's approach to funding and supporting CCR.

## The CCI Remains a Work in Progress.

As previously noted, the SBE adopted a revised CCI in September 2017. That revised version includes the following measures:

- results from the Smarter Balanced Summative Assessments;
- results from the Advanced Placement (AP) exams;
- results from the International Baccalaureate (IB) exams;
- completion of the a-g course requirements for admission to the UC and the CSU;

- completion of a CTE pathway; and
- completion of dual enrollment courses.

The state also identified a three-year implementation plan that includes consideration of additional career measures for inclusion in the CCI, such as work-based learning, internships, and industry certifications.[13]

A key challenge that the SBE faces as it continues to refine the CCI is capturing the breadth of knowledge, skills, and dispositions associated with CCR.[14] There are many pathway programs in use by schools, but the indicator includes only CTE pathways, primarily because they are included in the California Longitudinal Pupil Achievement Data System (CALPADS). A stakeholder group called Promoting Authentic College, Career, and Civic Readiness Assessment Systems (PACCCRAS) has recommended that the SBE expand the collection of data in CALPADS beyond CTE pathways to also include state-funded California Partnership Academies, Linked Learning pathways, NAF (formerly National Academy Foundation) academies, and district-developed college and career pathway programs.[15] The SBE may consider these or other recommendations as it continues to develop the CCI,[16] but currently there are many career pathway programs in use by school districts for which student performance data will not be captured by the indicator.

### Study Methodology

This study was divided into two phases. In Phase 1 (fall/winter 2016) we conducted semi-structured interviews with 27 state and COE officials familiar with CCR programs and initiatives. Interviewees represented members of the CDE, SBE, Office of the Governor, Senate Education Committee, California Community College Chancellor's Office, the CSU, and 13 COEs. The findings from this phase directly informed the development of research questions and methods for Phase 2.

Based on recommendations from these Phase 1 interviewees, the research team identified promising college and career partnerships and programs in different geographic regions of the state. Team members secured site visits with six programs in spring 2017. The sites chosen were spread across the state and reflected a range of CCR initiatives situated within various organizational structures, ranging from school-based programs to a regional consortium of districts, community colleges, and industry partners. These programs were deemed CCR programs based on their explicit focus on increasing students' readiness skills and their attempts to provide career exploration activities. We did not seek to assess program effectiveness; rather, we used these case studies to better understand the landscape of CCR activities in California.

Two-member site visit teams went to each selected site and conducted interviews with a total of 34 college faculty members, high school teachers, and related administrators and staff. We also conducted 11 student focus groups with 71 primarily community college students (a few focus group participants were high school students). In addition, we administered surveys to students to gather more information. Each site team then prepared debriefs that served as site case studies. For additional information, see Appendix.

# How State and County Office of Education Officials View CCR in California

The findings in this section are based on interviews with more than two dozen officials from the state and county offices of education (COEs). In the interviews, interviewees generally coalesced around several important themes and concerns, including the need for a coherent statewide approach to CCR. The interviewees also voiced concern about insufficient guidance from the state on readiness; the need to integrate college readiness and career readiness, both in program implementation and in state policy; the many challenges related to coordinating across K-12 and higher education; and the difficulties inherent in measuring readiness effectively.

### Interviewees expressed a desire for more state guidance about CCR.

> The state needs a broad set of parameters that doesn't rise to the level of a definition, but helps districts and COEs think about what an effective CCR program looks like.
>
> *–State official*

State and COE officials expressed a range of attitudes, and some misgivings, about the implications of California's lack of a statewide definition of CCR. An issue that recurred with both sets of interviewees was the difficulty of understanding what the state means by readiness when there is no definition. As many interviewees noted, this state of affairs leaves school districts and COEs on their own to create local definitions and to implement CCR programs that they believe have potential to be effective. While some COE officials reported that they appreciated having those responsibilities and regard this as an opportunity, others wondered aloud about the inevitable variation in program quality across districts and the state, and many state officials expressed this concern as well. On balance, most state and COE officials expressed support for additional, though modest, state guidance and direction.

Nearly all interviewees acknowledged a tension between the state promulgating a definition of readiness to which all districts would adhere and the principle of local control embedded in the LCFF. As one COE official told us, "The state is protective of local options because of LCFF." Another interviewee said the state's CTE standards could serve as a reasonable proxy for a definition. However, the interviewee also said these standards are not well known or used by educators.

A few interviewees advocated specifically for a statewide definition of CCR and expressed concern that, unless California adopts one, district and county program variation may swamp the message the state is trying to send about the importance of readiness to California's overall continuous improvement agenda. These interviewees found it problematic that, as one of them said, "The state doesn't speak with one voice" about CCR.

Other interviewees, though not necessarily longing for a statewide definition, said they were left somewhat at sea without more direct and deliberate guidance from the state. “We don’t know what the state expects” was the theme these interviewees sounded. When probed about the kind of state guidance that would be useful, they indicated they were not looking for a specific scope and sequence for readiness, but rather for clarity from the state on the elements of effective CCR programs. The COE officials we interviewed, for example, said they and the districts they serve would benefit from access to examples of CCR programs the state considers exemplary. Such examples could help districts begin to chart their own paths to implementing CCR programs that are both effective and adapted to their own circumstances and conditions.

An additional issue arose in our discussions with state and COE leaders. As they described programs they believed to be successful in imparting readiness skills to students, what became apparent was that many perceive the state’s gathering of student data about career pathways to be too narrowly focused on CTE pathways. They said that gathering data about CTE pathways is important, but that the state should expand these efforts to include pathway programs such as California Partnership Academies, Linked Learning and NAF pathways, as well as district-developed college and career pathway programs.

### The term ”college and career readiness” often bifurcates the concept of readiness.

> It still feels like a two-tiered system.
>
> *–State official*

Across the board, interviewees indicated that all students need the knowledge, skills, and dispositions generally associated with success in a contemporary workplace, including oral and written communication skills, the ability to cooperate with others, critical thinking skills, problem-solving skills, and effective time management. As one state official told us, “We need to prepare students for the day after [high school] graduation.”

Several interviewees, however, expressed concern that even the term “college and career readiness” separates college preparation from career preparation. Rather than describing an integrated whole, the term suggests two separate entities—and this bifurcation tends to be replicated in practice, with the unintentional consequence of delineating separate tracks for different students. Said one COE official, “When we use a phrase like ‘college and career,’ we are separating.” Another noted that the term “misses the overlap between college and career.” A third interviewee addressed the implications of this in practice: “There is a cultural shift required. [We need to] stop seeing [career readiness] as the stepchild and start prioritizing it in schools and integrate it with academics.”

Several interviewees said that a key aspect of effective CCR implementation involves increasing the range of postsecondary opportunities for all students, rather than providing select opportunities for different groups of them. As one COE official put it, “I’ve always thought that students should have opportunities for everything all the time. I think there should be a lot of on-ramps and off-ramps.” Other interviewees similarly emphasized the need for high schools to

offer a range of opportunities for students, so that no matter what they choose, no postsecondary option would be off limits.

We also heard that the state's emphasis on students completing the a-g course requirements required for admission to the UC and the CSU does not leave much room in students' schedules for CTE courses that support CCR. Said one COE official, "We want students to have options, but the way a-g is structured does not guarantee skill development." As a state official noted, "[In this state] we privilege a-g, [but] career readiness is often an afterthought." A COE official said, "This state has a college mindset."

Several interviewees noted that maximizing students' options and integrating academics and career readiness skills will require new kinds of teacher training and different approaches to professional development. Major challenges may involve aligning the training and orientation that teachers of academic subjects and of CTE receive. As one state official said, "Teachers of academic and technical courses work in silos."

### Interviewees want more collaboration between K-12 and higher education.

> We design a system that requires students to cross institutional boundaries to complete education, and yet the expectations about how instruction is delivered across are different.
>
> *–State official*

Nearly all interviewees agreed that collaboration between K-12 and postsecondary education is essential to implementing effective CCR programs, and almost every interviewee acknowledged that such collaboration generally is illusive, except when required for funding purposes. Words like "problematic" and "spotty" were common descriptors. Many blamed "turf issues" between K-12 and higher education. As one COE official explained, "The barriers are preconceived ideas, historical conflicts, attitudes from community college about how secondary [schools are] operating, and attitudes from secondary [schools] about how postsecondary is relating [to K-12]."

Several COE interviewees noted that their offices often serve as conveners, or as one COE official described it, a "convener and prodder." Some COEs have established regional networks that bring together school districts, institutions of higher education, and representatives of the local business community, and interviewees said that some of these meetings address CCR. These efforts, they said, depend on the leadership and initiative of local individuals rather than on statewide policies or practices. In short, where cross-sector CCR collaboration is concerned, state and COE officials generally agreed that more would be better—and that this would contribute to the success of CCR efforts in the state.

### Measuring CCR effectively and constructively is complex.

> College readiness has an agreed upon definition...Career readiness [just] has some skills associated with it.
>
> *–State official*

The means to measure student proficiency in academic content exists, though not all experts agree on the best methods to use. Indeed, educators, assessment professionals, and others continue to debate the efficacy of conventional standardized tests, performance-based assessments, portfolios of student work, and other kinds of measurement tools. The measurement of knowledge, skills, and dispositions associated with success in the workplace is even more complex and controversial. Appraising students' ability to communicate effectively, work in teams, manage time well, and the like is possible, but difficult, and assessments remain inexact.

Interviewees across the board were keenly aware of these challenges in talking about the development of a state CCI. As one state official told us, CCR skills are "much more easily observed than assessed." Another state official emphasized that any measurement indicator must accommodate a wide range of CCR approaches throughout the state: "We're designing a multiple-measures approach to the college and career indicator that doesn't penalize a school or over-reward a school for any particular emphasis—acknowledging that there are different pathways to college and career, and that it's not just how well you do on an SAT."

Many districts and COEs have been developing their own local CCR programs and their own measures for assessing them. A benefit of this approach is that the local measurement tools, compared with a statewide measure, may be better aligned with local programming. A drawback is that each district must develop its own valid and reliable methods for measuring CCR programs. This can be a heavy lift for districts and COEs, and it can result in wide variation in program quality and results statewide.

In addition, some interviewees said that existing assessments, such as ACT's WorkKeys, can effectively measure many workplace skills. But it is not clear what should be measured, and how and when. For example, some experts and several of our interviewees have suggested that workplace skills be measured after, rather than during, high school.

## Perspectives of Students, Teachers, and Administrators About CCR

To gain a better understanding of CCR, we sought to capture student, teacher, and administrator perspectives in the second phase of our research. Students become prepared for college and careers in a wide variety of ways. Understanding the challenges they face and the supports and experiences that benefit them can inform efforts to improve CCR programs and to further develop the CCI.

Our focus groups and interviews with students, teachers, and program administrators focused on student experiences in secondary school and their education and work experiences following

high school graduation. We asked students about their opportunities to build CCR skills, the challenges and barriers they faced, the skills they believed they needed to succeed in college and a career, the keys to developing those skills, and the best ways to measure those skills.

We asked teachers and program administrators about the academic knowledge and skills and the broader knowledge, skills, and dispositions that their students begin with at high school and that they develop before graduation. We asked about the curricular and work-based opportunities and supports that students receive in high school. We asked teachers to reflect on the effects of their individual schools' classes and programs on CCR. We also elicited their suggestions for measures to include in the CCI.

### Applied learning opportunities are essential for effective CCR programs.

The teachers, administrators, and students we interviewed emphasized the importance of providing ample opportunities for a wide range of students to participate in applied, or work-based, learning opportunities in high school and college. Students and faculty alike reported that there currently are insufficient opportunities.

> There are more kids than internships. …There are just not many companies in our community.
>
> *–District administrator*

At the CCR programs we visited, the kinds of work-based learning being offered varied from job shadowing and other shorter-term experiences to pathways that embedded such learning throughout a semester or year. Nearly all students we interviewed described the value they saw in being exposed to the world of work. As one student explained:

> *"Maybe instead of just taking a course, where you're reading out of a book and learning, it'd be so much more beneficial if you had a hands-on experience. So, if there is a program where you can go and…participate, even for a week or two, [in] a few different types of jobs that you might be interested in, I think that'd be so much more beneficial than just a course."*

Nearly all student interviewees who had participated in a CCR program offered compelling stories that demonstrated why the program helped them stay in high school and graduate. For example, one student said:

> *"Freshman year, I was on the verge of dropping out of high school…I didn't really want to do any school or nothing, but when I went to [the program], I found an interest in the [welding] shop. And then, by senior year, I was working with animals; I found an interest in that. So, it helped me out a lot."*

Several of the students who did not participate in a CCR program said they wished they'd had the opportunity to experience a work-based learning program and, in particular, the extra academic supports, smaller learning environment, and closer relationships with teachers and peers that such programs can provide. While some schools and districts simply did not offer such programs, students sometimes were not aware of the programs that did exist. A few

students noted barriers to their participation in a CCR program, including the small window of time they had to complete a-g course requirements and enroll in a dual enrollment or pathway program. Other students faced challenges with course scheduling. These findings point to the need for the state and LEAs to address the barriers students face in enrolling in such programs and to expand opportunities for them to participate in high-quality CCR programs.

The comments by teachers and leaders of CCR programs were consistent with what students told us. They recognized the need for in-class instruction and the value of providing them with hands-on learning experiences. These experiences included both project-based learning in school and work-based opportunities away from school. Several teachers said they had seen cases in which student participation in these kinds of experiences during high school made the difference between student success and failure. In addition, teachers reported that exposure to the world of work had other benefits. A teacher from a health program said:

> *"I want students to go on to college or technical school. I also want [to help] students to know what they want to do. We have students who end up going to college and majoring in something outside of medicine, like music and political science, but the academy helped them decide what they didn't want to do, so it was still beneficial."*

Some programs we examined offered more extensive hands-on learning opportunities than other programs. In general, career academies emphasized exposure to the world of work. A teacher in one such program said:

> *"Our goal is hands-on learning: mentors, job shadowing, [an] internship junior and senior year. Junior year, we focus on sports medicine—anatomy, physiology—…and work with the athletic director. Senior year, they can pick an internship in an area of interest to them. We have some clinics [where] we'll rotate them through all of the departments and some smaller offices, too. They have opportunities to do more internships. Some partnerships have summer internships, like [in] dental health."*

One CCR program that did not emphasize internships still provided multiple opportunities for career and college exploration, community service, and coursework designed to build the academic and behavioral skills necessary for readiness. This national program emphasizes preparation for both college and career, and it views such preparation as equipping students with one cohesive set of skills.

### Students and teachers expressed deep concern that high schools did not adequately prepare students for success in college.

> Are we trying to make students college-eligible or college-ready? I think we as educators do an okay job getting students college-eligible, but we do a horrible job getting them college-ready.
>
> *–High school teacher*

On balance, students in our focus groups were positive about their educational experiences, especially those in CCR programs. They reported that the teachers in their CCR programs helped boost their self-confidence and ability to persevere when confronting difficult challenges. Still, the students were not shy about the challenges they faced. Many described inadequate preparation and insufficient skills to succeed in college or other postsecondary programs. Even among students who were very positive about their CCR program, the majority reported that once they entered college, they realized they were underprepared. One student said, “They weren't lying when they were telling you it's just going to get harder.”

Other students echoed this sentiment and told us they were surprised by the demands of college, including the challenges posed by studying more independently (with less classroom time than in high school) and the expectations of college professors. As one student said, “I was excited [about] the idea of college and knew it would be harder than high school, but didn’t expect it to be [so] much more difficult than high school.” The teachers we interviewed generally concurred with this view. One teacher said, “When students go to college, what they struggle with the most is… the fast pace and rigor, and you don't always get that fast pace and rigor in high school.”

Many students in our focus groups who had not participated in a CCR program in high school were quite critical of their experiences in secondary school. While students in pathways programs reported that they generally were treated as capable adults (that is, teachers had high expectations of them and gave them corresponding responsibilities), some students who had not participated in pathways reported that they had not been treated that way, nor asked to assume that level of responsibility.

Likewise, the high school teachers we interviewed said that high school does not adequately prepare students for the environment they will face in college. Said one, “We need to do a better job not holding [students’] hands so much through the high school experience. We don’t wean them [during] junior and senior year like we should. When they get to college, they are slapped in the face.” A second teacher pointed to the challenges students face in the transition to college, reiterating the faster pace and advanced level of college work: “[In high school], students had someone coaching them.”

### Measuring CCR skills is challenging.

We also found general agreement among students, teachers, and CCR program administrators about the knowledge, skills, and dispositions that are crucial for CCR. Overall, interviewees pointed to the combination of academic knowledge and related communication and

computational skills (e.g., reading, writing, and math); inquiry skills (e.g., questioning techniques and deep understanding); organization (e.g., time management and study skills); and collaboration (e.g., team work). Some respondents also emphasized other personal qualities needed for readiness, such as resiliency, persistence, and self-confidence. Others mentioned basic social skills and employability skills, such as dressing appropriately, shaking hands, and making eye contact.

Regardless of a particular program's focus, high school teachers from each program saw common themes among the skills students need to be successful. One teacher commented, "Kids need to be able to talk in their field, no matter what industry they go into. They need to be conversationally proficient and to be able to communicate…."

Neither the teachers nor the students in our study were aware of the SBE's efforts to identify CCR measures as part of the new school accountability system. When asked about measuring CCR skills, teachers noted that, while many tools are available to assess the academic side of readiness, they were skeptical about the availability and effectiveness of tools designed to assess career readiness. They also cautioned the state about trying to measure these skills in high stakes ways, given the lack of reliable criteria and data related to career readiness.

To this latter point, interviewees questioned the state's ability to develop fair and reasonable measures of career readiness. They pointed to the burdensome amount of testing already underway and questioned whether it was feasible for the indicator to require yet another test. Many teachers acknowledged that their own efforts to measure CCR skills were largely subjective, but they said they did not think the state could do better. As one teacher told us, "I really don't know how to measure things like time management skills."

The students in our focus groups had not thought much about measuring specific CCR skills, and when pressed to identify factors that had helped them succeed, nearly all the students emphasized the critical importance of having a caring adult who attended to both their academic and social-emotional needs. They also emphasized the importance of having a safe and inclusive school climate, positive peer relationships, and committed teachers. In addition, they identified specific personal qualities that had helped them succeed, but that they considered difficult to measure, such as self-confidence and persistence.

### Relationships are key.

Often, a key part of students' experience at school is shaped by the presence of a caring adult who helps them feel safe and shows a commitment to their success. Thus, we were not surprised to find that students pointed to the importance of relationships in their educational lives. Students were frequently passionate in their praise for the special teachers, counselors, or principals who supported them. As one student told us, "I

> I guess what made the program successful for the students would probably be the teachers, because of their dedication for wanting you to learn—making sure you got the internships you wanted, making sure you were still ahead in class.
>
> *–Student*

know that I can always go to them... Like, if I'm having problems in my life, I can talk to them about it, or if I'm having problems in school, I can talk to them about it."

Most students in CCR programs identified a variety of supports they received that they considered essential to their progress. At the top of the list were close, supportive relationships with their teachers and other adults in their school. One student who had been in the health academy said, "They made sure that there were lots of opportunities. I was close to my teachers. They pushed…My principal read my scholarship application and helped me sign up for college and got me SAT prep."

Regardless of whether they were in a CCR program or not, students in our focus groups said they faced significant challenges associated with poverty, family problems, and the need to work while attending high school. These challenges made support from a caring adult at school even more valuable. Nearly all of the students said that their parents never attended college and could not help them with the steps needed to go to college. When we asked how many students had to work while going to school, almost every hand went up. Moreover, while some students said their schools and teachers had their best interests in mind, many reported that conditions at their schools impeded their educational progress. These conditions included bullying, the shortage of counseling support, too few caring adults, and poor teaching. One student reported that one of his teachers told him, "I get paid even if you don't learn."

When asked about the most important component of building students' CCR skills, teachers usually began by talking about specific skills and personal qualities. But when pressed, they, too, acknowledged the centrality of relationships. As one teacher told us:

> *"The thing they value the most [is] the meaningful adult. That is the beauty of the program, and it is family-oriented, and they have a safe person and a safe place with a cheerleader who will push them …. You can give the curriculum, but the belief [in them] is what gets the students through."*

This teacher said that measuring the impact of a concerned faculty or staff member on a student's educational life is best done after the student has graduated from high school and had some time to reflect. As she told us, there is so much going on in the lives of her students that "…one day they love you, and the next day they hate you." It is not until students get into college or a technical skills program, she said, that they can accurately assess how well-prepared they are and how effective their high school teachers were.

Reflecting on their experiences, teachers and students alike noted the importance, for any measure of CCR, of valuing and integrating both college and career preparation opportunities, so that more programs will be available to provide students with both academic knowledge and exposure to work-based experiences. Interviewees said the opportunities for students to apply academic knowledge and skills in real-world settings, to seek out mentors and support services in a supportive school community, and to cultivate those personal qualities that contribute to success in both college and career are invaluable for students' future success.

# Policy Implications

Our research is intended to supplement the work of a variety of groups that are helping to inform the state's efforts to refine the CCI and to otherwise support CCR program development and students' acquisition of CCR skills. Collectively, our discussions with students, teachers, and state and COE officials revealed important areas of agreement regarding the state's opportunities and challenges, the implications of which suggest actions the state ought to consider as it continues to build California's CCR profile.

As it works to refine the CCI, the state should:

1. **Determine who has access to high-quality CCR programs and then broaden that access.** In order to ensure access to CCR programs for traditionally underserved students in varying parts of the state, the SBE should: (1) request an analysis to gain a better understanding of current access to high-quality CCR programs, and, (2) support the expansion of programs for geographically and demographically underserved groups. The state needs to understand the geographic spread of the programs and of student populations with access to such programs.
2. **Identify and disseminate information about exemplary CCR program models.** The list of exemplars ideally would include descriptions of the various program elements that make them exemplary. Case studies could provide in-depth information about how certain elements were developed and implemented and about program successes and challenges. Districts and COEs could draw on this information as they develop and implement their own CCR programs.
3. **Expand the kinds of CCR programs included in CALPADS.** Both locally developed programs and national programs need to be included in the California Longitudinal Pupil Achievement Data System (CALPADS) or in other reporting mechanisms captured by the state's accountability system.
4. **Incentivize cross-system collaboration.** Greater cross-sector collaboration between K-12 and higher education and among education and business communities will enhance opportunities for regions to develop more coherent and integrated CCR infrastructures. This type of collaboration is evident in pathway programs, but it must be more effectively integrated or aligned across systems. Cross-system collaboration happens most often when there are funding demands or full-time staff whose jobs are focused on this cross-sector work. Investments in cross-system collaboration are critical to the development of sustained CCR supports for students.
5. **Refine the CCI, but proceed with caution in several areas.** First, our interviewees expressed serious concerns about the burden of additional testing on an already test-heavy system. Second, our interviewees questioned the accuracy of tests and other standardized mechanisms to measure many of the critical skills, and the knowledge and dispositions students need, to achieve readiness—and the kinds of incentives that standardized measures create. Finally, interviewees repeatedly expressed concern about the fairness of using CCR measures for high stakes accountability.

6. **Strengthen the CCI's focus on school climate.** Students in our study were nearly unanimous in asserting the centrality of having a caring adult guiding their academic careers and their CCR readiness. Relationships are a clear enabling factor in CCR and should be part of any indicator. Currently, measuring school climate is a separate component of the accountability system and one of the multiple measures of school effectiveness. Our research suggests that a school climate measure focused on student perceptions of the existence of a caring adult at their school should be central to the CCI.

California has taken important steps in creating overall policy coherence in K-12, in supporting a range of CCR programs, and in beginning to develop ways to measure CCR. As the SBE continues to refine the CCI for California's K-12 accountability system, we hope it will keep front and center the perspectives of students, teachers, and others who have participated in or managed CCR programs. Along with state and COE officials, these interviewees reported that CCR programs are important for students, particularly in offering them applied learning opportunities and personal relationships with caring adults. Indeed, our interviewees affirmed that CCR is difficult to define and measure, but agreed it would be useful to have some level of state guidance in identifying exemplary programs. They also believed equitable access to these programs for all students is essential. Finally, state and COE officials said that the state ought to expand the kinds of CCR programs about which it gathers student data so as to support the development and sustainability of a wide range of effective CCR programming.

In light of these findings, state officials should proceed with both purpose and caution in examining access to CCR programs, disseminating information about effective programs, and ensuring that the CCI does not limit the kind of high-quality CCR programs available to students. As the SBE moves forward in refining the CCI, this is a pivotal time to strengthen the sustainability and reach of exemplary programs - and to expand student access to them across California so that more students in every community will become college and career ready.

# Appendix

## Study Methodology

### Phase One: Interviews with State Officials and County Office of Education Administrators (Fall/Winter 2016)

#### Research Question

In the initial stage of research, we conducted exploratory interviews with various state and local policy leaders to better understand their views on a number of aspects of CCR. We sought to map the policies, initiatives, activities, instructional strategies, and professional development intended to improve students' postsecondary readiness. Specifically, our research addressed the following question:

- How do officials from the state and county offices of education view CCR programs and the state's College/Career Indicator (CCI)?

Our semi-structured interview protocol included questions about the state's vision for and definition of CCR, the role of the state in promoting and implementing CCR activities, and the roles of local K-12 districts, county offices of education, and postsecondary institutions.

#### Participants

In summer 2016, we conducted semi-structured interviews with 27 state and county officials familiar with CCR programs and initiatives. The officials were representatives of the CDE, the SBE, the Office of the Governor, the Senate Education Committee, the California Community College Chancellor's Office, the CSU, and 13 county offices of education. Interviews lasted approximately 40 to 60 minutes and were recorded.

#### Data Analysis

Detailed notes or transcriptions were created from interview recordings, and short summaries of key insights were distributed to the research team after each individual interview to inform future conversations. Structured debrief guides were then completed for each interview and shared with the entire research team in advance of a full-day analysis meeting in which major findings and themes were identified and discussed. The findings from this phase of the research directly informed the development of research questions and methods for the in-depth case studies described in Phase Two.

### Table 1: Phase one interviewees by role type

| Role | Number of Interviewees |
|---|---|
| California Department of Education | 6 |
| Office of the Governor | 1 |
| State Board of Education | 1 |
| Senate Education Committee consultants | 1 |
| California State University officials | 1 |
| CA Community College Chancellor's Office | 1 |
| COE administrators (representing 13 counties) | 16 |
| **Total** | **27** |

## Phase Two: Program Interviews and Student Focus Groups (Spring 2017)

### Research Question

Based on recommendations from state and county officials and other experts in the field, we identified promising college and career partnerships and programs in different geographic regions of the state as potential case study sites. By conducting in-depth case studies, we intended to bring educator and student voices into the policy discussion about the state's still-developing CCI and gain insight about how such an indicator might capture the experiences and competencies that students found most valuable in preparing them for postsecondary success. The main research question for this phase of the work was:

- What are students', teachers', and administrators' perspectives on CCR programs?

Our semi-structured interview protocols for staff members at community colleges, high schools, and partnership organizations contained questions about activities that prepare students to succeed in college and/or career, organizational capacity to implement college and career initiatives, and the sustainability of maintaining innovative programs. Students in focus groups were asked retrospective questions about the activities and programs that contributed to CCR and perceived barriers to their postsecondary success.

### Sites and Participants

Based on our initial outreach to eight different college and career partnerships, we secured site visits with six programs in spring 2017. These programs were deemed "CCR programs" based on their explicit focus on increasing students' "CCR skills" and on their attempts to provide some level of career exploration activity. There was large variation among programs.

One site utilizes a nationwide CCR program geared to first-generation college students. The program focuses on fostering students' academic and behavioral skills ("CCR skills") and provides students with primarily school-based career exploration opportunities. Another site is part of a nationwide network of high schools that integrates internships into the core academic

program. Students participate in internships two days a week and are encouraged to supplement these experiences with dual enrollment courses and articulated community college courses offered on their high school campuses.

Two of our sites represented direct partnerships between K-12 school districts and local community colleges. One of these partnerships centered on a newly created dual enrollment program geared toward specific CTE pathways. At the other site, we focused on a sector-specific community college pathway program that operated using a cohort model and actively recruited from local high schools. Finally, we visited two sites of robust regional partnerships. At one site, the county office of education is a hub for a consortium of high school districts and community colleges with pathways focused on three sectors aligned with the local economy. The consortium's work, supported by a California Career Pathways Trust grant, aligns curriculum between high schools and colleges and includes work-based learning activities. The other regional program includes a Linked Learning site that has historically represented a partnership between the county office of education and an industry-based organization and includes a number of CTE pathway programs.

Depending on the organizations and institutions involved in an individual program, we conducted interviews with county or regional program staff, college faculty and administrators, and high school faculty and administrators, for a total of 34 administrator/staff interviews. Interview participants were selected via "snowball" sampling, beginning with our contacts in the field who recommended faculty at the community colleges, local high schools, and/or regional education partnership staff involved in CCR work.

We also conducted 11 student focus groups attended by a total of 71 primarily community college students. The research team asked faculty, administrators, and counselors/advisors to help us gain access to/recruit students in pathway programs, resulting in variable participation at case study sites. Focus groups lasted approximately one hour, and students were provided lunch and $10 gift cards in exchange for their participation. All interviews and focus groups were recorded.

### Table 2: Description of case study sites and data collection

| Site | Urbanicity | Type of Program | Interviews | | | | Student Focus Groups |
|---|---|---|---|---|---|---|---|
| | | | County/ Regional Staff | District Staff | College Faculty | High School Faculty | Number of Students |
| North | Urban | HS program – integrated internships | | | | 3 | 2 |
| North | Suburban | District-CC partnership | | 1 | 1 | 1 | 9 |
| North | Urban | District-CC partnership | | | 3 | 5 | 6 |
| Central Valley | Rural | Regional CCR initiative | 2 | 2 | 1 | 2 | 23 |
| South | Urban | County-led CCR initiative | 1 | 2 | 3 | 1 | 21 |
| South | Suburban | School-based CCR program | 2 | | | 4 | 10 |
| | | | **5** | **5** | **8** | **16** | **71** |
| | | | **34** | | | | **71** |

## Data Analysis

After each site visit, the two-person site visit team created transcripts or detailed notes from each interview and focus group. Based on analyses of these data, as well as analyses of relevant program documentation and websites, each site team produced a detailed case study brief. These briefs were shared with the entire research team in advance of a full-day analysis meeting, at which we conducted a cross-case analysis to identify common themes and variation across the sites.

# Endnotes

[1] Warren, P., & Murphy, P. (2014). *Implementing the Common Core State Standards in California.* San Francisco, CA: Public Policy Institute of California.

[2] CDE (California Department of Education). (Undated). *California Accountability Model and School Dashboard.* Retrieved 9/13/17 from http://www.cde.ca.gov/ta/ac/cm/.

[3] Some examples include: Linked Learning, Career Pathways Trust, Regional Occupational Centers and Programs, Project Lead the Way, Virtual Enterprise, SAGE Programs, and YouthBuild.

[4] CDE (California Department of Education). (Undated). *California Accountability Model and School Dashboard.* Retrieved 9/13/17 from http://www.cde.ca.gov/ta/ac/cm/. See also CDE. (2017). SBE Agenda for September 2017. Website. Item 2: Developing an Integrated Local, State, and Federal Accountability and Continuous Improvement System, Sept. 13, 2017. Retrieved 9/13/17 from http://www.cde.ca.gov/be/ag/ag/yr17/agenda201709.asp and http://www.cde.ca.gov/be/ag/ag/yr17/documents/sep17item02slides.pdf.

[5] The soon-to-be-published volume, *Preparing Students for College and Careers: Theory, Measurement, and Educational Practice,* edited by McClarty, K. L., Mattern, K. D., & Gaertner, M. N., will be a comprehensive collection of research on CCR issues, including chapters on defining and measuring CCR, validating CCR performance levels, improving CCR, and future directions for CCR research.

[6] See for example: Conley, D. (2012). *A Complete Definition of College and Career Readiness*. Eugene, OR: Educational Policy Improvement Center. Retrieved from https://www.epiconline.org/ccr-definition/.

[7] Warner, M., & Caspary, K. (2017). *Access & Equity in Linked Learning: A Report on Pathway Access and Academic Outcomes for Traditionally Underserved Students*. Menlo Park, CA: SRI International.

[8] See for example: Huntsman, H., Hern, K., & Snell, M. (2016, October). *Capacity Unleashed: The Faces of Community College Math Pathways.* Sacramento, CA: The California Acceleration Project.

[9] Darche, S., & Stern, D., (February 2013). *Making it Real: How High Schools Can Be Held Accountable for Developing Students' Career Readiness.* Stanford, CA: Policy Analysis for California Education.

[10] See for example: Conley, D. (2012). *A Complete Definition of College and Career Readiness*. Eugene, OR: Educational Policy Improvement Center. Retrieved from https://www.epiconline.org/ccr-definition/.

[11] Fullan, M., & Rincón-Gallardo, S. (September 2017). *California's Golden Opportunity Taking Stock: Leadership From the Middle*. Thousand Oaks, CA: Corwin Press.

[12] Smarter Balanced Assessment Consortium. (Undated). *Reporting Scores.* Retrieved 9/14/17 from http://www.smarterbalanced.org/about/higher-education/. *Higher Ed Approved.* Retrieved 9/14/17 from http://www.smarterbalanced.org/about/higher-education/.

[13] See CDE. (2017). SBE Agenda for September 2017. Website. Item 2: Developing an Integrated Local, State, and Federal Accountability and Continuous Improvement System, Sept. 13, 2017. Retrieved 9/13/17 from http://www.cde.ca.gov/be/ag/ag/yr17/agenda201709.asp and http://www.cde.ca.gov/be/ag/ag/yr17/documents/sep17item02slides.pdf.

[14] Many of California's programs and initiatives focus on Deeper Learning, a term coined by the Hewlett Foundation, to refer to six interrelated competencies: mastering rigorous academic content, learning how to think critically and solve problems, working collaboratively, communicating effectively, directing one's own learning, and developing an academic mindset.

[15] Promoting Authentic College, Career, and Civic Readiness Assessment Systems (PACCCRAS) Working Group. Career Indicator Recommendations. Presentation to the State Board of Education and California Department of Education on April 17, 2017. Sacramento, CA.

[16] See Chorneau, T. (September 2017). CA Will Look to Other States for Career Readiness Answers. Sacramento, CA: Cabinet Report. PACCCRAS letter to State Board of Education (July 2016) recommending CCR indicators. Retrieved from http://cacollaborative.org/sites/default/files/PACCCRAS_Letter_to_SBE_07132016.pdf.

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