PATHWAYS TO POSTSECONDARY SUCCESS

Maximizing Opportunities for Youth in Poverty

POLICY REPORT

Measuring Institutional Conditions that Support Student Success in the California Community Colleges

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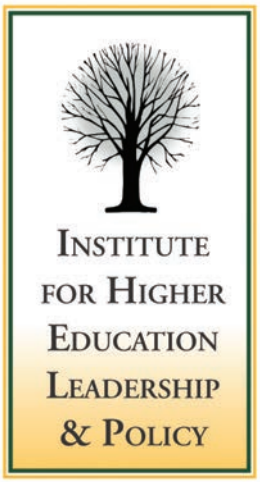

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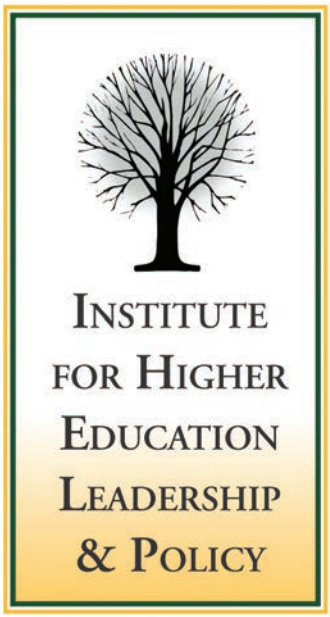

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Elements of a Framework to Report Institutional Conditions for Success

Community colleges are an essential component of the American higher education system. Some students enroll for job training or retraining, whether for individual courses or for certificates or career-oriented associate degrees. Others seek two-year degrees in liberal arts fields for the purposes of career entry or advancement. Still others may enroll with the intention of transferring to four-year institutions to earn bachelor's degrees. Open access policies and lower fees make these institutions especially important to students who, for a variety of reasons, may not have the academic preparation or economic resources to enter four-year colleges directly out of high school. They are a vital entry point for many first generation college students, who typically come from lower-income backgrounds, who are often students of color, and whose education is vital to the future of the country. For all of these reasons, we must attend to the success of community college students if we are to ensure equitable access to postsecondary education.

Scholars have identified numerous interrelated factors associated with success and failure among students in community colleges. These factors can be grouped into three categories:

1. *Student characteristics*, including academic preparation, financial resources, cultural familiarity with college, degree of commitment to achieving educational goals, and personal challenges such as family responsibilities;
2. *Student behaviors* once they enroll, including study habits and attendance, engagement in the academic environment, level of effort, and utilization of academic and personal support services; and
3. *Institutional conditions* that may help or impede students' progress, including matriculation processes, pedagogy, curricula, schedules, academic and student support services, organizational culture, and the physical environment.

Some of the student characteristics and behaviors may present greater obstacles to individuals who grew up in poverty and/or attended under-resourced K–12 schools; others may be equally challenging to all students, regardless of background. What the students arguably share, however, is their ability to access the resources offered by their institutions. Indeed, individual colleges have the most direct control over their own institutional conditions, and these conditions can be leveraged to affect students' personal circumstances and behaviors. For example, a college can develop close working relationships with feeder high schools to align secondary and postsecondary curricula and to inform high school students of what they need to do to become ready for college. This is especially important for students whose parents have not attended college themselves, since they are more likely to rely on others to guide them in the college preparation and choice process. Likewise, colleges can offer programs to address students' financial difficulties (e.g., book lending programs, installment payment options) and family obligations (e.g., child care services). And, they can encourage success by setting clear expectations and implementing campus policies that guide student behavior. With this interaction between institution and individual in mind, it is clear that we need a better understanding of what is happening on community college campuses with respect to support for students.

To date there has been a greater focus on factors that increase students' readiness to succeed in college than on the conditions that indicate institutional readiness to support that success. Most calls for improving community colleges focus on quantifiable outcomes: persistence, transition from basic skills to college-level work, awards, and transfer. But behind the statistics lie the institutional programs and policies that help students achieve these milestones. And so while state-level policies create parameters for student success, individual colleges are instrumental in creating the conditions within those parameters to support positive outcomes.

This paper is a step toward increasing attention toward institutional readiness. It focuses specifically on California's community colleges, where nearly one quarter of the nation's community college students are enrolled. With our attention set on the institutional level, we draw from the literature and from ongoing research to identify a set of indicators of the campus-level conditions that support student success. And with an eye toward operationalization, we also describe how community colleges might demonstrate that these conditions are in place on their campuses.

The University of California All Campus Consortium on Research for Diversity (UC/ACCORD) is currently exploring ways to promote college success and completion among low-income youth. Its "Pathways to Postsecondary Success" project, funded by the Bill & Melinda Gates Foundation, is gathering and analyzing data and conducting case studies and interviews with young Californians in order to bring a new depth of understanding to a body of knowledge that has previously been based largely on studies of registration data and evaluations of focused interventions. Drawing from this research and from earlier work conducted by Oakes (2003) on critical conditions for equity in college access, the Pathways project has developed a conceptual framework that includes five conditions for postsecondary institutions that are critical to student success:

1. College commitment to student success
2. High quality instruction and curriculum
3. Ongoing advising and monitoring
4. Integration of support services and resources
5. Streamlined pathways to completion

The Pathways framework offers definitions of these conditions as well as examples of college policies, programs, and services that may indicate their presence. The literature suggests dozens more examples.

Our tasks, as part of the larger Pathways project, were to (1) organize the voluminous research on the five Pathways conditions into a usable set of *indicators* of the presence of each of the five conditions, (2) identify available data resources that could potentially yield information about these indicators, and (3) look for alignment between the data and the indicators to suggest a discrete set of *metrics* that could be synthesized and shared with a wider audience. This set of metrics can then serve two purposes:

- Public accountability—to help students choose schools and to create incentives to improve institutional performance; and
- Institutional effectiveness—to help colleges identify the areas where they need to improve.

It should be noted that in the current context of mounting budget cuts and retrenchment, colleges are severely constrained in their ability to institute costly new initiatives to improve institutional conditions in support of student success. Any public accountability effort that may result from this work must recognize these hard fiscal limitations. Even as some changes must await better economic conditions, there are real opportunities to retool processes, reorient college cultures, and reallocate resources to create institutional environments that are more conducive to student success.

Definitions

Condition: Broadly-defined status of a college environment related to support for student success. This report uses the five conditions identified by the Pathways project.

Indicator: More specific aspects of the college environment that relate to each broad condition and signal its presence. Indicators are more directly measurable than conditions.

Metric: A specific construct from available data sources that expresses the degree to which an indicator, and thus the associated condition, is present.

There are myriad challenges to defining a set of indicators that can fairly and accurately capture a college's ability to promote student success. Likewise, it is difficult to identify valid metrics to account for the performance of colleges with respect to those indicators (see the **Definitions** box). We detail these challenges in the next section and explain how we worked within these constraints to develop a comprehensive set of indicators and metrics that signal whether, and to what extent, institutional conditions that help account for student success prevail at various colleges.

Measurement Challenges

Community colleges are complex organizations; they have multiple missions and serve many populations. Researchers and policymakers have encountered major difficulties in developing accountability systems that include valid and fair ways to measure student outcomes. Coming up with valid and fair measures of institutional conditions is even harder, as we explain below.

Challenges Related to Defining Indicators

No one best way. Researchers and practitioners have identified a reasonably circumscribed set of factors that improve student success, but colleges address these factors by implementing a huge variety of policies and programs. This diversity of approaches reflects the diversity of the students and institutions themselves. For example, high quality instruction for first generation college students who are English language learners may be quite different from best practices in career programs for returning adults. Indeed, the diverse backgrounds, needs, and goals represented by the students on any given campus require the use of diverse approaches to services. And at a broader institutional level, different faculty interests and skills may lead to different instructional approaches that are equally effective. For example, basic skills math may be taught effectively as part of a team-taught learning community or in an online, self-paced format. Likewise, different organizational arrangements at different colleges may lead to the same kinds of services being delivered in different configurations. New students may be effectively oriented to success through a formal course in one college and through individual advising sessions in another. Academic support may be delivered in the classroom in one college and through separate student services in another. Thus, it is impractical and invalid to attempt to identify a successful college environment by the presence or absence of an

individual strategy. It is necessary, therefore, to express conditions at a more general level than in relation to an individual initiative or activity.

Getting to quality. Because the conditions that foster student success generally involve relationships, processes, and the quality of thousands of interactions, determining whether they exist in a college poses enormous challenges. Having a college mission statement that stresses an institutional commitment to student success does not guarantee that faculty and staff understand what that means for their daily work lives. Students may receive advising, but the advising may not be of good quality or may not be attentive to the diversity of experiences that students bring to campus. So, beyond the challenge of finding good metrics to express qualitative phenomena, there are the more particular challenges of knowing what constitutes good quality and how to measure it.

To address these challenges related to defining indicators, we developed a set of criteria to limit them to those more likely to signal the presence of higher-order conditions for success. Specifically, indicators should be:

1. *Informed by research*. Evidence-based indicators are clearly preferable to those with only anecdotal, "common-sense," or inconclusive information about their impact on student success.

2. *Accommodating of multiple missions.* A set of indicators must collectively encompass the breadth of community college missions (academic, career and technical education, basic skills, adult education) so that colleges are recognized for supporting student success across the spectrum of students they serve.

3. *Sufficiently broad.* Indicators should allow for flexibility in design and implementation of policies and practices at a college to fit local circumstances rather than presuppose a specific means of achieving the relevant condition.

4. *Designed and implemented from students' points of view*. A significant priority of the current reform movement is to ensure that college policies and practices are designed first and foremost to be good for students, rather than for other institutional stakeholders. This means that indicators should favor institutional practices designed to accommodate the diversity of students' experiences and backgrounds over those designed to accommodate the preferences of faculty and staff.

5. *Courageous in the face of resistance*. Changes of substantial magnitude are needed to produce success, but change is hard and is often resisted. Indicators that signal bold efforts to make fundamental institutional change would be particularly welcome.

Challenges Related to Selecting Metrics for Indicators

Measuring qualitative phenomena. Most of the institutional data now systematically collected and published are inputs, activities, and outcomes that are recorded in financial, registration, and student records systems. Finding a metric for an inherently qualitative indicator may, in some cases, be an insurmountable task. For example, indicators of the "high quality instruction and curriculum" condition might include the presence of shared governance that supports experimentation with curricula and pedagogy and personal accountability for teaching quality. While this might be addressed in the

text of an accreditation report, it would not necessarily be available on a wider scale; it is probably not possible to capture it with a specific metric that would be applicable to all colleges. In other cases, quantitative but *imperfect* measures of the quality of a service or relationship can be acceptable. For example, there are survey items that could be used to report student perceptions of the usefulness of advising services. Or, with more effort on the part of college staff, there could be some assessment of whether the college requires instructors to distribute course learning outcomes to students early in the term and use them throughout the course. It will be important to guard against accepting misleading metrics simply to satisfy the desire for something measurable.

Example of Condition, Indicator, and Metric

Condition: High quality instruction and curriculum.

Indicator: Extent of active learning across the curriculum.

Metric: Percent of faculty who have participated in faculty development activities on promoting active learning.

Gaining college support. Owing to the scant availability of comparable quantifiable data, any comprehensive institutional conditions report would require significant effort on the part of faculty and staff to make more and better data available. For example, it could be useful for faculty and staff to submit regular responses to survey items or for colleges to provide relevant parts of accreditation or program review materials. It may also be advisable to have all colleges participate in outside surveys that are now used only by a subset of institutions. Some data that colleges now report are incomplete or inaccurate so colleges would have to expend additional effort to make them meaningful. This could involve costly modifications to existing administrative systems to provide information, for example, on student educational plans.

Example of Condition, Indicator, and Metric

Condition: Ongoing advising and monitoring.

Indicator: Comprehensive orientation provided to all incoming students.

Metric: College policy for mandatory orientation.

Colleges are already engaged in myriad accountability and institutional improvement activities and would likely resist additional work that was not perceived to advance ongoing efforts. College cooperation could also be threatened if the metrics used were not viewed as legitimate assessments of conditions related to student success. Faculty and staff are designing and implementing an impressive array of changes, drawing on research about student success, and learning to experiment with new approaches, measure the results, and share their findings. A set of proposed indicators and metrics, designed well, could offer colleges an opportunity to document these efforts as a foundation for setting resource and policy priorities to support further improvement.

To address these measurement challenges, we developed a second set of criteria to help identify specific measures, or metrics, that would be sufficiently valid and practical. Metrics should:

1. *Be aligned with other standards and reporting requirements.* Attention paid to each factor should complement other efforts toward improved outcomes and accountability.

2. *Meet the face-validity test.* Each metric should be reasonable to both internal and external stakeholders.

3. *Recognize that institutions will start at various levels of accomplishment*. Both absolute levels of factors and changes over time are important.

4. *Rely as much as possible on data-collection methods already in place.* This will minimize additional burdens to institutions and individuals.

5. *Possess sufficient stability.* Each factor should have continued relative importance, and units of measure must be defined consistently, so that year-to-year comparisons will be meaningful.

6. *Number no more than approximately twenty*. A limited set will focus attention on the most critical factors and make the workload manageable.

The next section of the paper discusses the existing sources of data available to institutional and academic researchers. That discussion is followed by descriptions of the recommended indicators and associated metrics, organized under the five conditions proposed by the Pathways project. **Appendix A** is a display of the indicators and the metrics that are proposed to measure them.

Resources for Selecting Indicators and Metrics

Sources for Indicators of Institutional Conditions for Success

A host of documents informed the development of the indicators described here. Although the bibliography contains a more exhaustive list of useful studies and reports, the following were the most central to the process and may be of particular interest to researchers and institutions:

- Various working papers from researchers at the Community College Research Center at Teachers College, Columbia University (http://ccrc.tc.columbia.edu/).
- *Basic Skills as a Foundation for Success in the California Community Colleges* (the "Poppy Copy") from the Research & Planning (RP) Group for California Community Colleges (http://www.rpgroup.org/publications/StudentSuccessBook.htm).
- Presentations at RP Group conferences (http://www.rpgroup.org/events/on-demand).
- Working papers from a joint project of UC Berkeley and the RP Group on approaches to basic skills instruction in the California Community Colleges (http://www.rpgroup.org/content/working-papers).
- Early findings from the Pathways case study teams in Riverside and Los Angeles.
- Recent reports with recommendations from the California Community Colleges (CCC) Task Force on Student Success, the President's Council of Advisors on Science and Technology, and the Little Hoover Commission.

It is important to note that the UC/ACCORD Pathways project is still underway. It consists of several studies that will increase information about the barriers that low-income youth face during their efforts to access and earn postsecondary education credentials. Among the project components are a survey of 2,000 California young adults and case studies of California youth and their

interactions with various educational institutions. The case study groups are focusing on community colleges in Los Angeles, low-income women in Riverside community colleges, and students' transitions from high school to postsecondary education in San Diego. We anticipate that the final reports from the three case study teams and the California young adult survey project will lead to findings that need to be incorporated into a revision of these proposed indicators.

Existing Sources of Institutional Data

There are several existing data sources that could serve as metrics in a future report on the necessary institutional conditions for student success. The purpose, accessibility, and relevant limitations of each are described in this section.

The California Community Colleges Chancellor's Office (CCCCO) collects student- and institution-level data for management and reporting purposes. Individuals can use its Data Mart to obtain FTE staffing by function, financial aid by type, headcount and full-time-equivalent student (FTES) enrollments, completions, student credit hours by type (e.g., credit, non-credit, basic skills), and some student demographics (e.g., race/ethnicity and gender). The database also includes extensive course-level data that CCC institutional researchers can use to study enrollment patterns. Analysts can track progress through multiple basic skills levels to transfer level courses, for example. There are very limited data items that would be of interest in measuring the extent and quality of matriculation services (e.g., admissions, orientation, counseling, and placement testing), but at present they are incomplete and unreliable.

College catalogs and schedules of classes can serve as sources of policies and instructional foci. They document offerings such as college success classes and learning communities, registration priority rules that might reward successful behavior, and similar indicators of successful practices. The catalogs will also likely display student learning objectives for each program, which can contribute to program coherence.

College websites are one of the important ways that institutions communicate with their constituencies. The sites can deliver important messages about commitment to student success and illustrate community outreach to high schools and employers. In addition, an institution that is transparent and inclusive in its improvement efforts will probably include on its website documents such as a strategic plan, recent self-studies and statistics used in accreditation, and descriptions of pathways to employment and transfer.

The California Partnership for Achieving Student Success (Cal-PASS), a program of the Institute for Evidence-Based Change, is a potentially rich source of data. This partnership collects student- and course-level data in detail from participating K–12 districts, community colleges, and four-year institutions. The Cal-PASS staff match records across sectors, and can generate reports that let institutions study articulation of courses, among other things, by comparing student outcomes in courses before and after transition from one sector to another. For example, for students in a particular high school whose highest mathematics class was pre-Calculus, Cal-PASS analysts can report on which courses the students took at participating higher education institutions and how they fared. Currently, all California Community Colleges and most K–12 districts have submitted 2010–11 data.

The Community College Survey of Student Engagement (CCSSE) is administered annually to samples of students in participating institutions. The full results for each institution and a summary of national results are published on the website of the Center for Community College Student Engagement at the University of Texas at Austin. The survey provides a wealth of information about students' reports of their extent of active learning, the accessibility of faculty, the quality of student services, and skill achievements. Students also answer questions about their goals, competing obligations, and educational backgrounds. The center's full research program and the survey questions can be found at its website: http://www.ccsse.org/center/. In 2011, 21 California Community Colleges participated. An additional 19 institutions administered the survey in 2009 and/or 2010, for a total of 40 CCCs with recent surveys. The results for all but one of them are available online. Since colleges are able to obtain survey results with student identification numbers, their institutional research offices can use the data to link student opinions with enrollment patterns and outcomes.

The Accrediting Commission for Community and Junior Colleges (ACCJC) is the official accrediting agency for two-year institutions under the purview of the Western Association of Schools and Colleges (WASC). The commission has adopted standards that require colleges to develop student learning outcomes (SLOs) for courses and programs, as well as means of assessing whether students are achieving them. Accreditation standards address issues like strategic planning, finance, and other factors related to institutional conditions for student success. Institutions create websites with reports and data linked to the standards. The commission publishes its decisions regarding accreditation, warning, and probation to indicate which institutions, in its opinion, are experiencing difficulties and which are meeting its standards. In addition, new rules require that the decision documents be made public so that researchers and stakeholders can see which standards an institution that is on warning or probation has failed.

The Integrated Postsecondary Education Data System (IPEDS), maintained by the U.S. Department of Education, is based on annual surveys of colleges. All postsecondary institutions that participate in federal financial aid programs are required to provide data on enrollment, program completion, faculty and staff, finances, cost, and financial aid. Some metrics could be calculated using IPEDS data, such as dollars per full-time-equivalent student (FTES) spent on particular functions. Comparability of the data may be restricted, however, due to institutional choices about how the offices that deliver academic support services are coded for reporting, and whether (and how) district office expenses are allocated to member colleges.

Potential Indicators and Metrics for Conditions Report

Any review of California Community College websites or perusal of conference presentations made by faculty and staff at these institutions reveals a wealth of initiatives designed to increase student success. Some of the programs benefit large groups of students without regard to income or family education status—for example, basic skills interventions. Others clearly address the particular needs of low-income and first generation students, including system-wide programs like Extended Opportunity Programs and Services (EOPS) as well as local efforts. It is clear that most institutions take this challenge very seriously, and they work hard to share their designs and results. A structured set of indicators, as laid out below, allows us to consider whether their efforts cover the breadth of

student experience and whether they are the types of efforts that research has suggested are most effective. Whether or not they are ultimately used to create a full report of the conditions for success at California's community colleges, the indicators suggested here could be helpful to individual colleges as they continue to refine their own efforts to increase student success.

The listing of indicators that follows is keyed to the five conditions for success identified by the UC/ACCORD Pathways project. While they are drawn largely from the widely cited research on student success, they also incorporate emerging findings from Pathways researchers. We first developed a comprehensive list, and then filtered the potential indicators using the criteria listed earlier. In order to illustrate how each indicator emerged from the various sources, we offer an example focused on distributed advising. This is an especially useful example because it serves to highlight the importance of designing programs and services that meet the particular needs of nontraditional college students, whether they are first generation, low-income, students of color and/or undocumented citizens.

The Pathways research findings are aimed at helping low-income college students, who are often the first in their families to attend college and who typically have not attended high schools with adequate resources to prepare them to navigate through their college experiences. These students may not arrive on campus acculturated to using formalized, traditional support services. While students whose parents did attend college will probably have some familiarity with these types of supports, early findings from the Pathways interviews suggest that first generation students are more likely to bypass student service offices and rely instead on personal relationships with faculty or staff members to receive services. With this in mind, it is clear that in addition to providing standard student service offices, institutions need to sensitize and train all employees to utilize "advisable moments" to steer students toward appropriate advising services that are more widely distributed across the college. This example illustrates how some indicators may not fall solely under one of the five conditions for success. Specifically, if a campus prompts and trains all employees to look for and use advisable moments, these efforts indicate an institutional commitment to success, a focus on ongoing advising, and the integration of services. To varying degrees, all of the proposed indicators presented this type of complexity.

The following sections take the five major conditions for success and suggest several indicators that might correlate with each of them. We describe each indicator that relates to more than one condition under the condition where it best fits. Each section includes a set of metrics that would indicate the presence—and, if possible, the scope or intensity—of the relevant indicator. The metrics measure the indicators either directly (e.g., through policies or data on inputs from the institution) or indirectly (e.g., through results from student surveys about activities, attitudes, and satisfaction). As discussed in a later section, these metrics may or may not be currently available.

In general, the indicators refer to activities that result from decentralized processes and actions currently under the control of individual districts and/or institutions. They do not include actions such as those recently recommended in reports from the Student Success Task Force and the Little Hoover Commission, which would require enabling legislation or regulatory changes. For example, changing Board of Governor (BOG) fee waiver rules to allow capping subsidized units should encourage students to adhere to a study plan, but this is not currently allowed.

The number of indicators and metrics offered exceeds a feasible number for a useful conditions report, but many of the indicators are unavailable at this time so it is worthwhile to begin with a larger set than is ultimately needed. **Appendix A** shows the entire list of indicators and metrics,

including their potential sources, and the feasibility of collecting them. If conversations with CCC staff and faculty further narrow the list of potential indicators, the complete list can still serve as a starting point for institutional conversations about a wider range of policies and processes that are hard to measure but are nevertheless worth assessing in a qualitative manner.

College Commitment to Success

> This condition refers to a college environment that fosters college completion for all students. College policies as well as the culture of the campus across multiple constituents (i.e., administrators, faculty, and students) should prioritize student success as the main mission and as the impetus of the accountability framework. We place this condition at the center because it sets the overall tone and climate of the college and helps to drive the other four conditions. (UC/ACCORD, *Critical Conditions for Student Success at Community Colleges*, draft)

The challenges facing community college students are cited at every turn: basic skills deficiencies, competing obligations to work and family, and often a lack of knowledge about how to navigate the system due to English language learner or first generation status. Many students are intimidated by very large, unfamiliar institutions with independent offices for every department and service, each seemingly with its own set of rules. Community college faculty and staff must create an environment that presents a coherent whole for students, who must be reassured that they can succeed and that the academic and support communities believe in and care about them. Student perceptions will be shaped by global messages, by individual interactions, and by processes that offer referrals and safety nets. Therefore, we have sought indicators that the institution has designed the global environment to support students effectively, and that students are aware of and know how to access these efforts.

Strategic plan focused on student success guides actions. Leadership is essential to establishing a culture of student success, of innovation, of priorities reflected in the allocation of resources, and of competency throughout the organization. Public pronouncements and concomitant actions set the stage for demanding the necessary and corresponding efforts from students, faculty, staff, and the community. Grass roots efforts by faculty and staff can be effective on a small scale, and can grow into major programs with college-level backing. But widespread change is often sparked by a vision that is developed through a comprehensive initiative. The Long Beach State Education Partnership, for example, links K–12 schools with higher education institutions to ensure that more students finish high school prepared for college. Strategic planning can also accomplish widespread change; such a plan articulates what success would mean for the institution's students and community. The plan should outline a pathway to achieve the goals, with sufficient specificity to guide initiatives and any necessary reallocation of resources, and should be public so that progress can be assessed. A metric would be whether the institution has a strategic plan that highlights student success, perhaps based on a review of the college's website.

Collaborative efforts focus on student needs in both instruction and support services. The Pathways conditions emphasize the importance of programs that cross organizational boundaries. These may include collaborations across academic department lines, such as learning communities and integration of basic skills instruction with academic and career technical education (CTE) programs.

Many community college students—particularly those who come from low-income backgrounds—spend little time on campus due to work and family obligations; some associate the use of support services with feelings of failure, intimidation and academic stigma. Collaboration between faculty and support staff may connect students with services that are crucial to success. De-mystifying services by bringing demonstrations into the classroom or giving credit for using tutoring and skills labs can provide exposure to such services and make them less threatening; requiring use by all students reduces the stigma.

Faculty–staff collaboration is also important in the development of academic support. Tutoring services and skills labs should be designed as integral parts of course offerings, with complementary curricula and pedagogy. When these experiences are not coordinated, students can be confused by competing approaches to solving mathematics problems or composing essays—a problem addressed by faculty involvement in designing academic support services. In this case, a metric is difficult to identify other than to ask colleges whether such cooperation is widespread.

Metrics for collaborative efforts (e.g., learning communities) could be the existence of such programs, which could be determined using course catalogs and websites. To determine the extent of these programs, it would be necessary to obtain data from institutions themselves about enrollments. An indirect and limited measure of collaborative efforts is available for some institutions through the CCSSE, where students are asked whether they have participated in learning communities.

Distributed advising system encourages trained staff to engage in advising and referral whenever possible. The distributed advising effort described earlier could also be used as an indicator, although the research basis for it is preliminary. This could only be measured by a survey of faculty and staff development efforts to indicate whether potential advisors are trained in effective advising practices, with an emphasis on advising for different socio-cultural groups.

A robust institutional research (IR) office collects data and analyzes whether academic and student support programs are effective. The results should be disseminated widely and discussed by faculty and staff. IR staff should be involved in strategic planning, academic senate discussions, and other important venues related to campus policies and practices in order to insure that they are fully informed of the operations around campus, are working on the most important issues, and are sharing information where needed. Another tool for shaping, informing, and using institutional research is a faculty–administration committee that sets research priorities and promotes the use of research in planning. The number of FTE devoted to institutional research could serve as a metric for this indicator.

Students receive strong messages about the institution's commitment to their success. There are several CCSSE questions that solicit general satisfaction and these could be used as metrics. One such question asks whether the student would recommend the institution to a friend or family member; there is little to discriminate performance, however, since at almost all colleges 90% or more of students respond "yes." The range of results for students' ratings of their entire educational experience is somewhat wider; 74% to 90% respond "good" or "excellent." Other questions that might speak more directly to success ask how much the college encourages students to spend significant amounts of time studying, and how much it provides the support students need to succeed.

Faculty demonstrate commitment to student success. This could be measured through a CCSSE question that asks students to rate the degree to which faculty are available, helpful, and sympathetic.

High Quality Instruction and Curriculum

> This condition requires classroom instruction that is rigorous and provides students with the skills needed to succeed in the current labor market. To have high quality instruction, colleges must have qualified instructors and a rigorous curriculum. (UC/ACCORD, *Critical Conditions for Student Success at Community Colleges*, draft)

Indicators of high quality instruction should address both the design of the curriculum—alignment with student learning objectives, articulation with K–12 and transfer institutions, and recognition of current research on learning—and the quality of delivery. The Pathways framework focuses on high standards, academic support, and faculty attitudes. It suggests components such as high expectations of all students, an ethic of care, bridge programs, professional development on pedagogy and curricula, and regular monitoring of student learning throughout each course so that problems can be addressed early.

Neither the Pathways project nor this analysis suggests specific instructional solutions (or using their prevalence as indicators). Such an approach is not feasible because of the diversity of student preparation and cultures, faculty ability to successfully employ certain pedagogies, mission mix, resource availability, and embedded curricula and initiatives. For example, integrating basic skills material into academic courses using supplemental instruction may work for students who are relatively close to the placement cut scores, but not for those who place three levels below. What can be expected across the board is evidence of the process of continuous improvement, using evidence to evaluate curricula and pedagogy as well as the success of coordination with academic support services.

Faculty help students see meaningful pathways to their goals. They encourage success by communicating the student learning objectives (SLOs) of each course and the academic program in a coherent and efficient way, reducing the attrition that can occur when students see a program as a random collection of required courses. Faculty and relevant staff should coordinate the full range of learning resources, including classroom, skills lab, and tutoring. There should be evidence that faculty are using approved SLOs to guide course curricula and that grading standards are reasonably consistent; this is particularly important in departments with high use of adjuncts and where sequences are involved, as in basic skills, the sciences, and CTE. Metrics could include whether faculty are required to distribute SLOs and refer to them throughout the course, and whether faculty use periodic common exams or other means of ensuring consistent curricula.

Professional development promotes best practices in pedagogy. It is essential that faculty, who are trained in their disciplines but often not in pedagogy, be prepared to teach in ways that promote student success. California legislation requires permanent community college faculty to spend 41 hours annually in "flex" faculty development activities. Adjunct faculty must participate to the extent that they would have been scheduled to teach on flex days. Each college must document these activities, and at least some institutions do code time spent by topic, including items such as pedagogy and research on how people learn. A metric could measure the average hours of faculty development in the last year on these topics.

Faculty incorporate information about learning into the curriculum. The CCSSE asks students about the prevalence of writing multiple drafts of papers, working with other students on projects during class, tutoring other students, and engaging in community-based projects as part of a course, all issues that could reflect faculty use of good pedagogy. One or more of these items could serve as metrics.

Faculty have high expectations of all students. A CCSSE question asks students how frequently they have worked harder than they thought they could in response to a faculty member's expectations; another asks how much the exams have challenged their abilities. Either or both of these items could serve as metrics for this indicator.

Faculty focus on skills relevant to preparation for employment or transfer. Several CCSSE questions ask about the degree to which students' college experiences have contributed to job- or work-related skills and knowledge, writing clearly and effectively, thinking critically and analytically, and solving numerical problems. There are obvious limitations to the reliability of student self-assessments of their own intellectual growth, but there may be value in the relative measurements across institutions.

Policies encourage students to complete courses by restricting withdrawals and late registration and by enforcing prerequisites. Research shows that a student who fails a course is more likely to succeed in a second attempt than a student who withdraws. Moreover, a late withdrawal wastes resources, as another student has been prevented from taking the course. Policies that enforce prerequisites protect available seats for students with the academic preparation to succeed. Adherence could be measured by reviewing college policies to see how lenient the institution is with regard to withdrawals and prerequisites. Direct data on withdrawals should be attainable.

Institutional research informs faculty hiring and review. IR staff can use data to identify less effective instructors. The information can be used to help faculty develop their skills, or, failing that, identify instructors who should be let go (within the bounds of contracts and tenure rules). Measurement of this indicator would have to be based on a survey of the colleges.

Ongoing Advising and Monitoring

> This condition refers to supporting students in planning their postsecondary goals from entry to completion. Key areas of advisement include communicating to students the academic and transfer requirements that must be filled and determining the additional resources and support services needed. Advisement should be ongoing to monitor student progress towards completion throughout their college pathways. (UC/ACCORD, *Critical Conditions for Student Success at Community Colleges*, draft)

Prospective and enrolled students may encounter advising in a variety of contexts, including from high school counselors, at orientation, in formal advising offices, via college catalogs and websites, from faculty or staff in academic departments or in other support offices and programs such as CalWORKS, or from current and potential employers, peer advisors, and other students without training in the area. The Los Angeles Southwest College matriculation website, for example, lists five different offices with counseling services. The range of knowledge about program requirements and the use of good advising practices among the institutional and external sources will vary widely.

In addition, many students actively avoid orientation and advising. On the CCSSE, one third of CCC respondents said they rarely or never use advising services, and 12 percent reported that advising services were not relevant for them. This may be due to students' lack of knowledge about the function of advising, uncertainty about their goals, feelings of intimidation, perceived language barriers, prior experience with poor advising, or an inability to get timely and convenient appointments. Some students may fear the testing and potential confirmation of basic skills deficiencies, with the implicit message of failure and years of additional work. Others may have attended another postsecondary institution and conclude that they know enough to navigate the system on their own.

Whatever the cause, it is clear that institutions need to minimize and counter misinformation as well as deliver accurate assistance. Moreover, they need to recognize two types of students: those who will willingly use the standard centralized processes, and those who need approaches that take into account prior negative experiences and/or any reluctance to access standard processes. The indicators suggested here address the institutions' efforts in both areas.

Users of these indicators would need to recognize that much of an institution's ability to support student success in this area is constrained by funding levels and the 50 percent law, which specifies that half of an institution's resources need to be spent directly on instructors. Thus, these indicators—pending flexibility in spending—are in part a way to find out how creative an institution has been in delivering advising within the boundaries.

Sufficient resources are dedicated to the core advising function. Metrics could include the ratio of student headcount to advisor FTE and the percent of first-time students that see an advisor in the first term. The system Data Mart includes information on FTE staffing by activity code, so a metric could include the FTE devoted to counseling and guidance as a share of total staff FTE. Likewise, IPEDS includes information on expenditures by category, with a relevant metric here being expenditures on student support as a share of total expenditures.

Mandatory orientation and advising policies are in place. Making orientation and advising mandatory will bring additional students into the process, and institutional research can support adoption of these policies by analyzing outcomes for participants and non-participants. The Chancellor's Office MIS data include variables indicating students' receipt of orientation and advising services, although the data are currently of questionable quality, and using the data as metrics would require special data runs, as they are not part of the Data Mart.

An early warning system identifies students in need of support. Early warning systems, where a faculty member initiates a warning if a student is at risk of failing a class, can be effective in getting students to access support services. In some cases the faculty member makes contact with the student, and in other models a student services staff person or an automated message is employed to suggest that the student take advantage of tutoring or a skills lab, or seek help for financial or personal problems. Metrics could include the number of early warning system triggers and retention outcomes.

Students have access to matriculation services throughout their attendance. Students who avoid the initial matriculation process (e.g., admissions, orientation, placement testing, and initial advising) and subsequent advising may be interested in using the services later. For example, a substantial percentage of already-enrolled students who took the CCSSE survey reported intending to take orientation, college success and/or basic skills classes. This suggests that colleges need to

meet non-traditional students where they are—with recurring offers of advice about succeeding that are adapted to continuing students. Metrics could include whether the college offers special matriculation services for re-entry, transfer, and other students who already have postsecondary experience, and whether it uses a distributed advising approach.

Integration of Support Services and Resources

> This condition addresses the multiple types of support services and resources that promote student retention and achievement. It requires a network of integrated services that diagnose students' needs and direct students to multiple resources to meet those needs. Services that need to be integrated include but are not limited to: financial aid, counseling, tutoring, transfer centers, career training/counseling, childcare, CalWORKS, Extended Opportunity Programs and Services (EOPS), psychological services and student civic clubs. (UC/ACCORD, *Critical Conditions for Student Success at Community Colleges*, draft)

Since virtually all California Community Colleges already have core student support offices, the question is whether these offices work cooperatively and proactively to guide students to relevant services. Clear delineation of the roles and responsibilities of each office and clear messages to students about each office's services are essential. Appropriate naming of offices and services can help.

The indicator that might be most helpful for this condition is institutional research about student usage (or non-usage) of each service, resulting in a profile of students who might benefit but do not seek assistance. The service offices could then use this information to try to determine whether the issue is one of service quality or lack of information on the part of the student. For example, the CCSSE survey asks whether respondents have children, whether they use campus childcare, and—if they do—whether they are satisfied with it. Further research about those students could probe reasons for non-use—for example, whether they are night students, if they would have difficulty transporting children to campus for care, or if their children are beyond child-care age. The answers to these types of questions would inform efforts to better meet student needs. There is no additional indicator included here for this item because it should be addressed in the institutional commitment to success IR indicator.

Staff members provide services and referrals proactively. This work must be done with sensitivity to the variation in student preparation, postsecondary acculturation, prior experiences, and often complex work and family obligations. A CCSSE question asks about the degree to which administrative personnel and offices are helpful, considerate, and flexible, and these findings could serve as a metric for this indicator.

Student services are conveniently located and easily accessible. We note that improving referrals between support services offices may depend on directing students to specific individuals rather than more generally to other offices. Students in the Pathways Riverside study, for example, cited a staff person in a program office who directed them to particular individuals in the advising office for assistance. Office co-location and common cross-training events could build such relationships. Metrics could include whether the various student services offices (counseling and advising, financial aid, etc.) are co-located, as well as some measure of the extent of evening and weekend service hours.

Streamlined Pathways to Completion

> This condition relates to curricula and programmatic pathways that are designed for easy navigation for students from entry through completion. This condition also ensures that programs and instruction provide direct linkage to jobs with current value in the labor market and/or curricula at four-year universities. (UC/ACCORD, *Critical Conditions for Student Success at Community Colleges*, draft)

Pathways to completion start well before students arrive at a community college. Several programs inform high school students about the need for preparation and provide early assessment; results of Early Assessment Program (EAP) testing—pioneered by the California State University system—are accepted by some CCCs as an assessment of college readiness for the purposes of course placement. The CCC Chancellor's Office is initiating a program to advertise the savings in time and expense derived from preparing well in high school. The existence of such programs is an important indicator of a focus on pathways. Effective placement and progress in basic skills courses are probably the biggest issues in successful pathways; indicators of how institutions promote them are key. Pathways issues within community colleges extend from basic skills through connections to employment or further education, as reflected in the indicators suggested here.

Clear messages are sent to K–12 students, teachers, and counselors about college readiness standards. Due to the open access policy at CCCs, many high school students believe that they do not need to prepare for college level work; placement into remedial classes comes as a shock to them. CCC outreach programs seek to inform students about the need to take challenging courses in high school. Regardless of the level of student preparation, however, the variety of assessment tests and placement standards used at different colleges that may seek to enroll the same students complicates the process from the students' point of view. Metrics could include whether colleges accept EAP results to waive assessment requirements and whether they accept test results from other colleges.

College offers pre-assessment/placement testing assistance. Proactive preparation for assessment testing can help students place higher if their skills are simply rusty, rather than deficient. To counter the real possibility of faulty placement (for whatever reason), metrics could include whether incoming students are forewarned of the importance of placement testing and offered a means of preparing for it, and whether policies allow for re-taking assessment tests.

College carries out a continuous improvement effort in articulation. Close articulation of curricula with both K–12 and transfer destinations is essential to effective pathways. Articulation efforts might first be focused on analyzing Cal-PASS data to see where gaps in articulation occur. Collaborative efforts should then follow to align curricula. This will be especially important to the extent that K–12 has the funding to implement the new Core Curriculum. Cal-PASS data can also highlight where students are backtracking or skipping steps in math and science progressions as they move from K–12 to community college. This information can be shared with advisors and through the outreach process to foster efficient pathways. A metric could be whether the institution uses Cal-PASS analyses of success rates in sequential courses across segments.

Incentives promote successful enrollment behaviors. Research suggests that community college students who declare a program of study, attend school full time, and complete 20 or more units during their first year are more likely to succeed. Thus, a useful indicator might show the institution promoting these actions through priority registration, fee incentives, or other means.

The Chancellor's Office MIS data include variables indicating whether students have been assisted in making individual education plans, although the data are currently of questionable quality and are not in the Data Mart, requiring a special data run.

College provides roadmaps to completion of programs. Another indicator is suggested by early findings from the Pathways study site in Riverside. A counselor for the CAP program took the list of courses offered by standard advising and converted it to a term-by-term plan, talking each student through the plan so he or she understood how it fit together. She also offered strategies to follow if a prescribed course was full in a designated term. Interviews revealed the value students placed on this type of translation, because it gave them a coherent term-by-term course list that moved them toward their goals. This is consistent with research from the CCRC, which shows that more prescribed pathways can assist completion for some students. The financial resources to provide such intensive counseling for all students may be unavailable, but examples of standard plans may be provided to large groups of students through orientation, program-specific e-mails, department web pages, etc. Importantly, some students who find it challenging to organize a course of study may not want to be unnecessarily confined to a specific pathway; in these cases, as long as the pathway remains an option, not a requirement, it can increase the chances of completion. The percent of academic programs that provide term-by-term roadmaps for students could be a metric for this indicator.

Class schedules facilitate efficient pathways. The Pathways framework emphasizes the need for regular and sufficient course offerings to meet student demand. Students benefit when colleges ensure that sufficient seats in sequences are offered in sequential terms, and when they offer courses that are likely to be taken concurrently at convenient, non-competing times. Campuses that capture future term course plans electronically can use them to plan future offerings. Given the current funding shortfalls this is an impossible standard for many campuses to meet. Nevertheless, there should be a process that refers to mission priorities and equitable treatment of various groups of students (e.g., day and evening attendees) in allocating scarce teaching resources. Existence of such a process is the metric in this area, as is a sampling of course availability for selected programs.

College focuses on pathways beyond the community college. Current transfer reform legislation, SB 1440, has the potential to construct more streamlined pathways to four-year institutions. Under this legislation, each college must adopt new degrees for each discipline. Accordingly, two good metrics of the availability of this pathway would be the number of transfer associate degrees adopted at a college and the portion of associate degrees awarded that are of the new SB 1440 variety. Because pathways for CTE students need to prepare them for employment, an indicator should show how thoroughly the institution consults with community employers in developing and assessing CTE programs, developing internship opportunities, and placing students. Metrics could include survey information on the extent to which college CTE programs survey employers about the quality of graduates and work with employers to develop skills and competency standards for programs.

Are the Data Available and Will They Be Useful?

Appendix A provides a full list of these proposed indicators, suggests metrics for each one, and notes potential data sources as well as data limitations or difficulty of collecting the information. Much of the information required to measure these indicators is not currently published. While some relevant information is gathered by the colleges, only some of this is sent on a regular basis to CCCCO and included in the MIS system. Thus a "scorecard" on institutional conditions related

to student success would require the cooperation of the institutions, a complete set of definitions that could be applied to a wide variety of organizational structures in the colleges, and a collection methodology for producing what we have called the "Success Indicators Survey" in **Appendix A.**

One issue that would need to be considered in the development of an indicators report relates to the frequency of data collection and therefore to resource cost. Many of the metrics identified would not yield significantly different results from year to year, and the cost of collecting and preparing the data would be high. Any survey, like the Success Indictors Survey we reference, involves high costs of administration. We suggest that some data might be collected from college websites and catalogs once definitions are refined to accommodate the substantial variation across institutions in the types and level of detail of information included in these sources. But poring over 112 college catalogs and websites entails a considerable expenditure of time. Thus, in light of these resource implications, it might be reasonable to expect that an indicators report would be updated every few years, but surely not annually.

The final reports from the UC/ACCORD Pathways teams may be of significant help in determining how to measure some of the indicators. For example, to the extent that students report that learning communities or early warning systems have made a difference for them, the means by which they were prompted to take advantage of these opportunities could lead to fine-tuning the metrics related to those issues.

Most of the relevant data that are available outside the CCC system come from the survey administered by the Center for Community College Student Engagement, in which only a subset of CCCs currently participate. The Center does not want the survey to be used to rank colleges, so it does not allow the data to be downloaded to enable side-by-side comparisons of institutions. Any such comparison requires the user to review individual college profiles on the website and enter the relevant figures into a local data repository. (The exception is that colleges can download their own data for deeper analysis.) In an effort to test whether wider use of the CCSSE would contribute to indicator scorecards with meaningful information about the range of practices across the CCCs, we copied into a database the data for the 39 CCC institutions for which they are publicly available. We analyzed the frequency responses for items that were selected as potential indicators. (There are approximately 120 items; 15 are included as possible metrics.)

Appendix B includes three charts that display these data. In keeping with the expressed intent of the Center, our intent is *not* to rank the 39 colleges on these measures, so we have used codes rather than institution names. Our goal was to find out whether the data suggest that student responses are usable as indicators of college efforts to improve student success. There is some qualitative information about the institutions available for this assessment, since the literature refers to several well-regarded instructional, matriculation, and academic support initiatives at particular institutions. We compared the existence of these efforts to student responses about related services at the colleges.

Several cautions are in order. The survey respondents include some students who are in their first terms, and who may not have made extensive use of services yet. Respondents may also be taking only one course at the institution while their primary affiliation is somewhere else. The respondent set may or may not be a representative sample of colleges in terms of programs, demographics, unit accumulation, student preparation, etc. In addition, self-assessment of growth of skills and service quality, with only minimal labels for the survey choices, is subject to wide variation of respondent

standards. With these caveats in mind, we make the following comments on the data displays:

Display 1 charts students' reported frequency of working on projects with other students during class. This is as close to a measure of active learning in class as the CCSSE contains. There is little variation in the responses. Institutions that appear from the review of the literature to be devoting significant effort to active learning include College II and College BB; they are among the colleges with higher frequencies of "often" or "very often" responses. However, no review of the literature can fully reflect practice; the actual levels of active learning at the other institutions displayed are unknown.

Students were asked how much their experiences at their colleges had contributed to their knowledge and skills in various areas. **Display 2** charts their responses concerning their ability to solve numerical problems. Response options include "very little," "some," "quite a bit," and "very much." While there are not radical variations among the participating CCCs, a few institutions did demonstrate relatively higher rates of having contributed "very much" (e.g., College KK). One use of the scorecards could be to point toward potential best practices. This student self-assessment would need some independent confirmation of a differential gain, but it may be a starting point for exploring pedagogical and curricular approaches.

Display 3 attempts to measure institutions' degrees of success in convincing students to use support services. It compares the percent of students who stated transfer as a primary goal with the percent who reported using transfer services "sometimes" or "often." As shown, usage is on the order of half (or less) of those who cite transfer as a goal. A few institutions display high usage relative to the percent of students with a transfer goal (e.g., College LL). This may simply be a result of the way that support services are organized at particular colleges, but again it could be a starting point for inquiry into best practices.

Conclusion

The goal of identifying, defining, and measuring indicators of the extent to which community colleges are creating conditions for student success is extremely ambitious. Community colleges are incredibly diverse and the students they serve have a range of needs, interests, and goals. The list of indicators shown here is a useful starting point, but it is far longer than any reasonable scope for a scorecard. In addition, it suggests that a final, feasible scorecard would fall far short of the full reach of important factors in play. Still, the need for such a scorecard is great, because these institutions represent such an important entryway into postsecondary education for many students who might not otherwise enroll.

We are faced with certain undeniable challenges as we move forward in devising this set of indicators and metrics. For example, available research results on the efficacy of many of the policies and practices touted as contributing to success are ambiguous at best; counter-arguments could be made about several of the indicators listed above. Moreover, it is not at all clear that the related measurable items are the most critical to success. Yet, if proposing them stimulates discussion about whether they are the most important factors and how one might assess their presence, this can contribute to the process of continuous improvement.

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Appendix A:

Sources and Availability of Potential Indicators of Institutional Conditions of Student Success

Indicator	Conditions	Metric	Data Source	Data Limitations
Commitment to Success				
Strategic plan focused on student success guides actions.	C	Strategic plan goals highlight student success (Y/N)	College website	Availability uneven, labor intensive
		Type of most recent accreditation action (probation, interim report requested, full accreditation renewal)	ACCJC (WASC)	Specific reasons for ACCJC actions may not be clear, although ACCJC reports are becoming more widely publicly available
		Publicly available documentation of reallocation to support strategic plan goals (Y/N with examples)	College website	Availability uneven, labor intensive
Collaborative efforts focused on student needs in both instruction and support services.	C, I, A, S, P	Learning communities are offered and/or basic skills are integrated with CTE and content courses (Y/N)	College website, catalog	Availability uneven, labor intensive
		Percent of students who have participated in learning communities	CCSSE	Only subset of colleges participate
		Faculty and staff work together to design academic support (tutoring, labs, office hours, etc.) and integrate it with classroom instruction through in-class presentations/dramatization, skills lab assignments, etc., and/or support service use is rewarded in the grading process (Y/N with examples)	Success indicators survey (SIS)	New survey needed; questionable value depending on how designed, response rate, and who fills it out
		Release time is provided to faculty for academic support services development (Y/N)	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
Distributed advising system encourages trained staff to engage in advising and referral whenever possible.	C, A, S, P	Staff and faculty development includes components on content, socio-cultural differences, and best practices in advising (Y/N with examples)	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
A robust institutional research office collects data and analyzes whether academic and student support programs are effective.	C, I, A, S, P	Number of FTE devoted to institutional research	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
		An institutional research advisory council exists and involves faculty and staff from support services (Y/N)	College website	Availability uneven, labor intensive

Key to conditions: C = Commitment, **I** = Instruction, **A** = Advising, **S** = Support services, **P** = Pathways
SIS = potential Success Indicators Survey that could be conducted; not an existing source of information

Indicator	Conditions	Metric	Data Source	Data Limitations
Students receive strong messages about the institution's commitment to their success.	C	Survey questions: How much does this college emphasize: • Encouraging you to spend significant amounts of time studying • Providing the support you need to help you succeed at this college	CCSSE	Only subset of colleges participate
Faculty demonstrate commitment to student success.	C	Survey question about the quality of students' relationships with instructors in terms of their availability, helpfulness, and sympathy	CCSSE	Only subset of colleges participate
High Quality Instruction and Curriculum				
Faculty help students see meaningful pathways to their goals.	C, I, A, P	Has there been any commendation (or warning) from ACCJC regarding the use of student learning outcomes (SLOs) (Y/N)	ACCJC	
		Departments use common exams or some other mechanism at least once during the year to confirm consistent curriculum and calibrate grading across instructors (Y/N)	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
Professional development promotes best practices in pedagogy.	I	Average hours of faculty development last year in these topics for full time-faculty; for adjunct faculty	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
Faculty incorporate information about learning into the curriculum.	I	Survey questions: During this year, about how often have you: • Prepared two or more drafts of a paper or assignment before turning it in • Worked with other students on projects during class • Tutored or taught other students • Participated in a community-based project as part of a regular course	CCCSE	Only subset of colleges participate

Key to conditions: C = Commitment, **I** = Instruction, **A** = Advising, **S** = Support services, **P** = Pathways
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Indicator	Conditions	Metric	Data Source	Data Limitations
Faculty have high expectations of all students.	I	Survey questions: • During the last year at this college, how often have you worked harder than you thought you could to meet an instructor's standard or expectations? • To what extent have your examinations during the current year challenged you to do your best work at this college?	CCCSE	Only subset of colleges participate
Faculty focus on skills relevant to preparation for employment or transfer.	I, P	Survey questions: How much has your experience at this college contributed to your knowledge, skills and personal development in: • Acquiring job- or work-related knowledge and skills • Writing clearly and effectively • Thinking critically and analytically • Solving numerical problems	CCCSE	Only subset of colleges participate
Policies encourage students to complete courses by restricting withdrawals and late registration and by enforcing prerequisites.	I, P	Course withdrawal rates	MIS data	Labor intensive; could potentially be added to Data Mart
		Policy restricting late registration beyond one week (Y/N)	Website	Availability on website uneven, labor intensive
		Number of introductory courses in non-English/math disciplines for which English/math prerequisites have been established	Catalog	Somewhat labor intensive, but could sample 1–2 disciplines; alternatively, might be a record of established prerequisites in academic affairs offices
Institutional research informs faculty hiring and review.	I	Processes and policies for assessing individual faculty teaching outcomes indicate lowest performing individuals are counseled and participate in development (Y/N)	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out

Key to conditions: C = Commitment, **I** = Instruction, **A** = Advising, **S** = Support services, **P** = Pathways
SIS = potential Success Indicators Survey that could be conducted; not an existing source of information

Indicator	Conditions	Metric	Data Source	Data Limitations
Ongoing Advising and Monitoring				
Sufficient resources are dedicated to the core advising function.	C, A	Student headcount divided by FTE professional staff in counseling/ advising-related functions	CCCCO Data Mart	Consistency of classifying staff functions is unclear; how to count peer advisors?
		Expenditures on student support as a share of total expenditures	IPEDS	
		Percent of new students who met with advisors before classes (or during the first term) for each of the last three years	SIS; CCCCO MIS data	New survey needed; questionable value depending on how designed, response rate, and who fills it out; MIS data quality questionable, and would require special data run
Mandatory orientation and advising policies are in place.	A, P	Orientation is required and enforced for all new students, with brief versions available to students who have attended another CCC (Y/N)	Website or catalog	Availability uneven, labor intensive
		Percent of new students who attended orientation in their first term/ year	CCCCO MIS data	Data quality questionable, and would require special data run
		Percent of new students who received counseling/advising services in their first term/year	CCCCO MIS data	Data quality questionable, and would require special data run
An early warning system identifies students in need of support.	C, I, A, S, P	Early warning system messages students who demonstrate attendance or performance problems and creates a support network in advising, academic support, and student services, with live outreach if students do not respond to the message (Y/N); or number of early warning system triggers and retention outcomes	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
Students have access to matriculation services throughout their attendance.	A, P	Special orientation sessions are designed for and available to students with prior postsecondary experience or who bypassed it when first enrolling (Y/N)	Website or schedule of classes	Availability uneven, labor intensive
Integration of Support Services and Resources				
Staff members provide services and referrals proactively.	C, A, S, P	Survey question asking for extent to which administrative personnel and offices are helpful, considerate, and flexible	CCSSE	Only subset of colleges participate
Student services are conveniently located and easily accessible.	C, A, S	Student services offices are co-located	Website	Availability uneven, labor intensive
		Student services offices are open during some evening and weekend hours	Website	Availability uneven, labor intensive

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SIS = potential Success Indicators Survey that could be conducted; not an existing source of information

Indicator	Conditions	Metric	Data Source	Data Limitations
Streamlined Pathways to Completion				
Clear messages are sent to K–12 students, teachers, and counselors about college readiness standards.	C, P	Existence of messaging plan to K–12 schools and delivery mechanism; actual delivery	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
		College accepts EAP results (Y/N)	Website, catalog	Availability uneven, labor intensive
		College accepts assessment test results signaling college readiness from other nearby colleges (Y/N)	Website, catalog	Availability uneven, labor intensive
College offers pre-assessment/ placement testing assistance.	C, A, P	College explains function and importance of testing, offers sample questions and directs students to means of preparing for the tests (Y/N)	Website, catalog	Availability uneven, labor intensive
		Policies allow for re-takes on assessment tests (Y/N)	Website, catalog	Availability uneven, labor intensive
College carries out a continuous improvement effort in articulation.	I, P	Uses Cal-PASS analysis of success rates in sequential courses taken across segments to assess articulation (Y/N)	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
		Release time supports articulation efforts (Y/N)	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
Incentives promote successful enrollment behaviors.	A, P	Percent of students with an education plan in place, perhaps by elapsed term of enrollment (e.g., 30% by end of first term, 40% by end of second term, etc.)	CCCCO MIS data or SIS	Difficult; student may have changed intentions without refiling a plan; MIS systems may not be able to create reports based on enrollment quarter
		Priority incentives are enforced for students who use advising and adhere to their academic plans (Y/N)	Website	Availability uneven, labor intensive
College provides roadmaps to completion of programs.	A, P	Percent of programs with term-by-term roadmaps	Website, catalog or SIS	Availability uneven, labor intensive; new survey needed; questionable value depending on how designed, response rate, and who fills it out

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Indicator	Conditions	Metric	Data Source	Data Limitations
Class schedules facilitate efficient pathways.	C, P	Class schedules offer seats in aligned courses at non-competing hours with course sequences in mind, as guided by resource allocation policies (Y/N)	Class schedule	Very laborious but possible review of course availability for a sample of programs
College focuses on pathways beyond the community college.	C, A, P	Number of associate degrees for transfer (per SB 1440) adopted by the college; percent of annual associate degrees awarded that are SB 1440 degrees	Chancellor's Office; MIS	Not certain if MIS yet flags SB 1440 degrees, but once it does, data are available and valid
		Share of academic departments that regularly survey relevant employers about their perceptions of the programs and satisfaction with graduates	SIS	New survey needed; questionable value depending on how designed, response rate, and who fills it out
		CTE programs establish connections to local employment markets through advisory councils or similar periodic contacts; knowledge and skill specifications are gathered from employers and other experts (Y/N)	Website or SIS	Availability uneven, labor intensive; new survey needed; questionable value depending on how designed, response rate, and who fills it out

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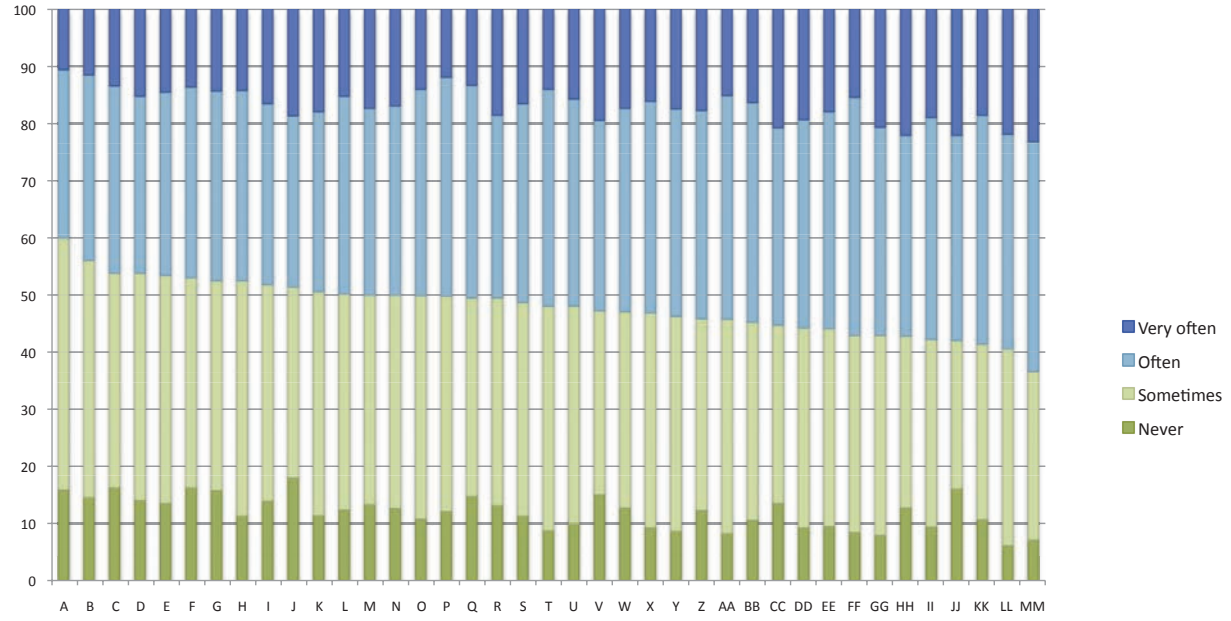
Appendix B:

Displays of CCSSE Items

Display 1

Distribution of Student Responses to CCSSE Question about Frequency of Working With Others on a Project During Class



Ordered by combined responses of "Often" and "Very Often," from lowest at left to highest at right

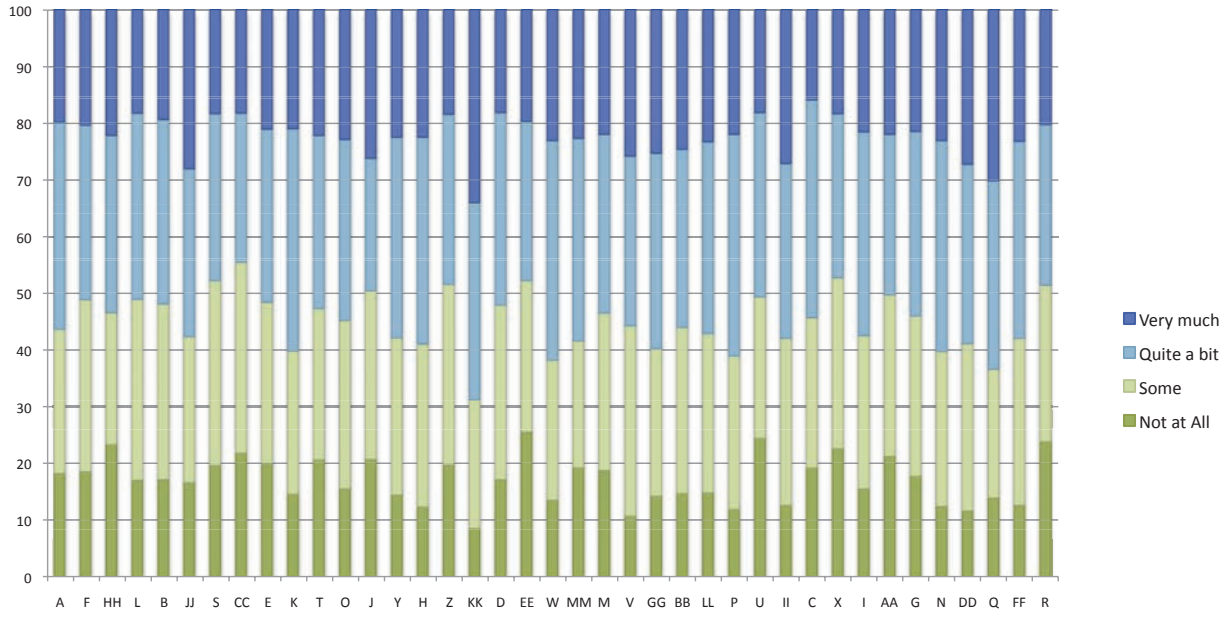
CCSSE survey administered 2009, 2010, and/or 2011; most recent results shown.
Source: Center for Community College Student Engagement, University of Texas, Austin

Appendix B continued:

Displays of CCSSE Items

Display 2

Distribution of Student Responses to CCSSE Question About Contribution of College Experience to Solving Numerical Problems



Ordered by percent of respondents having taken remedial/developmental mathematics, from least at College A (13.3%) to most at College R (27.6%)

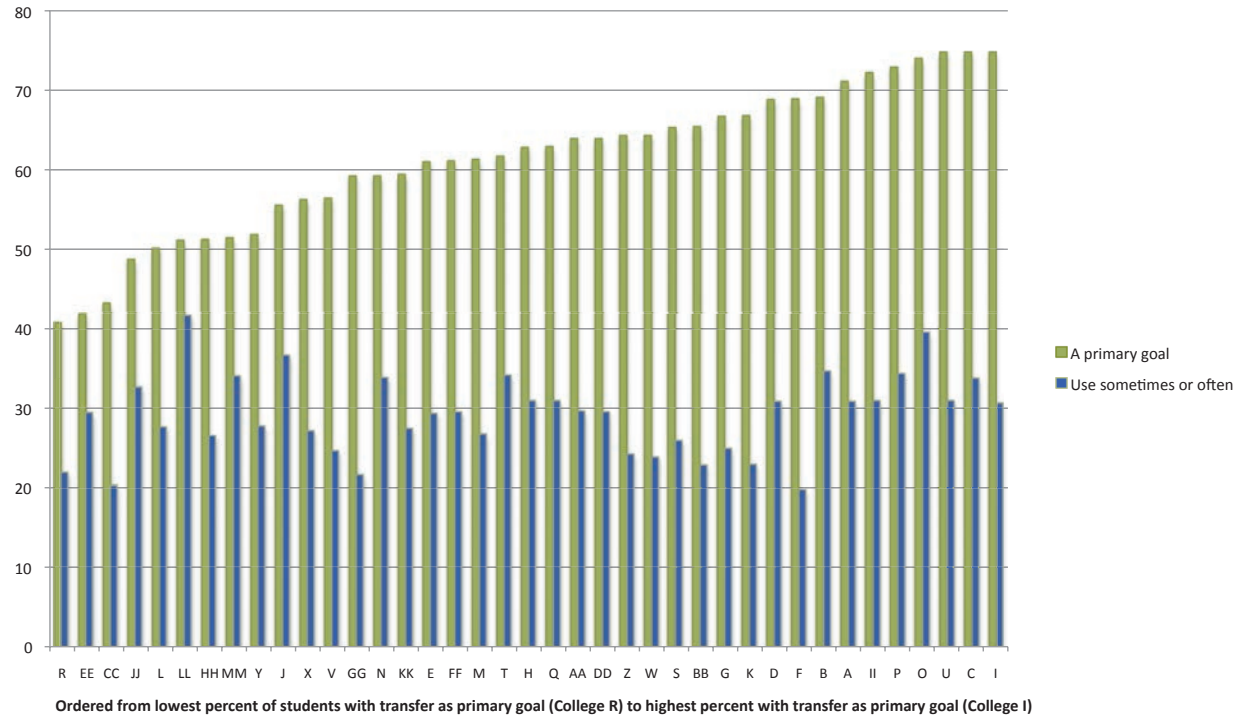
CCSSE survey administered in 2009, 2010, and/or 2011; most recent results shown.
Source: Center for Community College Student Engagement, University of Texas, Austin

Appendix B continued:

Displays of CCSSE Items

Display 3

Percent of Respondents with Transfer As a Primary Goal and Percent Who Report Using Transfer Services 'Sometimes' or 'Often'



CCSSE survey administered in 2009, 2010, and/or 2011; most recent results shown.
Source: Center for Community College Student Engagement, University of Texas, Austin

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PATHWAYS to Postsecondary Success is a five-year set of mixed-methods studies focused on maximizing opportunities for low-income youth to earn higher education credentials.

The aims of the project are to advance research on poverty; produce useful tools that improve educational opportunities; and shape the U.S. policy agenda on the relationships between poverty and education.

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WEBSITE: **pathways-ucaccord.org**

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UC/ACCORD harnesses the research expertise of the University of California to identify strategies that will increase college preparation, access and retention. Policymakers, researchers, teachers, outreach staff and students all benefit from this source of reliable information for equitable education policy and practice.

WEBSITE: **ucaccord.org**