SRI International

Taking Stock of the California Linked Learning District Initiative

Seventh-Year Evaluation Report
Executive Summary

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Executive Summary

Since 2006, The James Irvine Foundation has invested more than $100 million in Linked Learning, a promising approach to transforming education in California. In 2009, the Foundation launched the California Linked Learning District Initiative ("the initiative") to demonstrate this approach in nine school districts. The multiyear evaluation of this large initiative has a twofold purpose: to document the work and distill lessons from districts that are applying Linked Learning systemically and to measure the effect of this comprehensive implementation on student outcomes.

About Linked Learning

Rejecting the outmoded and usually inequitable separation of students into vocational and academic tracks, Linked Learning pathways are designed to integrate four core components throughout the student experience:

- Rigorous academics that prepare students to succeed in college.
- Career technical education courses in sequence, emphasizing real-world applications of academic learning.
- Work-based learning that provides exposure to real-world workplaces and teaches the professional skills needed to thrive in a career.
- Comprehensive support services to address the individual needs of all students, ensuring equity of access, opportunity, and success.

Linked Learning pathways are organized around industry-sector themes and can take the form of stand-alone small schools or academies within larger comprehensive high schools. Ideally, the industry theme is woven into lessons taught by teachers who collaborate across subject areas with input from working professionals, and reinforced by work-based learning with real employers. If possible, pathway students in every grade have their own course section for each of their classes—math, English, social studies, and a career technical education course—to allow teachers to implement integrated, cross-discipline projects and increasingly in-depth work-based learning experiences.

Certified Linked Learning pathways have successfully undergone an external review process managed by ConnectEd: The California Center for College and Careers or by NAF (previously the National Academy Foundation), a national network of college and career academies, based on indicators of pathway quality. Certification indicates that a pathway has attained a certain level of fidelity to the four core components of Linked Learning.

The Linked Learning District Initiative

Through the California Linked Learning District Initiative, the Foundation supported nine districts in developing systems of career pathways that are available to all high school students. A total of 46 pathways were certified across the nine districts as of July 2016.

The initiative is a vehicle for enhancing Linked Learning, determining what makes it successful at a systemic level, and demonstrating its viability as a comprehensive approach for high school reform.

Participating Districts

Antioch Unified
Long Beach Unified
Los Angeles Unified
Montebello Unified
Oakland Unified
Pasadena Unified
Porterville Unified
Sacramento City Unified
West Contra Costa Unified

The nine districts participating in the Linked Learning District Initiative varied in size, from slightly over 5,000 high school students to over 185,000 high school students, and represented a variety of geographic regions across California. All had a high proportion of disadvantaged students and below-average student achievement. More than three-quarters of the high school students in each district were nonwhite, and more than half were socioeconomically disadvantaged.

About This Evaluation

SRI International has conducted a rigorous, multimethod evaluation of the initiative in each year of its implementation, conducting interviews with district administrators, partners, stakeholders, pathway teachers, and students; administering surveys to students both in high school and 1 year after graduation; and collecting administrative data on students' high school academic outcomes and initial postsecondary enrollment. We have followed three cohorts of students: the class of 2013 in four districts and the classes of 2014 and 2015 in all nine districts.

SRI's seventh annual evaluation report on the progress of the California Linked Learning District Initiative differs from previous evaluation reports in that it is designed to be comprehensive and summative, rather than focusing on new developments in the initiative or policy context. With 2013–14 marking the final year of Foundation funding for the initiative, this report provides updated findings on student engagement and achievement outcomes, including initial enrollment and persistence in postsecondary education. In addition, this report provides final lessons learned from the experiences of the initiative districts; their successes and challenges with Linked Learning systems implementation over the past 7 years; and their plans for expanding and sustaining Linked Learning while maintaining pathway quality and fidelity to the Linked Learning approach. This will be the final multimethod annual report on the California Linked Learning District Initiative, however we will provide updated postsecondary education results in fall 2017 for the three cohorts included in this evaluation.

Linked Learning Outcomes

A central goal of the initiative was to increase student engagement, develop the knowledge, skills, and dispositions that would allow students to succeed in school and work, and ultimately improve high school academic outcomes, graduation rates, and successful transitions to a full range of postsecondary education opportunities, particularly for low-income and disadvantaged youth. In this report, we provide end-of-high-school and initial postsecondary outcomes for certified pathway students in all nine districts and all three cohorts in our evaluation.[1] We also present results from student surveys measuring students' perceptions of their growth in high school and their experiences transitioning to postsecondary endeavors. We pay particular attention to issues of access and equity, in terms of how closely the demographic composition of certified pathways reflected their districts as a whole, and how students in specific subgroups—students with low prior achievement, those with high prior achievement, English learners, and African American, Latino, and female students—performed, compared with similar students in traditional high schools. Finally, we present outcomes for students in noncertified pathways, a diverse group of programs identified by districts as pathways that have not yet been Linked Learning certified, compared with those of students in traditional high schools. The purpose of this analysis was to examine whether a career theme alone, without the additional quality assurance process indicated by certification, was enough to result in improved student outcomes.

[1] We used statistical controls to compare outcomes for certified and noncertified pathway students with those of students who attended traditional high schools, had similar demographic characteristics and prior achievement, and were enrolled in the same district. We could not control for unobserved and unmeasured characteristics of students, however, such as motivation and parental support. Our analyses therefore can neither shed light on nor adjust for ways these unobserved characteristics may differ between pathway and traditional high school students. For more information on the data and methods used in these analyses, please see the full seventh-year evaluation report.

College and Career Readiness

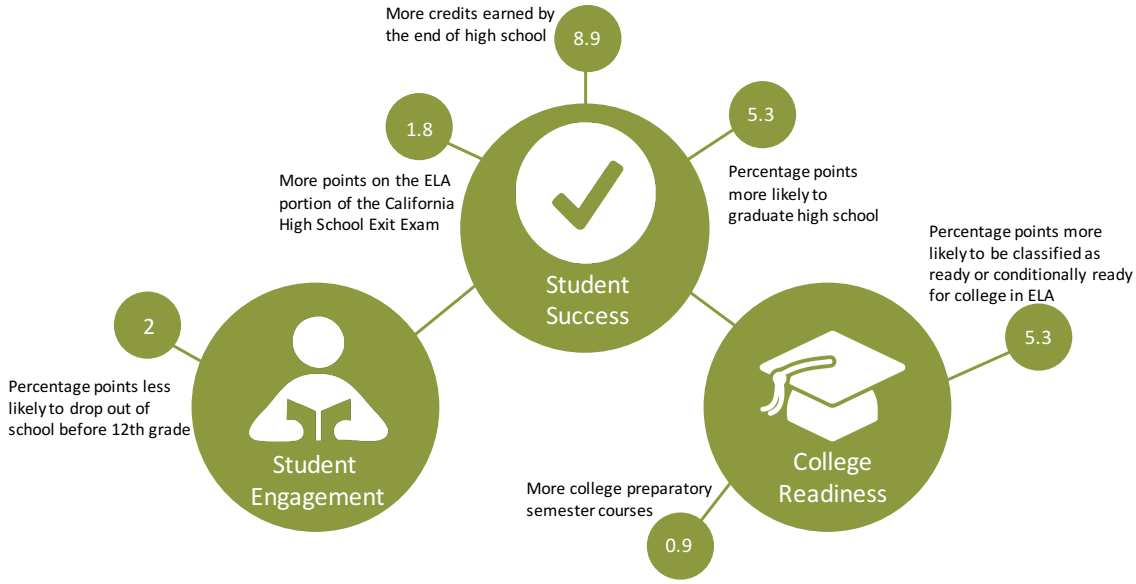
The first set of outcomes we present are indicators of students' success in high school, as well as their impression of the skills they gained from participating in Linked Learning.

Academic Outcomes

We have consistently found that the Linked Learning approach did make a difference for high school students, leading to decreased dropout rates, higher graduation rates, and more credits earned for students in certified pathways. For context, the size of effect of Linked Learning is equivalent to approximately one-third of the state achievement gap between African American and white students in graduation, and equivalent to nearly one-half of a semester of coursework in credits earned.

Our findings on certified pathway students' college readiness are more mixed. Students in certified Linked Learning pathways completed slightly more of the college preparatory courses required to be eligible for a California public 4-year institution, compared with traditional high school students, and were equally likely to complete the full complement of requirements. With the addition of the class of 2015, we also found that certified pathway students and their peers in traditional high schools earned similar college-admission GPAs. In light of our finding that certified pathways retained students who otherwise might have left high school prior to senior year and were unlikely to pursue the full college preparatory curriculum, this evidence that certified pathways were doing at least as well helping students complete the college preparatory course requirements is promising. Finally, we found that certified pathway students were more likely to be classified as ready or conditionally ready for college in English language arts (ELA) on the Early Assessment Program exam, exempting them from remediation at the majority of California's postsecondary institutions, and outperformed similar peers in traditional high schools on the ELA California High School Exit Exam. However, for other student engagement and school success measures, including daily attendance, course failures, ELA California Standards Test scores, and Math California High School Exit Exam, the two groups did not differ.

Compared with peers, Linked Learning students demonstrated increased academic success in high school

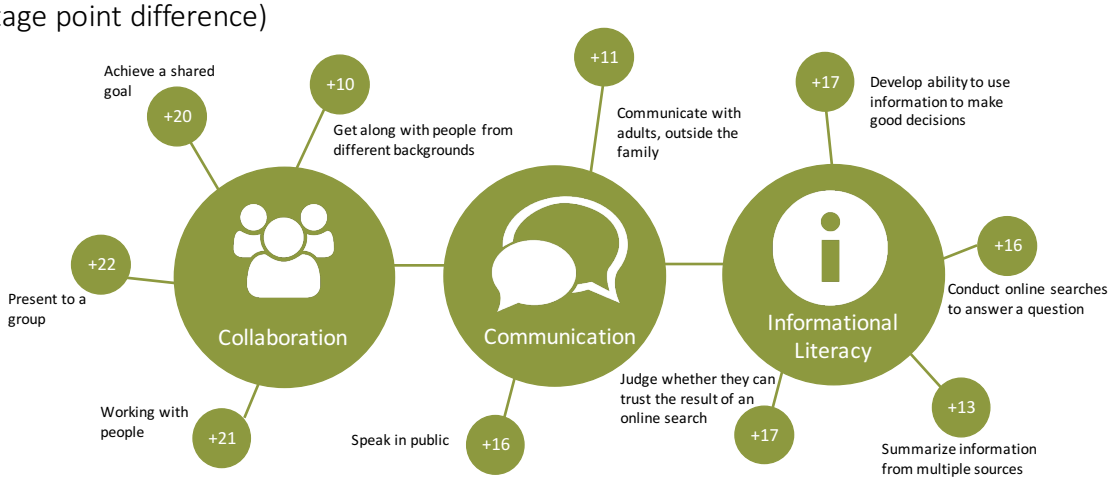


Differences between pathway and comparison students are statistically significant at the $p < .05$ level.
Source: Student-level district administrative data.

Student Perceptions

On our survey of 12th-graders, certified pathway students were more likely than comparison students to report that high school helped them develop key 21st century skills, such as communication, collaboration, and informational literacy. Further, pathway students were more likely to report that their high school experiences improved their self-management skills and sense of self-efficacy, as well as their knowledge of expectations for professional behavior and their ability to create a job application letter or resume.

Compared with peers, Linked Learning students gained 21st century skills
(percentage point difference)



Differences between pathway and comparison students are statistically significant at the $p < .05$ level.
Source: Spring 2014 12th-Grade Student Experience Survey.

Postsecondary Transitions

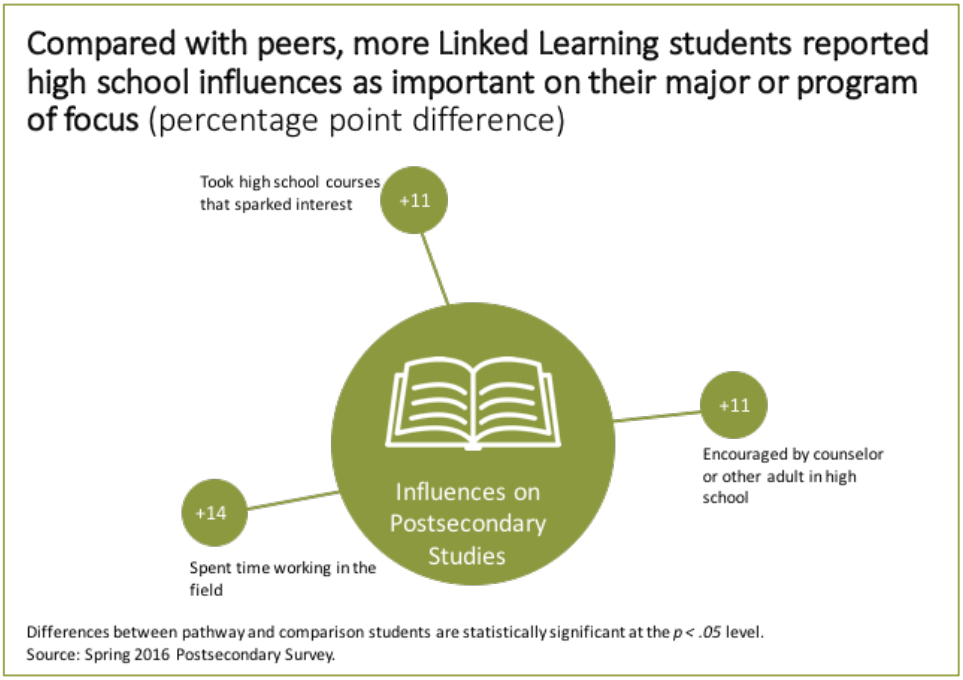
For the first time this year, we were able to track all three cohorts of students through their first year after high school to see whether these early indicators of college readiness translated into better labor market outcomes or smoother transitions to college.

College Enrollment and Persistence

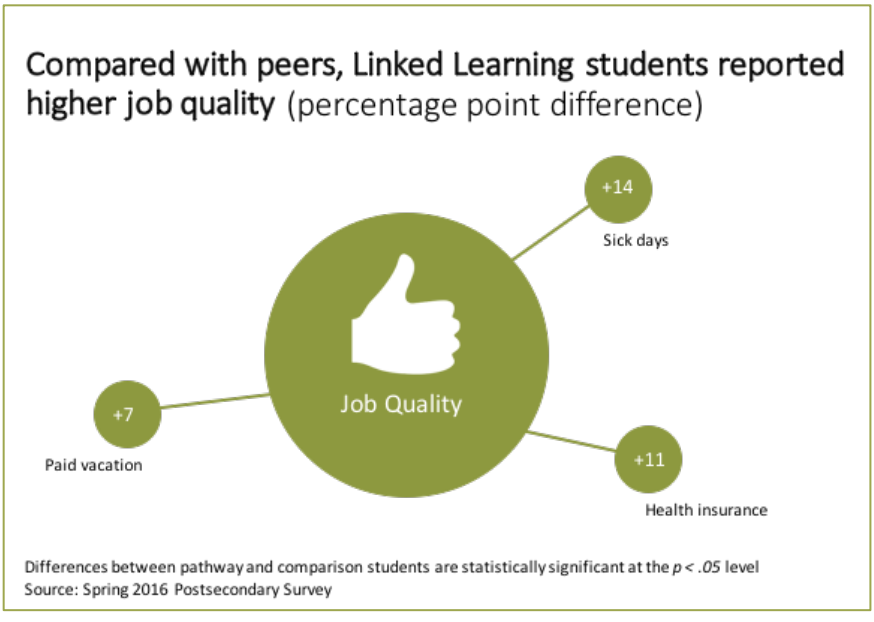
Certified and noncertified pathway students were as likely as similar peers in a traditional high school to enroll in college. Conditional on enrollment in any postsecondary institution, pathway students were also equally likely to enroll in a 4-year college and to persist in school to a second year, compared with similar peers who attended traditional high school programs. Although the finding for enrollment in a 4-year college is not significant in the overall sample, it is significant and positive for some student subgroups, as discussed below under “Access and Equity.”

Postsecondary Experiences

In addition, the postsecondary survey allowed us to explore students’ transition to postsecondary education in more depth. When they rated factors influencing their choice of major, pathway students were more likely than comparison students to identify as important courses taken in high school, encouragement of a counselor or other adult at their high school, and spending time in a work setting where people worked in the field of their major.



Immediately after high school, the skills gained by Linked Learning students translated into jobs better than those of their peers, as indicated by benefits such as paid vacation, sick leave, and health insurance. These results are based on a survey of former Linked Learning and nonpathway students in three of the initiative districts conducted in spring 2016 following their 12th-grade year. Pathway students, however, reported jobs that had similar levels of autonomy and that demanded similarly complex skills (such as communication and problem solving) as those reported by their peers. Further, pathway students did not report greater time management, goal setting, responsibility for work quality, or initiative in seeking help when struggling than their peers. These similarities between pathway and comparison students could be due to the timing of the survey; previous studies suggest that some of the benefits of pathway participation may not be initially visible and may instead accrue over time.



Although educators have traditionally viewed transition supports as largely the purview of postsecondary institutions, Linked Learning pathways—with their emphasis on preparing students for college and career and their focus on student supports—are well positioned to connect students to available transitional supports. However, we found no evidence that pathway students experienced stronger college transition supports than comparison students did. Pathway students reported similar ability to navigate the college financial aid process, were slightly less likely to report having participated in new-student orientation (91% versus 96%), and were

equally likely to report participating in other activities to support transitions, such as summer preparation programs, counseling, student support groups, or summer programs, at their postsecondary institutions. Finally, pathway and comparison students were equally likely to report enrolling in developmental (remedial) courses in college.

Access and Equity

The Linked Learning approach strives to provide all students with equitable access and opportunities for full participation in a variety of high-quality career-themed pathways—regardless of race, class, prior achievement, or special learning needs. To evaluate access and equity, we examined districts' choice and recruitment policies, assessed the degree to which pathways were representative of their districts' high school student populations, analyzed student persistence in pathways, and compared academic outcomes for Linked Learning student subgroups with those of similar peers in traditional high school settings.

Enrollment and Persistence

In addition to providing leadership, common vision, and support for implementation of the initiative, district offices are also responsible for the recruitment and assignment policies whereby students are informed of and enroll in pathways. In examining these policies, we found:

- Districts that achieved the most accessible pathway enrollment systems combined a required open-choice policy (all eighth-graders went through a high school choice process in which they could access most or all pathway options in the district) with centralized outreach and recruitment practices (the district organized recruitment for all pathways, ensuring a level of consistency).
- Three districts achieved representative enrollment in certified pathways, reflecting the challenge in realizing equity in a choice-based system.

Enrolling students in pathways is only the first step in ensuring equitable access—we also examined whether students remained in the *same* certified pathway they initially enrolled in as an indicator of whether they received the support needed to succeed. We found:

- Overall, more than half (68%) of students who were enrolled in certified pathways remained in their initial pathways through 12th grade.
- English learners, special education students, and students with low prior achievement were less likely than the average student to persist in their initial pathways.

Subgroup Academic Outcomes

For our analysis of academic outcomes by student subgroup—African Americans, Latinos, females, English learners, and students with low prior achievement—we examined each outcome presented earlier. We found:

- On average, students who entered certified pathways with low prior achievement were 5.1 percentage points less likely to drop out, were 8.5 percentage points more likely to graduate, and accumulated 15.5 more credits and 1.7 more college preparatory requirements than similar peers in traditional high school programs. Although students with low prior achievement in certified pathways were equally likely to enroll in a postsecondary institution as similar peers, when they did enroll in a college, they were 6.4 percentage points more likely to enroll in a 4-year institution.

- On average, English learners in certified pathways earned 11.7 more credits—equivalent to more than two courses—and one more college prep requirement than similar peers in traditional high school programs.
- On average, African American students in certified pathways earned 15.2 more credits—roughly three courses—than African American students in traditional high schools. Among African Americans who enrolled in a postsecondary institution, certified pathway students were 12.4 percentage points more likely to enroll in a 4-year college than their peers.
- Findings for female and Latino students mirrored the overall results for students in certified pathways—most likely because female and Latino students accounted for 50% and 58%, respectively, of the total student sample.

These results confirmed that the overall positive or neutral effects of pathway participation are not masking negative effects for specific subgroups. The observed effectiveness of Linked Learning for students entering high school with low academic skills is consistent with the thesis that pathways' prescribed course of study may be particularly beneficial for disadvantaged students who otherwise might find themselves tracked into lower level classes and who may find the real-world relevance and smaller community provided by a certified pathway key to thriving in school. Similarly, African American students and those with low prior achievement in certified pathways—groups that are traditionally underrepresented in higher education—may have enrolled in 4-year colleges more frequently than their peers because of the additional support offered by the pathway small learning communities. Given the greater complexities and challenges of enrolling in a 4-year college as opposed to a 2-year college, the additional supports from teachers, guidance counselors, and pathway staff may have been particularly beneficial to students who otherwise might have opted for a 2-year institution.

On the other hand, these findings suggest that African American and English learner students may not have experienced the full academic benefits of participating in a certified pathway. Interviews with high school counselors indicated that scheduling conflicts with required language classes often prevented English learners from participating fully in a pathway's course sequence, tempering the effect of pathway enrollment on outcomes for these students.

Noncertified Pathways

Noncertified pathway programs typically share some important features with the certified pathways, such as a small cohort and career theme, but vary in their implementation of the full Linked Learning approach. With the inclusion of the class of 2015, this year for the first time we found that noncertified pathway students were 2.0 percentage points less likely to drop out before 12th grade, compared with similar peers in traditional high schools. We saw no other statistically significant differences between noncertified pathway students and similar peers in traditional high schools for any other outcomes compared. The decreased dropout rate for noncertified pathway students with the addition of the more recent class of 2015 may reflect the investment in a districtwide system of pathways. Throughout the course of the grant, all nine districts pushed to extend the Linked Learning approach to new pathways, build up the weaker pathways, and eliminate pathways that may not have had the structure, staff, or student interest to function at a high level.

Key Strategies

As Linked Learning expands to more and more districts in California, the successes and challenges of the nine initiative districts implementing Linked Learning systems over the past 7 years are highly instructive for districts that are just beginning to engage with or scale up Linked Learning. Over the course

of the evaluation, we asked district and school administrators, pathway leads, coaches, and technical assistance providers to reflect on what is needed to make Linked Learning successful. Drawing on their responses, as well as our own analyses of successful approaches and ongoing challenges, we have distilled a set of key strategies that support implementation of Linked Learning for both school districts and pathways.

For School Districts

- ✓ A **common vision** for Linked Learning and collective buy-in for the goals of the initiative, shared by educators across the district and at every level; in particular, the superintendent, executive cabinet, and school board must be **visible and public champions** of the effort.
- ✓ **Leadership** for Linked Learning, including a **dedicated Linked Learning director** with cabinet-level positional authority, supervisory authority over high school principals, and the support of a **cross-district Linked Learning leadership team** with representatives of many district offices (including offices of human resources and curriculum and instruction), as well as principals and pathway leads.
- ✓ **Attention to equity**, including the distribution and location of pathways and the policies and recruitment practices that influence student preferences and access to pathways.
- ✓ **Staff and structures to support work-based learning** so the responsibility of providing work-based learning opportunities that are allocated equitably to students does not fall solely to pathway leads and teachers.
- ✓ **Favorable human resources policies** to recruit and retain pathway teachers and allow for the development of experienced, collaborative pathway teaching teams.
- ✓ A **broad-based coalition** of regional industry partners, civic leaders (e.g., Chamber of Commerce, mayor), and local postsecondary institutions to support work-based learning, to smooth transitions to postsecondary education, and to sustain Linked Learning.
- ✓ A **continuous improvement process** that is valuable to district staff and pathway teachers and ensures fidelity to the Linked Learning approach.

For Pathways

- ✓ **Strong and active leadership from principals** who understand the core Linked Learning components and oversee the creation of **master schedules** that support (1) regular collaborative planning time for pathway staff and (2) "pure" student cohorts that spend all or almost all of their school day moving through pathway classes together.
- ✓ **Sufficient time and support for pathway leads** to fulfill their responsibilities (e.g., additional release time and administrative support) are essential for making the position sustainable.
- ✓ **An engaged team of teachers** who come together as a community of practice to develop integrated curriculum, deliver high-quality instruction, and support students.
- ✓ **Active pathway-level advisory boards**, working alongside engaged pathway leads and staff, are essential in helping pathways develop curriculum, assess student performance, and identify work-based learning opportunities.

External technical assistance from ConnectEd in the form of district- and pathway-level coaching was a critical support for initiative districts in implementing these key strategies. District-level coaching initially focused on building relationships, spreading the foundational knowledge of Linked Learning, getting key leaders on board, helping shift educators' mindsets to align priorities and supports with Linked Learning, and helping district staff examine and confront traditional leadership structures and district practices.

At the start of the initiative, ConnectEd also provided pathway-level coaching; however, as districts became more familiar with the Linked Learning approach, many transitioned to developing a cadre of internal pathway coaches, often veteran pathway teachers who were trained to take on the coaching role by ConnectEd. Whether internal or external, pathway coaches can help teachers make the instructional shifts necessary to truly implement a rigorous, integrated academic and technical curriculum with aligned work-based learning experiences. Effective coaching must be tailored to a pathway's specific needs (e.g., master scheduling, development of integrated projects, leadership skills to facilitate a generative community of practice among pathway teachers).

Looking Ahead

With the ending of Foundation support, the majority of districts have shifted their focus from increasing the quantity of pathways to strengthening Linked Learning implementation in existing pathways by establishing systems to assess pathway quality and strengthening structures to support pathway teams. Districts recognized that by establishing high-quality pathways that produce results they could build a body of evidence to communicate how Linked Learning prepares students for college and career, fueling both student demand and teacher support for Linked Learning.

Even without ambitious pathway expansion goals, districts had to think creatively about how to continue the work of deepening Linked Learning implementation and sustaining high-quality pathways. Implementing Linked Learning with fidelity requires dedicated district-level staff members, release time for pathway leads and teachers to collaborate on integrated projects, coaching to build teachers' capacity to make the necessary instructional shifts, and support for developing and administering work-based learning opportunities. By 2015–16, districts found that to continue support for these key Linked Learning scaffolds, they could not rely solely on internal resources but needed to strategically leverage regional partnerships to support work-based learning and college and career preparation, draw on new state funding aligned with the goals of Linked Learning, and use state and district accountability systems to further elevate Linked Learning as a central district priority.

As state and Foundation funding have pushed the development of regional consortia to support college and career pathways, districts were able to capitalize on these funding opportunities and regional partnerships to help sustain Linked Learning. Districts strategically combined new state grants aligned with the goals of Linked Learning with general funds to deepen Linked Learning implementation and sustain high-quality pathways. Districts also leveraged the regional partnerships that were catalyzed by these new funding sources, particularly to expand work-based learning opportunities and dual-enrollment offerings through local community colleges. Regional systems hold promise for supporting and sustaining Linked Learning district implementation, but only insofar as they themselves are sustained. As funding for the regional work ends, the sustainability of these partnerships will depend on partner organizations' adopting the consortia mission as part of their goals and creating standard operating procedures for working with one another.

Attaining sustainability, however, requires more than finding the necessary resources; it requires a shift such that knowledge and authority for the reform are transferred from the external reform agent to teachers, schools, and districts so that the reform can become self-generative. By design, the initiative's focus on building district systems attempted to ensure that this shift took place, and our evaluation has identified a number of strategies associated with more successful institutionalization of Linked Learning, including the communication of a common vision and creation of a cross-district leadership team to ensure that Linked Learning is codified in district priorities, such as a graduate profile defining the skills and competencies for high school graduates. As California shifts some control for school accountability to districts and broadens its state school accountability system to include multiple measures of college and

career readiness, another strategy for institutionalizing Linked Learning is to use state and district accountability systems to further elevate Linked Learning as a central district priority.

Some districts have incorporated Linked Learning into their evaluations for high school principals, and all nine districts have included Linked Learning as a strategy in their local district accountability plans. These plans, reviewed by county offices of education, codify district goals, strategies for meeting these goals, and metrics for measuring progress toward achieving them. At the state level, California's new school accountability system is broadening to encompass a multimeasure College and Career Indicator that is likely to include career technical education (CTE) pathway completion, in addition to measures districts are already required to address in their local plans, such as completion of college preparatory or advanced coursework or college readiness assessment scores. The inclusion of a CTE metric is encouraging for sustaining Linked Learning, but districts can take it a step further by specifying metrics in their local accountability plans related to completion of both CTE coursework *and* college readiness, capturing the integration of academic and career-based learning that defines the Linked Learning approach.

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