

Meeting 17 Summary
College and Career Readiness for All: Linked Learning in Long Beach

November 7-8, 2011
Long Beach, California

Prepared by Joel Knudson, American Institutes for Research

***Note:** This meeting summary was developed as a resource for members of the California Collaborative on District Reform. We are making this document publicly available in an effort to share the work of the Collaborative more broadly to inform dialogue and decisions of educators throughout the state. However, it does not contain the background and contextual information that might otherwise accompany a product created for the purpose of public consumption.*

Meeting 17 of the California Collaborative on District Reform extended our recent attention to preparing students for college and career. Previous meetings, including the June 2010 convening in La Jolla—which focused on the Common Core State Standards—and the March 2011 gathering in Garden Grove—which examined district strategies around student placement, instruction, and grading practice—allowed members to discuss the systems necessary to prepare students for postsecondary success. However, these previous meetings afforded only a limited opportunity to wrestle with the “career” piece of college and career readiness and what it means for K–12 systems. Using the lens of “Linked Learning,” this meeting gave the Collaborative the opportunity to explore the challenge of college and career preparation on a deeper level.

Linked Learning has received growing attention across the state as an approach to secondary school reform, including the formation of a cross-district network, the California Linked Learning District Initiative, which is focused on developing district-level supports for this work. The Collaborative meeting in Long Beach took up this emphasis on *systemic* approaches to Linked Learning and on bringing these approaches to scale at a district level. Meeting participants also recognized, however, that Linked Learning does not represent the *only* answer to reforming secondary education. Rather, it can provide a valuable vehicle for school systems to engage in the effective practices necessary to prepare students for all kinds of postsecondary success.

An Overview of Linked Learning

Materials in the briefing binder provided some background information on Linked Learning, including the pathway certification rubric from the Linked Learning Alliance.

This document defines Linked Learning as an approach that engages students in a rigorous high school experience and prepares them for both college and career. Linked Learning operates through pathways that give a unifying theme to students' high school experience and connect students to real-world learning opportunities related to that theme. While the details of a Linked Learning system will vary according to local context, the approach operates on four guiding principles: (1) pathways prepare students for both postsecondary education and careers, (2) pathways connect academics to real-world applications, (3) pathways lead to a full range of postsecondary opportunities, and (4) pathways improve student achievement.¹

Linked Learning also requires four core components. First, a challenging academic component should prepare students for success in postsecondary education without remediation required. Second, a demanding technical component should deliver knowledge and skills needed for career opportunities in the industry represented by the pathway theme. Third, a work-based learning component should enable students to learn through real-world experiences. This might mean internships in many cases, but can involve a range of opportunities.² Finally, support services should enable students to succeed in a challenging program of study.

The James Irvine Foundation has funded various organizations to build support and capacity for school systems to embrace Linked Learning as an approach to secondary education. To this end, ConnectEd builds district capacity through direct technical assistance and facilitates networking with other districts. ConnectEd has developed a certification system that seeks to promote and recognize rigorous programs as well as a set of tools designed to help district and school leaders, and its California Linked Learning District Initiative aims to support the efforts of several California districts embracing a systemic approach to Linked Learning.³ Through this initiative, member districts have developed master plans for expanding Linked Learning and are in various stages of implementing those plans. Another key organization focused on this topic in California is the Linked Learning Alliance, which promotes engagement and advocacy for Linked Learning at the state and local levels.

Linked Learning in Long Beach

Meeting 17 began with an opportunity to learn about the approach to Linked Learning being pursued in Long Beach Unified School District (LBUSD). LBUSD has embraced Linked Learning as a district-wide structure for designing secondary education, with plans for pathways to serve all students in every high school across the district. Currently, 20,000 of

¹ Linked Learning has previously been known in California as Multiple Pathways; its focus on college and career resembles similar approaches like Career Academies.

² For additional examples of real-world learning opportunities, refer to the section of this summary that addresses partnerships with industry.

³ The California Linked Learning District Initiative includes these Collaborative districts: Long Beach, Oakland, and Sacramento City Unified School Districts, and Los Angeles Unified Local District 4. The other district participants are Antioch, Montebello, Pasadena, Porterville, and West Contra Costa Unified School Districts.

the district's 25,000 high school students are served by a pathway, and the district is designing pathways for the remaining students while also building pathways into the plans for four new district high schools. The pathways build on prior structures in many of the district's high schools, where small learning communities (SLCs) were already organized around themes but were not necessarily connected to industry. LBUSD continues to seek new industry partnerships and is working to enhance the quality of its existing pathways; the goal is for 90 percent of LBUSD pathways to have received California Linked Learning Pathway certification within five years.⁴

LBUSD pathways vary from school to school, and feature industry connections that range from business to health to law to social justice. The entire district operates under a system of school choice, where students apply to high schools in eighth grade and select pathways that align with their personal strengths and interests. As a result of this process, 50 percent of high school students in LBUSD attend school outside of their neighborhood attendance zone.

LBUSD also works to create high expectations and prepare students to make informed decisions about pathway choices before they reach high school. All fourth grade students participate in a field trip to Long Beach City College (LBCC), and all fifth grade students visit California State University, Long Beach (CSULB). These visits allow students to learn about the transition to college while also exposing them to the career preparation opportunities available after high school. For example, district leaders described the culinary training program at LBCC as an especially engaging part of the fourth grade trip. District leaders also report that all fourth grade students can explain the state's A-G requirements. In addition, the district's high schools engage in outreach and recruitment activities designed to inform incoming ninth graders about their high school options before students apply to pathways in the spring; for at least one high school, these activities involve a one-on-one meeting with a counselor for each student.

The Collaborative meeting gave participants an opportunity to see the ways in which Linked Learning plays out in two LBUSD high schools: Millikan High School and Cabrillo High School.

Millikan High School

The first day of the meeting took place at Millikan High School, where presentations from school leaders, classroom observations, and panels of teachers and students provided a window into the way Linked Learning has evolved in a high school with a stable history of themed SLCs.

Millikan opened more than 60 years ago, and began transitioning to an SLC structure in 2002 with the introduction of its first three pathways. The school subsequently expanded

⁴ District leaders originally sought a goal of 100 percent certification. The 90 percent threshold approved by the board acknowledges the flexibility needed in pathway design for schools to transition out of old pathways and into new ones to meet evolving student needs.

the number of SLCs to serve all students in the school, and all pathways adopted Linked Learning in 2009. Teachers have been at the heart of pathway development at Millikan, and with the adoption of Linked Learning, have worked under district guidance to adapt pathways to meet state academic and Career/Technical Education (CTE) standards while also preparing all students to meet California's A–G requirements.

The Linked Learning program at Millikan builds on a subset of pathways that have operated as magnet programs and where word of mouth has contributed to a strong reputation and high level of demand across the district. Indeed, Millikan houses three of the five most popular pathways in the district—that is, three of the five pathways that receive the most applications from eighth grade students. As a result, the school draws students from across the district (with 50 percent living outside the neighborhood enrollment area), and its demographics roughly match the district overall despite being located in a suburban community. Consistent annual Academic Performance Index (API) growth (including narrowing achievement gaps among racial and language proficiency subgroups) speaks to the school's success at improving student outcomes, but school leaders also point to declining disciplinary referral rates as evidence of higher levels of student engagement.

During the meeting, participants observed classrooms and spoke with students and teachers from three of the pathways: COMPASS (the school's community of artists and social scientists), PEACE (the school's community with a social justice emphasis), and GREEN (the school's community with an environmental focus).⁵ Two of these pathways—PEACE and COMPASS—have received California Linked Learning certification.

Cabrillo High School

On the second day, participants convened at Cabrillo High School, where a presentation from school leaders and a panel of teachers and industry partners provided a second example of Linked Learning in action, demonstrating its growth in a newer high school where industry partnerships have grown alongside SLC evolution.

Cabrillo opened in 1995 as the newest comprehensive high school in LBUSD. In contrast to Millikan, the overwhelming majority of students at Cabrillo come from within the neighborhood attendance zone. The school features wall-to-wall SLCs, which have been developed by Cabrillo faculty and staff and were introduced in 2004. Cabrillo established a ninth grade transition academy in 2010, which focuses on career awareness and foundational skills and is designed to better prepare students to select a pathway that begins in 10th grade.⁶ The high school is applying for California Linked Learning certification for two of its pathways in 2012.

⁵ The additional Millikan pathways are QUEST (a GATE community serving highly motivated and talented students), the Global Technology Academy (a program emphasizing computer applications and technology), and the Millikan Business Academy (a community that focuses on entrepreneurship, marketing, enterprise, and financial independence).

⁶ Cabrillo features three pathways for grades 9–12—SACMAA (a program for students interested in visual and performing arts and computer media), CED (a program oriented towards engineering), and University Scholars (a program serving bright and academically driven students)—and three pathways for grades 10–12

The Importance of the “Long Beach Way”

Throughout the meeting, participants wrestled with the challenge of acknowledging the ways in which Linked Learning has been made possible through the particular context of Long Beach while trying to identify the elements of success that can be adopted by other systems trying a similar approach. Participants from within and outside LBUSD repeatedly made reference to the “Long Beach way,” a phrase that describes the culture and orientation towards continuous improvement that seems to permeate all levels of the K–12 system. This culture is enabled by strong relationships and supportive connections not only across departments and levels of the district, but with the teachers’ union and school board. Noting that changes with regard to Linked Learning have been possible in large part because of the district culture, one meeting participant observed, “It’s easier to bring in a new innovation if you are good at and comfortable with making change.”

Recognizing the importance of district culture, it is important to consider which elements of success found in LBUSD’s secondary program are due specifically to Linked Learning. Participants emphasized that Linked Learning is not the *only* approach to high school reform, but that the elements of Linked Learning can provide a valuable vehicle for accomplishing the central outcomes of a K–12 education. As one participant shared, “Linked Learning is nothing short of a complete redesign of secondary education. It’s not about *Linked Learning*, but Linked Learning is a driver of that change.” In other words, Linked Learning can provide a means for districts to bring out the elements of high-quality secondary education that they already know to be effective.

A Systems Approach to Linked Learning

While the meeting allowed for an in-depth exploration of Linked Learning in Long Beach, the more general problem of interest for Collaborative members was how to implement a Linked Learning approach at scale across a range of district contexts. What are some of the common challenges, and how does the Long Beach experience highlight these and potential strategies for addressing them? Dialogue throughout the two-day meeting highlighted the challenges of building educator and system capacity to implement Linked Learning, developing productive partnerships with industry and higher education, ensuring pathway quality, and promoting equity so that all students have opportunities to succeed.

that serve students who attend the ninth grade academy—CHOC (a program focused on health and human services), CAB (a business-oriented program), and CAL-J (a program that exposes students to criminal/civil law and law enforcement).

Building Capacity

Teacher Capacity

Classroom visits and teacher panels emphasized the critical importance of building teacher capacity to meet the demands of teaching in a Linked Learning environment, including

- introducing new strategies for improving student engagement in a way that ensures a high level of rigor even as real-world learning opportunities are incorporated;
- building connections for students across their classes, which requires an understanding of multiple disciplines;
- introducing real-world learning opportunities, which requires an understanding of the career demands in the industry their pathway represents; and
- teaching 21st century skills—including concepts like collaboration and self-promotion—that may not traditionally be incorporated into K–12 education.

As one meeting participant observed, “What it comes down to is that teachers need to have the skills that we want the students to have.”

Pre-service: Building teacher capacity to work in a Linked Learning environment calls for careful attention to teacher preparation. Partnering with higher education can be particularly effective, especially if teacher training programs can prepare teachers to teach in the district they will enter after graduation. In LBUSD, 80 percent of the teaching force comes from CSULB. A seamless integration of teacher preparation programs with the expectations for teaching in LBUSD has created a situation where new teachers begin their jobs with skills and classroom experiences that align with the requirements of teaching in the district.

In-service: New experiences for existing teachers can also be useful. For example, teacher externships, where teachers spend time with an industry partner, can enable them to learn the demands of industry and better design student learning opportunities to create real-world relevance. A Cabrillo teacher noted that her externship with Union Pacific enabled her to articulate career opportunities and demands to her students that they did not know existed.

Professional development opportunities within the school, especially empowering teachers and providing them with time to collectively design high-quality instructional experiences, can be especially effective. Release time for professional development and pathway design, time for collaboration over the summer, and flexible scheduling that allows for common planning can all enable the extensive interaction required to ensure high-quality pathways. At Millikan High School, teachers spoke highly of a performance mapping process where they worked together across disciplines to identify that standards and outcomes students needed to meet (including A–G requirements, California state academic and CTE standards, and criteria for Linked Learning certification) and to design an interdisciplinary curriculum through which they could be obtained. Time was a key component of this process, and, according to one teacher, “the number one key ingredient for our success.” Equally important, however, was the need for collaboration and trust. As another teacher

explained, “This is a big commitment. We have to be willing to be transparent with changes, be willing to grow, and learn to let go of what is sacred to you for the greater good.”

Leader Capacity

Just as districts must improve teacher capacity, they must also consider the development of leaders equipped to lead Linked Learning. The meeting did not address this challenge in depth, but several participants acknowledged the important role a district plays in leadership development.

District Capacity

In addition to educator capacity, districts must also attend to the system capacity necessary to support Linked Learning work. Securing resources and strategically managing funding streams are essential to a program that bridges many of the traditional divides in K–12 education. LBUSD leaders described constant communication between academic administrators and the business office to ensure both legal compliance and ongoing support for the district’s work. Superintendent Chris Steinhauser explained, “The business people sit down right beside us every single day.” Accounts of this communication revealed a culture in which the actions of all district leaders are driven by the needs of Long Beach students. As another district administrator said, “We don’t believe in not having money being an excuse for not doing the work.”

An additional element of system capacity relates to relationships that enable the critical connections with college and career emphasized in Linked Learning approaches. To adequately prepare students for success in college and career requires an educational “system” that extends beyond the boundaries of the traditional K–12 school district to include the colleges students will attend and the businesses where they will seek employment after graduating.

Developing Partnerships

Linked Learning’s emphasis on college and career preparation calls for students to understand and have the tools to meet the demands of both postsecondary options. Real-world learning opportunities and skill sets that enable young adults to compete for today’s jobs require connections with industry that can provide the learning opportunities and identify the proficiencies that students need to demonstrate. The academic demands of college and the steps needed to qualify for admission require a clear articulation of the ways in which K–12 requirements align with higher education expectations. In a Linked Learning system, the district can play a crucial role in establishing both kinds of partnerships.

Partnerships with Industry

Linked Learning’s guiding principles demand that students not only receive career training, but that their learning opportunities have real-world applications. The involvement can

take many forms. Internships often receive the most attention, as they allow students to directly apply their learning in a career environment outside of school. However, internships have limitations, since the number of opportunities available in a community will never match the number of high school students in a district. Schools might therefore consider ways to bring industry experts to campus to provide work-based learning experiences for students in their coursework. Additionally, classes might offer a real-world opportunity to conclude a final academic project. For example, students in a legal pathway at Millikan concluded a class project with a mock trial at a Los Angeles courthouse. Beyond academic coursework, site visits to industry sites can give students exposure to career options they might not have otherwise considered. A Cabrillo teacher described a visit that some of her students took by sharing, “To see people that look like you in a position that you didn’t think was possible for you is very powerful.” As school systems consider other opportunities for real-world learning, leveraging technology can provide useful options, especially when geographical distance or scheduling conflicts can make personal visits prohibitive.

In addition to giving students real-world learning opportunities, relationships with industry can help define career readiness itself. A partnership between Long Beach educators and members of the business community has helped the district focus on five employability standards that guide its pathway design: (1) ethical behavior and personal responsibility, (2) self-promotion, (3) teamwork, (4) leadership, and (5) critical thinking. While these standards guide the pathway design process in many LBUSD high schools, work remains to figure out how to best assess these pieces within a Linked Learning curriculum.

The opportunities for partnerships with business to deepen Linked Learning work are promising, but discussion in the meeting also brought up the constraints inherent in trying to provide business opportunities only within the community. One such constraint is the degree to which students seek or achieve exposure to other kinds of opportunities outside their community. Another is that there simply may not be enough opportunities to go around, particularly in rural areas where a broad range of industry choices may not be available. Some participants questioned how important proximity is for these relationships, and wondered what opportunities exist in the absence of a strong industry presence.

For all aspects of business partnerships, discussion during the meeting identified several roles that school districts can play in facilitating relationships that are difficult for school-based staff to manage. District staff can often facilitate communication between school staff and industry partners, since the schedule and demands of educators do not always align well with the traditional business day. Additional bridge-spanning responsibilities can help address other cultural divides that include terminology and cultural expectations. As one LBUSD representative explained, “We need to develop systems to be able to understand each other’s culture.” The district can also facilitate equity across schools by managing relationships so that pathways and schools do not need to compete with one another for industry partnerships. In LBUSD, the recently developed Education Business Advisory has emerged as a means of facilitating industry partnerships and managing these roles. For all

partnerships, comments at various points in the meeting emphasized that the relationships do not begin as fully developed real-world connections, but build and deepen over time.

Partnerships with Higher Education

One of the central goals of Linked Learning is to prepare students for college. As districts look for steps that can ease the transition to college, effective partnerships can facilitate alignment with the higher education systems that students aspire to enter.

Facilitating Preparation for College: First, education systems can facilitate the transition from K–12 to postsecondary education by preparing students to progress seamlessly without the need for remediation. As one example, Long Beach has worked with LBCC to reduce the need for student remediation in its college classes. A collaborative effort between the research departments in the two systems revealed that students who received an A or B in their senior high school English class reliably went on to be successful in English 1 at LBCC. Rather than require students to take a placement test that could result in remedial coursework for students that test poorly, LBCC agreed to place all students who had received an A or B in senior English into English 1. By moving students directly into credit-bearing coursework when they demonstrate the capacity to handle the material, the systems are providing students a more direct path to college success. As another example, CSULB has committed to accepting all graduating high school seniors from LBUSD through a system of local preference, ensuring that students who meet criteria for college acceptance have clear options made available to them. The district is also engaged in conversations to ensure that the rigor of Linked Learning courses is recognized so that those courses will meet California A–G requirements.

Preparing Teachers for a Linked Learning Environment: The partnerships with higher education not only help prepare K–12 students for college, but can prepare prospective teachers to be successful in a Linked Learning environment. For example, an upcoming four-day professional development activity focused on Linked Learning will include all 80 faculty members in the secondary program at CSULB. CSULB is also looking to provide more work-based experience for teaching candidates in LBUSD schools. Through an approach that CSULB leaders describe as a clinical model, teaching candidates will conduct fieldwork and attend classes on LBUSD high school campuses during the first half of the year, then continue to student teach in the same high school through a co-teaching model. In many ways, this system for teacher induction mirrors the Linked Learning philosophy for secondary education, with strong real-world learning opportunities supplementing rigorous academic coursework to prepare students for career success.

The commitment among the Long Beach education systems manifests itself in other ways too. LBUSD communicates its research needs to CSULB, where graduate students can design their dissertations to meet the district’s needs. A recent expansion of the Beginning Teacher Support and Assessment (BTSA) program provides further evidence of the mutual commitment to meeting students’ needs. Budget cuts in LBUSD have resulted in substantial personnel cutbacks, meaning that new CSULB graduates struggle to find teaching positions in the district. Despite this challenge, the two systems have worked together to provide

BTSA opportunities to teachers without jobs, allowing them to build their skills and maintain their certification despite a temporary challenge in finding employment.

Pursuing Deep and Lasting Partnerships: The individual examples here reflect a deeper partnership among LBUSD, LBCC, and CSULB that focuses on serving the needs of students in their systems. As one LBCC administrator explained, “It really feels like I work for three institutions at the same time, in the best way.” An LBUSD administrator voiced a similar opinion about the ongoing communication and collaboration across the systems, saying, “It’s viewed as the way we do our work. It’s not an extra. It’s not an add-on. There isn’t a day I don’t interact with one of my partners.” The connections extend not only to communication, but to personnel decisions that take advantage of individuals’ knowledge of and experience in the various systems. Panelists noted that most instructors at CSULB teach in LBUSD, have taught at LBUSD, or have retired from LBUSD before moving to CSULB.

For other districts pursuing partnerships with higher education, Long Beach representatives identified important lessons. The commitment from high levels of leadership from all institutions is essential for the growth and persistence of high-quality relationships. Also, just as with business partnerships, relationships grow and deepen over time. The connections among LBUSD, LBCC, and CSULB are a product of nearly two decades of work together. New partnerships require the same levels of communication and effort to bridge language and cultural divides as found in business partnerships. As an LBUSD administrator advised, “You have to start someplace and build on it.” In Long Beach, these relationships have laid the foundation for effective work in support of Linked Learning. For other districts, Linked Learning could represent an avenue for establishing and strengthening similar connections.

Developing and Monitoring Quality in Pathway Design

Meeting discussion also addressed considerations for creating high-quality pathways and taking steps to ensure that they maintain high levels of rigor. Tools and resources developed by multiple players within the Linked Learning community can be valuable resources for district, school, and pathway leaders in developing high-quality programs. The California Linked Learning Pathway certification provides concrete expectations for designers of rigorous programs. Additional resources like the college and career readiness framework and online guide for mapping produced by ConnectEd may help systems empower their schools to take on the responsibility of program design while ensuring high quality.

The Process of Pathway Development

The Millikan site visit provides a window into Long Beach’s approach to pathway quality. First, teachers are intimately involved as the primary developers of the school’s pathways, and have been since the introduction of SLCs at the school. A recent performance mapping activity allowed teachers to deepen their understanding of the desired outcomes for their program while building cross-disciplinary connections. Teachers worked together across

subject areas to identify the standards and outcomes students need to meet and to design an interdisciplinary curriculum to enable students to meet it. From a panel of Millikan teachers, meeting participants heard repeatedly about how valuable teachers viewed the experience not only for their own professional development, but as a way of strengthening the school's pathways.

Evidence of Quality Pathways

Classroom observations gave meeting participants an opportunity to observe the pathways in action. Evidence of connections across classes occurred in several places. In one classroom, participants observed students linking the concept of invasive species from their biology class to a discussion of the industrial revolution in a history class. In another case, participants saw content from a history class being used to deliver material in an English class. One described the experience by saying, "I went into a class that had a fishbowl going on with a discussion of Jefferson...I was in there for about 10 minutes before I realized it was an English class." Student reports of their pathway experience also revealed an appreciation for the Linked Learning approach. Several described a preference for project-based learning as an engaging mode of learning. The students also described universal high expectations. As one student attested, "I really feel like it is almost impossible to fail. You have to try really hard to fail."

In their conversations about classroom instruction, participants raised two important considerations for the quality of Linked Learning pathways. First, for Linked Learning to be successful, the instruction on which it rests must be good instruction. One visitor observed, "Some of the things were interactive, but...those might have happened even if it wasn't Linked Learning." Another echoed this: "Some of the teachers were quite phenomenal whether they were in Linked Learning or not." Regardless of the source of quality instruction, that quality is essential for Linked Learning success. Second, instruction in any school varies from classroom to classroom. Visitors observed classrooms in two certified and one non-certified pathway, which presented an opportunity to see instruction at various stages of growth. The variation allowed participants to identify some areas for improvement, but also reflected the spectrum of learning that is an inevitable reality of the implementation process.

Common Core State Standards as a Contributor to Pathway Quality

Dialogue in the meeting also connected Linked Learning to an ongoing topic of discussion in the Collaborative—the implementation of the Common Core State Standards (CCSS). With its explicit focus on college and career readiness, Linked Learning aligns well with the stated goals of the CCSS. Moreover, the focus on reading and writing across the curriculum in the CCSS supports the kinds of interdisciplinary work that Linked Learning promotes. Indeed, the focus on fewer but deeper standards may give teachers an opportunity to embrace more interdisciplinary learning opportunities for students.

Nevertheless, the demands on teachers in Linked Learning, and in particular with the adoption of the CCSS, are substantial. Interdisciplinary work often requires greater effort

for teachers and the coordination across subjects demands time, energy, and a willingness to open some very personal classroom decisions to a more collaborative process. In addition, a more limited number of standards does not equate to complete freedom. In a standards-based environment, the demands of meeting specific student learning outcomes remain substantial. Participants suggested that the integration of mathematics in particular is likely to be a continuing challenge. Beyond these issues, while the CCSS nominally advocates for career preparedness, challenges exist in overcoming traditional perceptions of CTE as an alternative route for students less likely to achieve academic success—a perception with consequences for students and their transcripts and for teacher preparation.

Accountability for Pathway Quality

Meeting dialogue also highlighted considerations for another area of ongoing Collaborative attention—student assessment. In an environment with high-stakes testing, where teachers feel compelled to teach in a way that produces high test scores, the demands of accountability can make it difficult to pursue goals not captured in state tests. While LBUSD has embraced a philosophy of making decisions based on the best interests of students, continued success in the mainstream public measures of student performance relieves political pressure, which allows the district to continue embracing its current philosophy. As an LBUSD board member explained, “The reality is that those measures...that the public wants to know—those are increasing.”

Beyond standardized testing, participants discussed the ways in which the project-based learning advocated by a Linked Learning approach can provide more authentic opportunities to assess student learning. A Millikan student reinforced this idea by saying, “It’s easy to cheat on a test, but if you are given a project and have to display your knowledge on a project, a teacher can really see who knows what they have learned.” Additionally, involving industry partners in the creation of rubrics for student projects can help create a more authentic assessment that captures the skills students need for postsecondary success.

While Linked Learning provides an opportunity to identify and develop the kinds of soft skills that students need for career success, measurement of these non-cognitive outcomes presents an ongoing challenge. ConnectEd and others continue to work at this in collaboration with business partners.

Ensuring Equity

Throughout the meeting, participants discussed considerations for ensuring that all students experience opportunities for success in a Linked Learning system.

In LBUSD, the decision to implement Linked Learning district-wide emerged from a focus on equity. By providing pathways wall to wall across the district, requiring that all pathways are A–G aligned, and aiming for certification of 90 percent of the pathways, the district seeks to ensure that all high school options will provide a high level of rigor that

positions students for college and career. In addition, the school choice program theoretically gives every student access to any program in the district, meaning that the highest quality pathways are not reserved for students in the most privileged neighborhoods. Furthermore, school leaders attempt to match the district's demographics within each school and pathway in an effort to ensure that the best opportunities are not reserved for a particular kind of student.

LBUSD has also addressed the potential challenge of ensuring both coherent pathway programs, on the one hand, and equitable access to higher level courses that cannot be offered in each pathway, on the other. For example, in the past few years the district has worked to open up Advanced Placement (AP) courses and to encourage much broader participation in these courses. To ensure that students can take advantage of this opportunity, all students have the freedom to take some classes outside their pathway. As a result, LBUSD leaders report that 35 percent of high school students are taking at least one AP class.

Other more explicit approaches to equity also appear in LBUSD. At Millikan, school leaders are modifying their student placement practice to integrate English learners into all their pathways, rather than assigning students that need English language development into a single pathway, as had been the previous practice. While this decision expands access for all students, tension remains between providing equity of access and grouping students in a way that qualified teachers can meet their language needs. District and school leaders have also tried to act strategically to address inequities in industry. For example, representatives from Cabrillo talked about trying to attract more women to the engineering pathways as a response to the traditional underrepresentation of women in the field.

Despite efforts to explicitly address issues of equity, systems must dedicate ongoing attention to recognizing and addressing problems that emerge. For example, students at Millikan perceived a hierarchy among the pathways, with some SLCs carrying a reputation as having higher status than others. For some of the Millikan pathways in particular, minimum GPA guidelines—a vestige of SLCs that have traditionally been magnet programs—reinforces this perception. In other environments, pathways that stipulate prerequisite courses might similarly group students in ways that undermine efforts to achieve equity. As one meeting participant observed, “For all of us, the challenge is the tracking mechanism, where the same kinds of kids end up in the same pathway.” The considerations for student placement extend to teacher assignment, as schools must be careful about groupings of stronger teachers within a single pathway. A system of school choice presents another challenge. While such a policy theoretically gives all options to all students, it might also lead to disproportionate opportunities for families with greater resources and levels of engagement.

As a response to all these potential issues, meeting participants spoke of the need for attentiveness to parent engagement and the role of school counselors or other gatekeepers in admitting students into programs. Participants also emphasized the importance of ongoing monitoring and data review, such as tracking student perceptions of inequities. High school and postsecondary outcomes across schools and across pathways within a

school are also important means of judging the degree to which different pathways are producing students with varying levels of success in high school, or with different levels of college or career success after graduation.

Conditions for Success in Implementing Linked Learning

While Meeting 17 gave participants an opportunity to learn about the specifics of the Long Beach experience with Linked Learning, the challenge remains to identify the ways in which the successes in Long Beach might travel to other environments. The two-day meeting did not address this question in depth, but conversation among participants sparked some initial ideas.

The Importance of Exemplars

Several participants spoke of the potentially daunting challenge of transporting Long Beach's success to a different environment. Many of the elements observed during the Collaborative meeting grow out of and rely on a strong district culture and years of carefully cultivated relationships; other districts may not be able to mimic the exact steps that Long Beach has taken. Nevertheless, as one participant argued, the story is important to share "so people know what success looks like." A book currently being developed by LBUSD and its higher education partners that describes their partnership is one way to share that story with a wide audience. Other California districts embracing a systemic approach to Linked Learning, including the participants in the California Linked Learning District Initiative, might also serve as exemplars for districts taking on this work.

Strategies for Implementation

For systems looking to begin or expand their own efforts to implement Linked Learning, some conditions for success emerged.

Working within the District Context

First, participants emphasized the importance of building on existing district strengths. At Millikan and Cabrillo High Schools, the foundation of SLCs as the organizing structure for secondary education made the transition to Linked Learning pathways a natural extension of work that was already underway. Speaking generally about the district, one administrator explained, "In Long Beach we always try to link the work we are doing to the work we previously did." Other districts may not have the base of SLCs in their high schools to start with. However, district leaders spoke of the importance of working from where they are now and using Linked Learning as an opportunity to deepen and expand their existing approaches to secondary education.

Drawing on Knowledge about Successful Implementation

Meeting participants also suggested that much of what we know about successful implementation also applies to Linked Learning. Cynthia Coburn’s implementation framework,⁷ which the Collaborative used as a basis for understanding work around post-secondary access in Garden Grove and which emphasizes the need to consider *depth* of change just as much as *breadth*, can provide useful guidance in this regard. Participants also suggested various approaches to building a constituency. Board relationships, an essential component of the successes in Long Beach, can be critical in embracing a new approach to secondary education. An LBUSD board member explained a philosophy of support that has enabled the district to act in the best interests of students, saying, “There is evidence—and leadership continues to develop evidence—that Linked Learning is contributing to improvement. That’s good enough for us. It is not the role of the board member to get into the weeds.” Even for districts that do not share this kind of board relationship, engaging and educating elected officials in secondary reform efforts can help build support for the work. The James Irvine Foundation’s role in helping districts partner with one another and involving multiple players in Linked Learning advocacy and support can also be helpful. Regarding teachers, dialogue in the meeting captured the importance of considering sequence and rolling steps out at a pace that teachers can take them on.

Engaging in Communication and Collaboration

An additional consideration is the importance of communication and collaboration at all levels. These features are essential for successful relationships between districts and their partners in business and higher education; within and across departments of the central office; and at the school level within and across grade levels, within and across pathways, and within and across subject areas as teachers seek to develop high-quality pathways. A leader from Cabrillo High School also mentioned the importance of getting curriculum leaders on board to ensure high standards (and alignment to high-stakes tests) as a critical step that enabled teachers to buy in to the interdisciplinary activity required by Linked Learning.

Revisiting Progress and Maintaining Flexibility

Finally, meeting dialogue reinforced the importance of constantly revisiting progress and maintaining flexibility. Programs will evolve as student needs and interests change and as relationships with partners grow, leading to important improvements over time. At the same time, variation across schools requires the flexibility to meet the needs of individual school contexts. Responsiveness to challenges and the agility to address them can be key components of effective implementation.

⁷ See Coburn, C. (2003). Rethinking scale: Moving beyond numbers to deep and lasting change. *Educational Researcher*, 36(6), 3–12, available in the Meeting 15 briefing binder.

Leveraging State and Federal Policy

Conditions for success in implementing Linked Learning also include the policy environment in which districts operate. Participants discussed some of the ongoing developments in state and federal policy.

Recently signed legislation is directly supportive of Linked Learning efforts. California Senate Bill 650, the College Promise Partnership Act, authorizes a partnership between LBUSD and LBCC that facilitates concurrent enrollment and aligns eligibility, expectations, and credit awards between the systems. Participants expressed hope that similar provisions can be made for other districts in the state in the future. Expanding beyond Long Beach, California Assembly Bill (AB) 790 establishes a Linked Learning pilot program to be administered by the California Department of Education and AB 1330 authorizes the Commission on Teacher Credentialing to develop Linked Learning teaching standards. While the direct impact of these legislative changes may be minimal, the growing awareness and acknowledgement of Linked Learning in state policy may represent an important step in enabling its future success. In particular, this awareness may counteract the tendency for legislators to equate Linked Learning with vocational education, an association that fails to acknowledge the rigor and dual college/career focus that Linked Learning embraces.

Other policy developments are less specific with regard to Linked Learning but will have an impact on secondary school reforms that include Linked Learning. Federal proposals for reauthorization of the Elementary and Secondary Education Act include increased opportunities to access and flexibly use Title I dollars, as well as options for reforming low-performing high schools that include explicit elements of college and career preparation. These proposals may set up conditions in which Linked Learning is a more plausible option for school and district leaders.

Given these developments, meeting participants addressed considerations for a legislative strategy that supports Linked Learning. For the Linked Learning Alliance, three goals drive current state legislative advocacy efforts: (1) removing the discrete obstacles to daily work, (2) addressing Common Core implementation and assessment to accommodate all aspects of college and career readiness, and (3) altering a finance system in which funding stovepipes make it difficult to support Linked Learning work. One meeting participant characterized the current climate of California legislative leadership as uniquely favorable, suggesting that the time to pursue some of these goals is ideal. Other conversations throughout the meeting raised additional opportunities, including a more thorough consideration of which courses qualify for A–G requirements and meet requirements for the National Collegiate Athletic Association (NCAA).⁸ In both cases, traditional biases against CTE coursework often prevent the recognition of rigor in Linked Learning courses serving all students, not just those on the academic fringe.

⁸ Participants suggested that collective efforts are needed to ensure that the NCAA recognizes applied Linked Learning courses on students' high school transcripts for credit and athletic eligibility.

Despite the opportunities presented through policy to support Linked Learning, certain meeting participants cautioned against a strategy that too specifically defines Linked Learning. While acknowledgement through legislative language may represent an important means of stabilization and securing support, legislation could also define Linked Learning as something that becomes too prescriptive and infused with political interests. At a time when Linked Learning is in its early stages of growth and systems are still learning which approaches might be most effective, this danger might be particularly salient. Thus, participants emphasized that legislation that enables Linked Learning does not need to be restrained to “Linked Learning legislation,” and in fact may be better if it is not characterized in that way. Ultimately, participants agreed that the goal of any policy should be to remove roadblocks without imposing restrictions.

Next Steps for the Collaborative

Meeting 17 of the California Collaborative provided an opportunity for participants to learn a great deal about one particular approach to adopting Linked Learning systemically. In many ways, however, the meeting touched only the tip of the iceberg. Questions remain as districts in various stages of implementation seek to identify lessons for their own particular context. Among them, at what point does Linked Learning become a systemic strategy, and does it need to be? Conversations are underway about how the dialogue initiated during the meeting can be extended for potential future Collaborative efforts.

The date, location, and topic of the next Collaborative meeting are yet to be determined, but we anticipate that Meeting 18 will be held in March or April of 2012. In the meantime, Collaborative staff will continue to share the work of the group with California audiences. Joel Knudson will present work from the Collaborative’s brief on a systemic approach to school turnaround at the California Educational Research Association conference in Anaheim and a December SchoolsMovingUp webinar. Additionally, a third brief documenting the work of the Fresno-Long Beach Learning Partnership will be released in December. Finally, the Collaborative continues to pursue new sources of funding in an effort to support its work through the upcoming year and beyond.

For ongoing information about the Collaborative, resources from this and previous meetings, updates about Collaborative members, and information on upcoming events, please visit our website at www.cacollaborative.org.