Why Pathways?

A better approach to transforming high school education in California

Virtually all stakeholders agree: California's high schools are not working for the majority of students.

It's a situation with serious implications for these youth today, and for all Californians tomorrow.

It's time for pathways to success.

Current proposed solutions address part, but not all, of the issues causing young people to drop out or check out of school.

It's time for a comprehensive, proven approach that has relevance for youth—and for California's economy.

ConnectEd
The California Center for College and Career

A call for innovation
THE STATE OF HIGH SCHOOL EDUCATION TODAY

Only a third of high school students in California graduate on time and transition easily to postsecondary education and lasting career success.

California's high schools are not working for large numbers of young people. Almost a third of new ninth-graders drop out before graduating.[1] They face a future of marginal, low-paying jobs or of eking out wages and living off-the-books in the underground economy.

Another third finish high school, but lack the academic and technical readiness to succeed in college or career. If they pursue postsecondary education, they often wind up spending long hours in remedial courses trying to learn the mathematics, reading, and writing skills they should have acquired in high school. If they seek employment, they quickly learn that their options are limited largely to low-skill, low-paying jobs with little prospect for advancement.

Only a third of high school students in California graduate on time and transition easily to postsecondary education and lasting career success.[2]

By any standard, Californians cannot afford this situation. It represents significant human, social, and economic costs today—and even bigger negative consequences for our future.

A range of good—but fragmented—ideas are available.

While there may be agreement on the problem, there is less consensus on what to do about it. Many remedies are proposed, including higher academic standards, reinvigorated career and technical education, universal college-preparatory curriculum, small schools and small learning communities, charter schools, better assessment, increased accountability, fiscal incentives, and other school finance reforms.

These ideas are for the most part well conceived. If wisely implemented, many hold promise for positive change. However, each is usually advanced in a piecemeal fashion—and comes up short of creating big impact and truly making schools better.

It's time for a different approach.

California needs a comprehensive, coherent strategy that allows industry, policymakers, educators, and community advocates to re-engage high school students in serious learning. Specifically, we need to help young people prepare to produce effectively in a rapidly changing economy; achieve educational, financial, and personal goals; and participate in community life.

We need an approach that is simple and complete, built on our collective aspirations for lifelong learning, economic well being, and civic engagement. And this approach must be versatile—it must recognize that California's young people can pursue many different pathways to achieving their dreams and contributing to the success of this state.

[1] California Department of Education 2005–06
[2] National Center for Public Policy and Higher Education 2004

The big idea

LINKED LEARNING PATHWAYS TO SUCCESS

It's time to transform today's education for tomorrow's economy.

This goal is within California's reach. It's possible through the statewide application of a proven concept known as *Linked Learning: Pathways to College and Career Success*.

Linked Learning transforms students' high school experience by bringing together strong academics, demanding career and technical education, and real-world experience to help students gain an advantage in high school, postsecondary education, and careers. Students follow industry-themed pathways, choosing among fields such as engineering, arts and media, or biomedicine and health.

Those in an engineering pathway might learn about geometry and algebra while designing and building a structure. Students in an arts and media pathway might learn persuasive writing skills while developing business plans, or creative writing skills while drafting scripts.

The success of the Linked Learning approach is grounded in its relevancy and rigor. These pathways connect learning with students' interests and career aspirations. They also connect to actual needs in our state's economy, and they help motivate young people to learn by answering the question: "Why do I need to learn this?"

By combining a college-preparatory curriculum with exceptional career and technical education, and exposing students to the world of work, pathways lead to real-world success for our youth, and to a world-class labor force for our state.

The pathways approach is being implemented in school districts—both urban and rural—in all regions of the state. The results to date are striking, including higher graduation rates, increased postsecondary enrollments, higher earning potential, and greater civic engagement.

Pathways are poised to become a better model for California public education.

AN INVITATION TO A BETTER FUTURE

State leaders in business, labor, public policy, education, and community development are invited to join the Linked Learning Alliance. This statewide coalition of hundreds of organizations and individuals is dedicated to improving California's high schools and preparing students for postsecondary education and career, both options and not just one or the other. The Alliance brings a collective voice and coordinated effort to expanding access to Linked Learning. Working groups focus on areas such as policy, awareness building, and pathway development to help ensure that more students in California have access to Linked Learning. To join, go to www.LinkedLearning.org.

A winning combination

PRINCIPLES THAT SPELL SUCCESS FOR PATHWAYS

If there ever was a day when high schools could be content to prepare some students just for college and others just for work, that day is past.

Pathways can be organized around any one of the 15 major industry sectors that make up the California economy. And they can be offered through a number of high school delivery systems. The ability to provide students with a range of relevant content in a variety of ways is a hallmark of the pathways approach.

At the same time, each pathway is grounded in a set of four guiding principles.

1. **Pathways prepare students for postsecondary education and career.** A pathway is always about both objectives; it's never a choice between one or the other. Here's why: The probability of making a living wage in today's economy without some form of postsecondary education is already low and will only diminish. Increasingly, career success depends on some postsecondary education and gaining a formal credential—a certificate, associate's degree, bachelor's degree, or higher level of achievement.
2. **Pathways lead to the full range of postsecondary opportunities.** Pathways can eliminate current practices that sort and track high school students in ways that limit their options after high school. Students graduate prepared for a full range of opportunities: two- and four-year college, apprenticeship, formal employment training, and military service. Each pathway represents a broad theme that can appeal to and engage a student, regardless of his or her prior academic achievement and postsecondary aspirations.
3. **Pathways connect academics to real-world applications.** Each pathway integrates challenging academics with a demanding career and technical curriculum. Pathways alter *how* core academic subjects are taught; they do not lower expectations about *what* is taught. Through the pathways approach, students are expected to achieve at high levels in mathematics, science, English, social studies, and foreign language. Students master these subjects through the power of applying knowledge in a real-world context—they learn by being presented with authentic problems and situations that are part of the modern workplace.
4. **Pathways improve student achievement.** Pathways are based on accountability. They are designed to produce higher levels of accomplishment in a number of measurable arenas, including academic and technical scores, high school completion, postsecondary transitions, and attainment of a formal postsecondary credential. They also contribute—in ways that most conventional academic and career and technical education curricula do not—to increased student proficiency in vital areas such as critical thinking, problem solving, media and information literacy, and collaboration. Finally, pathways make an immediate difference, helping young people gain higher earnings right after high school and giving these students a leg up in the labor market while they pursue postsecondary education.

Keeping it real
CORE COMPONENTS THAT ENRICH PATHWAYS

A Linked Learning approach creates strong options for students. Each pathway is organized around a major industry theme such as engineering, arts and media, finance and business, environmental design, or biomedicine and health. In turn, each pathway contains four essential ingredients.

1. **A challenging academic component** prepares students for success—without remediation—in postsecondary education. Pathways complement traditional learning with project-based instruction that links to real-world applications to engage students in core subjects including:
   - English—four years
   - Mathematics—three years, including algebra, geometry, and advanced algebra or statistics
   - Science—two years, including biology, chemistry, or physics
   - Social Studies—three years, including American and world history, U.S. government, and economics
   - Foreign language—two years, emphasizing oral communication and cross-cultural understanding
   - Visual and performing arts—one year
2. **A demanding technical component** delivers concrete knowledge and skills through a sequence of three or more technical courses. The focus of these courses is on preparing youth for high-skill, high-wage employment by emphasizing real-world applications that bring their academic and technical learning to life.
3. **A work-based learning component** offers opportunities to learn through real-world experiences. At different stages of the high school experience students gain access to a range of options including intensive internships, job shadowing, mentorships, virtual apprenticeships, and school-based enterprises. These experiences enhance classroom instruction, and help sharpen students' desire to increase knowledge and skills that are relevant to their career interests.
4. **Support services** includes counseling and transportation as well as additional instruction in reading, writing, and mathematics to support students in a challenging program of study.

While any school can be theme based, a key difference with pathways is that academic course content is coordinated with and reinforces technical course content and vice versa. The science teacher reviews theories that students did not understand in the technical class; the technical teacher brings theories to life in the next hands-on technical class. Seeing the connection between theory and application helps students gain a greater depth of knowledge.

In the best application, each pathway spans grades 9 to 12 and connects directly to a set of postsecondary options.

The great promise of Linked Learning is the ability to finally make learning real and exciting for the thousands of students who are bored with conventional high school curricula. Whether they aspire to become doctors or medical technicians, architects or carpenters, all students hunger for the answer to a simple question: "Why do I need to learn this?"

Pathways offer a challenging vehicle that inspires students to learn, and give them access to education that is both rigorous *and* relevant.

Working on the ground

THE PRACTICE AND PROMISE OF PATHWAYS

One rigorous evaluation found that males who were enrolled in career academies earned $2,100 more annually.

Pathways are already a powerful—and proven—approach in communities across California.

Through pathways, students are connecting their core academic classes to challenging career and technical instruction. It's happening in places like the *School of Digital Media and Design* at Kearny High in San Diego, *Arthur Benjamin Health Professions High School* in Sacramento, the *Architecture, Construction, and Engineering Academy* at Jordan High in Long Beach, the *Academy of Business and Finance* at Porterville High in the Central Valley, the *Los Angeles High School of the Arts*, and the *Law Academy* at Richmond High School.

Although Linked Learning pathways are hardly the norm in California's high schools, they are emerging as a fresh, comprehensive, and practical solution to our statewide need to transform education.

Linked Learning is a flexible approach that can be implemented through various models such as California Partnership Academies, career academies, charter schools, and small-themed schools to name just a few. Today in California, 500 Partnership Academies are organized around one of the state's 15 major industry sectors, and another approximately 300 career academies are in operation. Regional Occupational Centers and Programs (ROCPs) play an important part in many of these academies. In many other high schools, ROCPs are experimenting with innovative approaches to integrate academic and technical education.

As with any improvement approach, pathways can certainly benefit from new resources, but first and foremost implementing pathways is about using resources differently.

There is growing evidence that a Linked Learning strategy will improve student outcomes.

One of the most rigorous recent evaluations in this area found that, eight years after completing high school, males who had enrolled in career academies on average earned $2,100 annually more than their peers.[3] Along similar lines, a recent examination of data from California's Partnership Academies showed Academy students passing the High School Exit Exam at much higher rates than other high school students. Academy students were also much more likely to complete challenging academics, with 50 percent of Academy seniors meeting the minimum "a–g" course requirements for admissions eligibility at the University of California and California State University, compared with only 39 percent of all seniors statewide.[4]

Pathways offer the potential to unlock the full promise of education in California. They can provide a better way to prepare all students for success after high school.

[3] Kemple and Willner 2008
[4] Bradby et. al. 2007

What it will take?
PROVIDING PATHWAYS FOR ALL

Ten major areas of focus will address needs and provide a policy framework for successfully expanding pathways in California's schools:

1. **State Endorsement of Linked Learning:** persuading elected officials and educational leaders to recognize Linked Learning as a key strategy for preparing students for postsecondary and career success in California
2. **Curriculum and Instruction:** developing models for curriculum and instruction to provide schools with solid examples of the Linked Learning approach
3. **Work-Based Learning:** providing opportunities for high-quality learning based on real-world career situations to students in grades 9 through 12
4. **Student Support Services:** bolstering existing in-school support services to help students master rigorous curriculum and map their college and career options
5. **Teacher Preparation and Development:** increasing the supply of teachers who can prepare students for both college *and* career, including developing supplemental credentials that certify teacher readiness for effective delivery of Linked Learning pathways
6. **Regional Implementation:** supporting regional coalitions in planning and implementing Linked Learning pathways that match area industries and circumstances
7. **Scheduling and Instructional Time:** ensuring widespread adoption of block scheduling, seven- and eight-period days, and other strategies for increasing the time available for students to complete Linked Learning pathways
8. **Alignment with Postsecondary Education:** improving coordination between high schools and postsecondary institutions to advance student preparation and access to these institutions
9. **Strong Leadership:** providing information and assistance to principals, superintendents, board members, and other education leaders to ensure quality implementation of Linked Learning
10. **Assessment, Accountability, and Evaluation:** assessing student learning, incorporating new measures into the state's accountability system, and evaluating the effectiveness of Linked Learning in action

It's time to significantly reduce an unacceptably high dropout rate and prepare youth for the demands of California's dynamic economy. It's time to link postsecondary choices with high school pathways that engage and motivate students. It's time to link industry experiences with high school learning to prepare students for real-world success.

It's time to transform today's education for tomorrow's economy. It's time for Linked Learning.

It's time to provide our young people with real-world learning for real-world success.

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Transforming today's education for tomorrow's economy

ConnectEd's mission is to support the development of Linked Learning and the pathways by which California's young people can complete high school, enroll in postsecondary education, attain a formal credential, and embark on lasting success in the world of work, civic affairs, and family life. We are dedicated to advancing practice, policy, and research supporting Linked Learning.

Why Pathways?

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