

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.



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The California Center for College and Career

A call for innovation

THE STATE OF HIGH SCHOOL EDUCATION TODAY

California's high schools are not working for large numbers of young people. About one-third of new ninth graders drop out before graduating. 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 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-pay 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.

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 shifting our current condition for the 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.



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The big idea

MULTIPLE 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 *multiple pathways*. A *pathway* is a program of academic and practical study centered on a California industry. High school students pursue a pathway over multiple years and graduate prepared for the full range of post-graduation options — which can include enrolling in a two- or four-year college, beginning an apprenticeship, starting formal job training, or joining the military.

By offering multiple pathways, schools encourage students to select from a variety of themed programs in any of 15 fields — including business and finance; biomedical and health science; building and environmental design; engineering; and arts, media and entertainment.

The success of this approach is grounded in its relevancy and rigor. Pathways 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 know this?" By combining a college-preparatory curriculum with exceptional career and technical education, 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 and higher earning power for students in pathways or similar programs.

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 come together around multiple pathways and build a new agenda for high school improvement in California. This group can become a powerful force for transforming high school education by examining and forming consensus around the multiple pathways approach. In addition, this group can contribute to further definition of pathways guiding principles, core components, and policy implications. Each of these topics is presented on the following pages, along with evidence to date pointing to the potential for pathways to change California high school education for the better.

A winning combination

PRINCIPLES THAT SPELL SUCCESS FOR PATHWAYS

Multiple 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 (let alone the economy of tomorrow) without some form of postsecondary education is already low and will only diminish. Increasingly, career success depends on postsecondary education and gaining a formal credential — a certificate, associate's degree, bachelor's degree, or higher level achievement. 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.
- 2. 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 real-world application — they learn by being presented with authentic problems and situations that are part of the modern workplace.
- 3. Pathways lead to the full range of postsecondary opportunities.** Pathways prepare students for all the avenues they might pursue following high school graduation: two- and four-year college, apprenticeship, formal employment training and the military. Each pathway represents a broad industry theme that can appeal to, and engage, a student regardless of his or her prior academic achievement and postsecondary aspirations. Pathways can eliminate current practices that sort and track high school students in ways that limit their options after high school.
- 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 to career and education, 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.

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Keeping it real

CORE COMPONENTS THAT ENRICH PATHWAYS

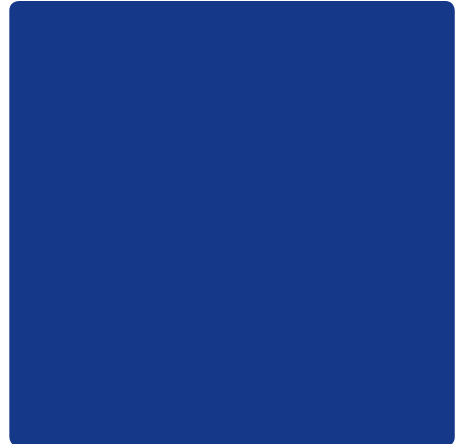
A multiple pathways approach creates strong options for students. Each pathway is organized around a major industry sector such as business and finance; biomedical and health science; building and environmental design; engineering; and arts, media and entertainment. In turn, each pathway contains four essential ingredients.

1. **A challenging academic component** prepares students for success — without remediation — in California’s community colleges and universities, as well as in apprenticeships and other postsecondary programs. Central to each pathway is instruction in essential subjects, typically spanning multiple years and always placed in the context of real-world application. Pathways design can feature innovative approaches to delivering college-preparatory subjects, replacing traditional learning with rigorous instruction that engages students in core subjects, including:
 - English — four years
 - Mathematics — 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. The focus is on preparing youth for high skill, high wage employment through an emphasis on real-world applications that bring their academic and technical learning to life.
3. **A work-based component** offers opportunities to learn through real-world experiences. Students gain access to intensive internships, virtual apprenticeships, and school-based enterprises. These experiences complement classroom instruction, helping sharpen students’ desire to increase knowledge and skills that are relevant to their career interests.
4. **Supplemental services** include counseling as well as additional instruction in reading, writing, and mathematics.

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

Multiple pathways eliminate the problematic separation of mainstream academics from technical instruction. They offer a challenging vehicle that inspires students to learn, and gives them access to education that is both rigorous *and* relevant.

The great promise of multiple pathways is the ability to finally make learning real and exciting for the thousands of students who are bored with conventional high school curricula. Whether dreaming of becoming a doctor or a medical technician, an architect or a carpenter, 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 gives them access to education that is both rigorous *and* relevant.



Working on the ground

THE PRACTICE AND PROMISE OF PATHWAYS

Today, multiple pathways are hardly the norm in California’s high schools. Yet they are emerging as a fresh, comprehensive, and practical solution to our statewide need to transform education.

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 *Construction Technology Academy* at Kearny High, the *High Tech High School* in San Diego, the *Health Careers Academy* at Palmdale High School, the *Health Professions High School* in Sacramento, the *Manufacturing Production Technology Academy* at Laguna Creek High School and the *Media Academy* at Grover Cleveland High School in Los Angeles.

Today in California, there are 290 Partnership Academies organized around one of the state’s fifteen major industry sectors, and there are approximately another 300 career academies in operation. Regional occupational programs (ROPs) play an important part in many of these academies. In many other high schools, ROP programs are experimenting with innovative approaches to integrate academic and technical education.

There is growing evidence that a multiple pathways strategy will improve student outcomes.

One of the most rigorous recent evaluations found that, five years after completing high school, males who had enrolled in career academies earned \$2,500 annually more than their peers. 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 37 percent of all seniors statewide.

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.

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What it will take?

PROVIDING PATHWAYS FOR ALL

Bringing the benefits of pathways to all California communities requires effectively tackling critical policy issues in ten areas.

1. **State Endorsement:** persuading elected officials and educational leaders to recognize multiple pathways as a key strategy for preparing students for postsecondary and career success in California.
2. **Regional Implementation:** supporting regional coalitions in planning and implementing multiple pathways programs that match area industries and circumstances.
3. **Curriculum and Instruction:** developing models for curriculum and instruction to provide schools with solid examples of the multiple pathways approach.
4. **Work-Based Learning:** providing opportunities for high quality learning based on real-world career situations to students in grades 9 through 12.
5. **Student Support Services:** bolstering existing in-school support services to help students master rigorous curriculum and map their college and career options.
6. **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 multiple pathways.
7. **Postsecondary Transitions:** improving coordination between high schools and postsecondary institutions to advance student preparation and access to these institutions.
8. **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 multiple pathways.
9. **Leadership Support:** providing information and assistance to principals, superintendents, board members, and other education leaders to ensure quality implementation of multiple pathways.
10. **Assessment, Accountability, Evaluation:** assessing student learning, incorporating new measures into the state's accountability system, and evaluating the effectiveness of multiple pathways 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 offer high school programs that engage students and motivate them to achieve and pursue deeper training and education. It's time to provide our young people with real-world learning for real-world success.

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

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 multiple 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.

Why Pathways?

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