



I N S I G H T

Lessons learned from the Concurrent Courses initiative

Different Approaches to Dual Enrollment

*Understanding Program Features
and Their Implications*

Linsey Edwards, Katherine L. Hughes and Alan Weisberg

CCRC Community College
Research Center
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Contents

Foreword	2
Summary	3
Introduction	5
The Importance of Program Configuration	7
The Concurrent Courses Initiative: Pathways to College and Careers	9
Descriptions of the Eight Partnerships	9
Understanding Variation in Program Configuration	13
Discussion and Conclusion	23
References	25

Foreword

Three years ago, The James Irvine Foundation launched the Concurrent Courses initiative to demonstrate the feasibility of dual enrollment programs — traditionally the prerogative of advanced students — to enhance college and career pathways for a broader range of youth. Programs of this type allow high school students to take college courses and earn college credit. Increasing access to dual enrollment, particularly for students struggling academically and those within populations underrepresented in higher education, supports our Youth program's goal of increasing the number of low-income youth in California who complete high school on time and attain a postsecondary credential by age 25.

Since 2008, we have learned much from the eight secondary-postsecondary school partnerships involved in the initiative. Concurrent Courses affirms the notion that a broad range of dual enrollment students can do better in high school and accumulate the college credits needed for a good start in higher education. Through this report, practitioners who wish to establish or enhance dual enrollment programs will find what we consider to be essential program qualities, as well as the program characteristics that influence how those qualities are achieved.

In our experience, the most successful dual enrollment programs not only incorporate the characteristics best suited to their students, communities and economics, but do so by integrating rigorous academics with demanding career and technical education, comprehensive student support services and relevant work-based learning opportunities. These integrated elements are core to Linked Learning, Irvine's approach to comprehensive high school reform.

The Concurrent Courses initiative has been managed by the Community College Research Center (CCRC) housed at Teachers College, Columbia University. We are grateful to the CCRC team for this work, including Senior Research Assistant Linsey Edwards, Assistant Director Katherine L. Hughes and Research Affiliate Alan Weisberg for authoring this report conveying CCRC analysis and findings. We also thank the many educators working within the Concurrent Courses partnerships reported on here. Additional outcomes of this initiative are being gathered and assessed, and will be published at a future date.

We invite anyone with interest in dual enrollment, young people and their contributions to community to browse these pages for insights and ideas on promising pathways to college.



Anne B. Stanton
Youth Program Director
The James Irvine Foundation
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Summary

Dual enrollment programs allow high school students to take college courses and earn college credit. While dual enrollment has historically focused on high-achieving students, these programs can have significant benefits for underperforming students as well, particularly if integrated with a career focus. Our research shows that student experience differs dramatically from one program to the next. Examining these differences illuminates the advantages and disadvantages of various program designs, particularly as they influence access and success for a broad range of students. These findings may be helpful to educators, policymakers and families interested in dual enrollment.

This report analyzes eight secondary-postsecondary partnerships in California that sought to integrate dual enrollment with a complementary career-focused strategy for engaging struggling students. Adding a strong career focus can be an important element for such students because of its potential to motivate them through applied learning and help them see pathways through college to future employment. The programs featured here join a growing movement to make career-focused dual enrollment part of a promising college and career preparation strategy for a broad range of students.

ABOUT THE CONCURRENT COURSES INITIATIVE

The Concurrent Courses initiative was created in 2008 to demonstrate the feasibility of using dual enrollment programs to enhance college and career pathways for low-income youth who are struggling academically or who are within populations historically underrepresented in higher education. Funded by The James Irvine Foundation, the initiative provided financial support and technical assistance to eight secondary-postsecondary partnerships in California for approximately three years as they developed, enhanced and expanded their career-focused dual enrollment programs.

Participating Dual Enrollment Programs 2009–2010 academic year

Arthur A. Benjamin Health Professions High School, Sacramento, in partnership with Sacramento City College

City College of San Francisco, San Francisco, in partnership with San Francisco Unified School District

Long Beach Unified School District, Long Beach, in partnership with Long Beach City College and California State University Long Beach

Los Angeles City College, Los Angeles, in partnership with Hollywood Senior High School, Downtown Business Magnets High School and Miguel Contreras Learning Complex

North Orange County Regional Occupational Program, Anaheim, in partnership with Anaheim Union High School District, Cypress College and Fullerton College

Santa Barbara City College, Santa Barbara, in partnership with Santa Barbara High School District, Carpinteria High School District and South Coast Regional Occupational Program

Shasta Union High School District, Shasta, in partnership with Anderson Union High School District, Shasta College and Shasta-Trinity Regional Occupational Program

Tulare Joint Union High School District, Tulare, in partnership with College of the Sequoias

FINDINGS

While Concurrent Courses partnerships pursued the same goals, their program features varied by design. Each partnership reflected its own set of relationships, fiscal challenges and geography. Analysis of each program and its results generated the findings detailed in this report. Presented here are two qualities that are important to the dual enrollment experience and six program features that influence how a program achieves these qualities.

QUALITIES TO ACHIEVE

Authenticity of experience. A dual enrollment class should be perceived by students as an authentic college experience where they can “try on” the college student role and view themselves as capable of doing college work.

Integrated student supports. Dual enrollment programs serve more students more effectively by building learning support into class time, more so than through limited, independent interventions such as one-on-one tutoring.

Program Features to Consider

1. **Location of classes** **On college campuses,** students find a highly authentic experience and access to college support services. However, because the cost and time needed for bus travel can make these arrangements difficult to manage for schools and students, some programs locate dual enrollment classes at the high school.
2. **Type of instructor** **College instructors** teaching high school students for the first time often need help in understanding and connecting with them, while high school instructors teaching college courses may need assistance in changing their pedagogy to create an authentic collegiate environment. Professional development can help both college faculty and college-credentialed high school teachers improve student persistence and success.
3. **Course offerings** **Appropriate course selection is very important,** and should be informed by the program’s goals and students. Student success classes, in which students develop study skills, establish career goals, and investigate colleges and majors give students tools to help them succeed in college. Hands-on career-technical courses are also very appealing to students.
4. **Mix of students** **When dual enrollment students are mixed** in classes with regular college students, they are likely to display greater maturity and feel their college experience is authentic.
5. **Type of credit** **The opportunity to receive credit for both high school and college** is a significant incentive for students to participate in dual enrollment programs, as doing so can save money and time. Still, some local policies permit students to earn only college credits for dual enrollment coursework.
6. **Timing of courses** **When held during the regular high school day,** access to dual enrollment courses is broadened as transportation challenges and conflicts with after-school obligations are eliminated. However, this arrangement may lessen authenticity and be difficult for schools and students with tight course schedules.

Introduction

Dual enrollment — allowing high school students to take college courses and potentially earn college credit — has become increasingly common in the United States. While there are no national figures showing participation rates over time, in the last several years a number of states have passed policies encouraging the practice.¹ Dual enrollment has also received increasing attention from the federal government, appearing in several bills recently introduced by the U.S. Congress.² As originally conceived, dual enrollment programs target high-achieving high school students, particularly seniors who have already taken the most advanced courses available at their schools. Yet today, dual enrollment is also emerging as part of a promising college preparation strategy for a broad range of students, including those who are struggling in high school. Advocates contend that a thoughtful sequencing of dual enrollment courses, combined with appropriate student supports, could have a strong positive influence on students who are disengaged from high school and lacking the confidence needed to plan for college. A career focus in dual enrollment may be an important element for such students, because it may engage them through applied learning and help them see pathways through college to future employment.

Today, dual enrollment is also emerging as part of a promising college preparation strategy for a broad range of students.

In 2008, The James Irvine Foundation launched the Concurrent Courses initiative, which provided about three years of support for eight secondary-postsecondary partnerships in California offering career-focused dual enrollment programs targeting historically underrepresented populations. The initiative reflects many of the goals and principles of the Foundation's Linked Learning approach, which uses multiyear industry pathways — such as biomedical and health sciences, finance and business, and information technology — to link rigorous academics to real-world applications outside of school. Through community and business partnerships, this approach seeks to better engage and prepare students for postsecondary success and careers by offering college-preparatory academic content, demanding career-technical education, work-based learning opportunities, and support services.

This report, informed by qualitative data gathered by the Community College Research Center on the Concurrent Courses initiative, provides detailed information to practitioners who wish to implement or enhance dual enrollment. The eight Concurrent Courses partnerships implemented programs that differ in a variety of dimensions, including class location, class time, instructor characteristics, course content, student mix, and opportunities for earning credit. This report describes

¹ For example, in Texas, under House Bill 1 (2006), school districts must allow eligible students the opportunity to earn at least 12 college credits through International Baccalaureate, Advanced Placement, or dual enrollment programs. In 2007, New Mexico implemented a high school graduation requirement as part of the High School Redesign Initiative [S.B. 561] requiring students to complete either a dual enrollment, Advanced Placement, or online course.

² For example, the Fast Track to College Act of 2009 [H.R. 1578, 111th Cong.] would have authorized the Secretary of Education to provide grants to support early college high schools and other dual enrollment programs.

the various program models and the state and local policies and community contexts that shaped them. To help secondary and postsecondary partners consider the potential consequences of particular programming decisions, dual enrollment models are discussed in relation to the following aims:

- Making dual enrollment an attractive option for a broad range of students, particularly for youth who are low-income, struggling in high school, or part of a group that is underrepresented in higher education
- Delivering career-focused dual enrollment courses that offer high school and college credit
- Supporting students in their college courses so that they have the resources to succeed and to build self-efficacy for continued engagement in college

In addition, this report explains why a careful consideration of program configuration is particularly important when attempting to engage disadvantaged, underachieving and/or underrepresented students. It overviews the Concurrent Courses initiative and its aims, providing a brief description of each partnership to give a clear context for analysis of program models. It discusses the various program models with attention to the challenges and potential benefits presented by variations in program configuration. The final section presents findings and broad recommendations both for facilitating access to dual enrollment and for supporting participating students.

The Importance of Program Configuration

A review of state policies governing dual enrollment identified a number of dimensions of program variation: target population, student eligibility criteria, course location, student mix (whether high school students take the courses alongside college students), instructors' credentials, course content, method of credit-earning, program intensity, and funding (Karp, Bailey, Hughes and Fermin, 2004). That review examined the policies governing these dimensions in all 50 states and found that, in general, states show the greatest interest in overseeing the financial aspects of dual enrollment and determining which students are allowed to participate. States show less interest in promoting a specific model of dual enrollment and tend to leave programmatic decisions to local institutions. This is generally the case in California, where state legislation and education code govern funding and student eligibility (Golann and Hughes, 2008) but do not determine the other dimensions noted above. (For more on California state laws pertaining to dual enrollment, see the text box on page 8.)

It is clear that the structure of a dual enrollment program can influence students' experiences and perceptions. For instance, where and by whom the courses are taught can impact the extent to which a dual enrollment program is perceived as an authentic college experience. There is reason to believe that students will benefit more from dual enrollment courses that most closely resemble regular college courses since, in addition to learning the advanced academic or technical content, they can potentially learn the norms and behaviors associated with success in college. The dual enrollment classroom can be an environment in which students "try on" the role of a college student. If successful at this role rehearsal, students will learn what it is to be a college student and may even experience a shift in self-concept; that is, the dual enrollment experience may allow students to begin to view themselves as capable of engaging successfully in college-level work. Karp (2006) found a direct correlation between the authenticity of dual enrollment courses and students' increased understanding of what it means to be a college student. Ensuring that dual enrollment courses are perceived as authentic may improve their effectiveness as part of a college preparation strategy.

Where and by whom the courses are taught can impact the extent to which a dual enrollment program is perceived as an authentic college experience.

It is particularly important to consider the method of course delivery when seeking to engage academically struggling and underrepresented students. Students with a history of academic achievement have likely found ways to navigate academic institutions to their advantage, and privileged students may have the social capital that encourages participation in an early college

experience. However, circumstances in the lives of underrepresented or underachieving students may affect their participation. For instance, low-income students who work or who care for younger siblings may not be able to take college courses that are offered after school.

It is also important to consider the contextual factors that shape program implementation and adherence to program goals. Both local and state policies must be considered when implementing dual enrollment programs. In a few cases in the Concurrent Courses initiative, local policies restrict decisions about how or when dual enrollment may be offered.

California State Law Pertaining to Dual Enrollment

Education Code 76001: A special part-time (high school) student may enroll in up to, and including, 11 units per semester, or the equivalent thereof, at the community college. The governing board of a community college district shall assign a low enrollment priority to special part-time or full-time students to ensure that these students do not displace regularly admitted students.

Education Code 76300: The governing board of a community college district may exempt special part-time (high school) students from enrollment fees.

Senate Bill 292 (1996): School districts can claim full ADA [average daily attendance] for dually enrolled students as long as they are enrolled in and attend high school for 240 minutes per day. They can claim three-quarters ADA for dually enrolled 11th- and 12th-grade students who attend high school for 180 minutes or the appropriate percentage of ADA for the number of minutes between 240 and 180, inclusive.

Senate Bill 338 (2003): The governing board of a school district may determine which students might benefit from “advanced scholastic or vocational work.” To participate, students must obtain a principal’s recommendation and parental consent. Community colleges may restrict admission based on age, grade level, or multiple assessments. In order for a college to claim full-time equivalent student funding for high school enrollees, the class must be open and advertised to the general public. Summer dual enrollment is limited to 5 percent of each grade at any high school.

The Concurrent Courses Initiative: Pathways to College and Careers

The Concurrent Courses initiative provided support to eight secondary-postsecondary partnerships in California for about three years as they developed and expanded dual enrollment programs. The overarching aim of Concurrent Courses was to help low-income youth in California who are academically underperforming and underrepresented in higher education to complete high school and successfully transition to college by providing rigorous, supportive and career-focused dual enrollment opportunities.

The Community College Research Center (CCRC) provided oversight of the partnerships and is carrying out qualitative analysis of program implementation; it is also conducting a quantitative analysis of student outcomes. The qualitative data drawn upon for this report come from staff and administrator interviews, instructor interviews, student focus groups, and dual enrollment course observations conducted during annual research visits to each participating site. A student survey administered during the spring of 2010 provides further insight into the student perspective (the survey response rate was 61 percent). Students participating in Concurrent Courses are being tracked in order to evaluate the impact of supportive, career-focused dual enrollment on secondary and postsecondary outcomes.³ Quantitative data are provided through the California Partnership for Achieving Student Success (Cal-PASS), a data collection and sharing system. The quantitative analysis informs an evaluation that seeks to provide evidence on the effectiveness of career-focused dual enrollment in promoting positive student outcomes, such as the accrual of college credit, high school graduation, and college enrollment and persistence. A report of outcomes using quantitative data is planned for release in early 2012.

Practitioners often ask if there is a relationship between program delivery and student outcomes — a significant question that is being explored by CCRC. While the Concurrent Courses partnerships all pursued the same goals, the features of the particular programs varied by design. This analysis yields valuable lessons about the advantages and disadvantages of various program features and about which models best supported the initiative's goals.

Descriptions of the Eight Partnerships

Following is a summary of the main features of each secondary-postsecondary partnership in the Concurrent Courses initiative during the 2009–2010 school year, in which 1,757 students were enrolled in college courses across all institutions. Programs are compared on the basis of the following dimensions: the location of dual enrollment classes (on the high school campus or college campus), the type of instructor (high school teachers or college faculty), the type of dual enrollment course offerings (academic or career-technical education [CTE]), the mix of students (high school students only or high school and college students), the type of credit earned (dual credit or college credit only), and when courses are offered (before, during or after school).

³ Outcomes analysis and the tracking of student participants are funded, in part, by the Institute of Education Sciences at the U.S. Department of Education.

Arthur A. Benjamin Health Professions High School, Sacramento

Partner: Sacramento City College

Arthur A. Benjamin Health Professions High School integrates healthcare career standards with a rigorous high school academic curriculum. Students from this high school, 80 percent of whom come from underrepresented groups, take allied health and academic courses offered by Sacramento City College, with support from college tutors and summer activities on the college campus. The majority of students are expected to take two college courses before high school graduation.

Sacramento

LOCATION	College campus and high school
INSTRUCTOR TYPE	College faculty and high school teachers
COURSE OPTIONS	Academic
STUDENT MIX	High school and college
NUMBER OF STUDENTS	56
CREDIT EARNED	Dual credit
TIME OF DAY	Before and during school

City College of San Francisco, San Francisco

Partner: San Francisco Unified School District

The City College of San Francisco has a long-running dual enrollment program with multiple high school partners in several career fields. Through the Concurrent Courses initiative, City College has included more underrepresented students in its programs through targeted outreach efforts and new secondary partnerships. The college also has implemented a for-credit orientation program, basic skills courses for struggling students, and ongoing CTE professional development.

San Francisco

LOCATION	College campus
INSTRUCTOR TYPE	College faculty
COURSE OPTIONS	Academic and CTE
STUDENT MIX	High school and college
NUMBER OF STUDENTS	209
CREDIT EARNED	Dual credit
TIME OF DAY	During and after school

Long Beach Unified School District, Long Beach

Partners: Long Beach City College and California State University Long Beach

The Architecture, Construction and Engineering Academy (ACE) at Jordan High School is a school within a school. Approximately 70 percent of the students at ACE come from low-income families. The school works with two college partners to develop curricula that integrate academic and technical education. This dual enrollment program takes place at the two colleges — a two- and a four-year institution — and includes other academic and support activities.

Long Beach

LOCATION	College campus and high school
INSTRUCTOR TYPE	College faculty
COURSE OPTIONS	Academic and CTE
STUDENT MIX	High school and college
NUMBER OF STUDENTS	44
CREDIT EARNED	College credit
TIME OF DAY	During school

Los Angeles City College, Los Angeles

Partners: Hollywood Senior High School, Downtown Business Magnets High School, Miguel Contreras Learning Complex

Los Angeles City College offered a five-semester course sequence for high school students in multimedia and web development (this program is no longer being offered). The sequence, comprising of 18 college credits, led to a certificate and was made available to low-income, underrepresented students at three partnering high schools. Classes were taught by college instructors and yielded both college and high school credit. Job readiness workshops and paid internships were also made available to students enrolled in the sequence.

Los Angeles

LOCATION	High school
INSTRUCTOR TYPE	College faculty
COURSE OPTIONS	CTE
STUDENT MIX	High school
NUMBER OF STUDENTS	95
CREDIT EARNED	Dual credit
TIME OF DAY	After school

North Orange County Regional Occupational Program, Anaheim

Partners: Anaheim Union High School District, Cypress College, Fullerton College

The North Orange County Regional Occupational Program has created a pathway in education for students interested in teaching and related careers. More than three-quarters of students enrolled in the education pathway are English language learners. Transferable college courses taught by college instructors were offered to students after school at the high schools. The program, which is no longer operating, also offered tutoring to support students' success in the courses and college field trips to promote college exploration.

North Orange County

LOCATION	High school
INSTRUCTOR TYPE	College faculty
COURSE OPTIONS	Academic and CTE
STUDENT MIX	High school
NUMBER OF STUDENTS	83
CREDIT EARNED	College credit
TIME OF DAY	After school

Santa Barbara City College, Santa Barbara
Partners: Santa Barbara High School District, Carpinteria High School District, South Coast Regional Occupational Program

Santa Barbara City College has a large, well-established dual enrollment program offering college courses to more than 1,000 high school students, many of whom are enrolled in career academies. The college has developed bilingual program materials and implemented a freshman seminar (with credits that are transferable to the University of California) that has increased the participation of underrepresented students in dual enrollment.

Santa Barbara	
LOCATION	High school
INSTRUCTOR TYPE	College faculty and high school teachers
COURSE OPTIONS	Academic and CTE
STUDENT MIX	High school
NUMBER OF STUDENTS	1,149
CREDIT EARNED	Dual credit
TIME OF DAY	Before, during and after school

Shasta Union High School District, Shasta
Partners: Anderson Union High School District, Shasta College, Shasta-Trinity Regional Occupational Program

The Shasta partners have a strong history of collaboration on career and technical education and granting high school students college credit through examination. They have used this experience to implement dual enrollment in the renewable energy field. Their activities include developing program sequences in renewable energy, organizing an annual renewable energy fair, providing transportation for students to take courses on the college campus, and tutoring to support students' academic progress.

Shasta	
LOCATION	College campus (for 2009–2010 only)
INSTRUCTOR TYPE	College faculty and high school teachers
COURSE OPTIONS	CTE
STUDENT MIX	High school
NUMBER OF STUDENTS	67
CREDIT EARNED	Dual credit
TIME OF DAY	During school

Tulare Joint Union High School District, Tulare
Partner: College of the Sequoias

The Tulare partnership provides college courses on a high school campus for students participating in a district-wide allied health pathway. Seventy-five percent of participating students are low-income. Students receive free college credit that is transferable and meets industry certification requirements. A range of supports are offered, including tutoring, career awareness activities, and “college knowledge” workshops.

Tulare	
LOCATION	High school
INSTRUCTOR TYPE	College faculty
COURSE OPTIONS	Academic
STUDENT MIX	High school and college
NUMBER OF STUDENTS	54
CREDIT EARNED	Dual credit
TIME OF DAY	After school

Understanding Variation in Program Configuration

Location. Where a dual enrollment course is offered can have important implications for student access, academic supports and course authenticity. According to a 2005 national report from the U.S. Department of Education, of the postsecondary institutions with dual enrollment programs during the 2002–2003 academic year, 80 percent offered courses on the college campus, 55 percent on the high school campus, and 12 percent at another location (Kleiner and Lewis, 2005). In California, dual enrollment courses can be offered on the high school or the college campus; programs may use both spaces if conditions permit.

On the college campus. There are likely significant benefits to offering courses on the college campus. This location provides the most authentic college experience. Students in courses on the college campus have the opportunity to be immersed in college culture, experience college-level expectations and be surrounded by college-going peer groups. This not only prepares students for future college coursework but also helps them visualize themselves as college students. Ultimately, this could lead to greater academic self-efficacy⁴ and achievement. A Long Beach student enrolled in a course on the CSU campus said the course helped him with his confidence: “If I can make it through a college course, I can make it through college, and that inspires me more to go to college.”

Students in courses on the college campus have the opportunity to be immersed in college culture, experience college-level expectations and be surrounded by college-going peer groups.

In addition, students enrolled in courses held on a college campus benefit from the academic and other support services available there. At the Community College of San Francisco, dual enrollment students participate in an orientation that provides them with much-needed information on campus resources. Students from the Architecture, Construction and Engineering Academy at Jordan High School who take classes on the CSU Long Beach campus are given college identification cards and use the campus library to conduct research for class presentations. Students at these sites are arguably more likely to gain the information and experience needed to successfully navigate these institutions once they become regularly matriculated college students.

Yet, in areas where public transportation is limited, holding class on the college campus can deter participation. This is particularly important given the Concurrent Courses initiative’s aim to serve underrepresented students, many of whom do not have cars of their own or someone to drive them to a college campus. In Shasta, for instance, where courses were initially offered at the college, bus travel to the college campus was both costly and challenging for the school district to arrange. Consequently, courses were moved to the high school campus for the 2010–2011 school year. In San Francisco, despite the existence of public transportation, the college has had difficulties recruiting students from particular high schools to participate. Some students who do participate spend an hour or more each way on public buses.

⁴ Academic self-efficacy refers to the belief students have in their capability to engage in and successfully complete academic tasks or goals. For more on this and its relationship to academic achievement, see Chemers, Hu and Garcia (2001).

At Jordan High School in Long Beach, where courses are offered on two different college campuses, the issue was resolved by chartering a district bus to transport students to their classes. As a district administrator pointed out, if the school controls the transportation to and from the college, the students will have to attend. This arrangement, while ideal, is likely not sustainable in the long run, since it relies on grant funds to pay for the bus. A lower-cost alternative in many places is to issue public transportation bus passes.

On the high school campus. Despite the advantages of offering courses on the college campus, the majority of Concurrent Courses sites offer courses at high schools. Sixty-nine percent of dual enrollment students in 2009–2010 took college courses at their high school.⁵ Decisions to offer courses at the high schools are generally influenced by transportation challenges and a desire to increase the number of students able to participate. Students feel these courses have the potential to be just as beneficial as those offered at the college. In a 2010 survey, Concurrent Courses students, regardless of whether they took their dual enrollment course on the high school or college campus, were likely to agree that the course made them feel confident they can succeed in college.

Offering dual enrollment courses at the high school also permits greater integration and alignment of these courses with high school courses. Many Concurrent Courses initiative courses are offered as part of an academy or pathway that links CTE and academic content. The intent of curriculum integration is to create practical and relevant content that prepares students technically and academically for success in college and career. In the Sacramento partnership, for example, dual enrollment on the high school campus is part of a rigorous, integrated pathway preparing students for health careers. Integration is perhaps easier on the high school campus because dual enrollment is not seen as a discrete activity but rather as an integral part of the high school's health career program.

Offering dual enrollment courses at the high school also permits greater integration and alignment of these courses with high school courses.

In addition, while high schools may not have the same range of drop-in supports as the colleges, students may be more likely to seek support on the high school campus. Often, the students who most need academic assistance are the least likely to solicit that help, particularly if they feel uncomfortable doing so. If the college campus seems unfamiliar or intimidating, dual enrollment students may not seek the support they need. The high school environment, on the other hand, is likely easier to navigate. A Santa Barbara focus group participant said that while taking classes at the college was a good experience, she preferred the dual enrollment courses offered at her familiar, comfortable high school setting.

Arguably, the purpose of these classes is to bring students out of their comfort zone to improve the transition from high school to college. And high school classrooms may have limited resources and instructional space; this is particularly an issue for those technical dual enrollment courses that require special work spaces and equipment. In Long Beach, for example, a construction class was hindered by the limited space and materials available, and virtually all those involved agreed that the course would be improved if it were held on the college campus.

⁵ Information taken from 2009–2010 Cal-PASS dataset for the Concurrent Courses initiative.

Instructors and pedagogy. Little has been written about pedagogy for dual enrollment instruction. Ideally, dual enrollment instructors should deliver the same college-level content and assessments as they would in a regular college course, and in ways that engage and support high school students. This is particularly important to the Concurrent Courses initiative’s broader mission for dual enrollment — to reach disadvantaged or underrepresented students.

In California, there is no specific legislation that pertains to dual enrollment instructors. However, community college instructors are required to have a master’s degree in the academic field of the subject they teach; some career-related courses are also taught only by instructors with master’s degrees. This means that any high school teacher hired as a college adjunct to teach dual enrollment courses must have a master’s degree as well. Several of the Concurrent Courses partnerships hire qualified high school teachers to serve as dual enrollment instructors, while others rely only on college faculty (primarily adjunct and part-time faculty).

Similar to the course location, the instructor’s characteristics — his or her institution, experience and pedagogical methods — affect the perceived authenticity of a dual enrollment course. The instructor can strongly influence whether a collegiate environment is created in the classroom — regardless of the location of that classroom. At the Concurrent Courses sites, participating students certainly have ideas about the kind of teaching and classroom atmosphere they associate with their high schools versus the kind they associate more with college. Student survey respondents reported that college instructors focus less on rules in the classroom, giving students greater freedom and greater responsibility for their own work.

When asked whether her college professor operates the classroom differently from the way a high school teacher would, one student focus group participant in North Orange County said, “There are not a lot of rules in the class. You have to show up and do the work. The college teacher expects you to do it.

If you don’t do it, you don’t.” Rather than viewing this as license to take it easy, the student went on to say, “I’m doing it for me so I might as well do it.” Another student from the same program said, “It is true, they give you more responsibility, not like high school classes. They give you the work and you do it. I had more control about what I wanted to do and how I learned it. It’s a good thing, a good feeling.”

[In my college class] I had more control about what I wanted to do and how I learned it. It’s a good thing, a good feeling.

– North Orange County student

Other students commented on classroom behaviors, such as note taking and completing homework, which are expected of college students but not required. “I had to take notes every single day. In this class you can take notes if you want to. You have to do what you need to succeed in class,” said one student focus group participant. An ACE Academy student interviewee said that note taking was not required in his introduction to engineering class at the university but that “most people do” because it is helpful. Students in Los Angeles said that college instructors do not enforce or check homework. And, in terms of classroom participation, a student in San Francisco said, “At [high] school... you have to raise your hand and everything, but here [at the college] you can speak out, not be afraid to say what’s on your mind.”

In sum, college instructors are perceived by many Concurrent Courses participants as treating them differently — more as adults — than their high school teachers do. “They gave us a bit more freedom,” said a student from Los Angeles. Yet, a high school instructor could create the same environment, and a college instructor could create conditions more resembling a high school course. In a San Francisco college classroom, the instructor was perceived as creating a more high-school-like class environment. One student focus group participant reported that this instructor “checks in with us [and] gave mid-terms grades. She checks in with you about missing assignments.” Students perceived this type of individual attention as what a high school instructor — not a college instructor — should do. In contrast, the Sacramento Health Professions High School instructor who teaches the college anatomy/physiology class made changes in her classroom pedagogy so that when students step into the college class they perceive her differently. Student focus group participants reported that this class is probably the most demanding class in their school, more difficult than even Advanced Placement classes.

To promote student persistence and success in their courses, instructors may benefit from professional development. High school instructors may need assistance in changing their pedagogy to deliver college-level content in a college environment, and college instructors teaching high school students for the first time often need help in understanding and connecting with them while still teaching rigorous content. To address these needs, the Concurrent Courses initiative provided assistance to sites in 2009–2010 in which experts from the Oakland-based Career Ladders Project worked with some of the dual enrollment instructors on strategies for helping students, particularly those with a gap in skills, persist in the classes.

In addition to improved pedagogy, students often need to make use of college support services outside the classroom. In some circumstances, students may need to be counseled to drop the course rather than receive a failing grade. At two of the Concurrent Courses sites, college and high school faculty from the same disciplines continue to meet regularly to discuss curricular alignment, student support and other topics. In North Orange County, one program staff member said the partnership with the high school is beneficial on a broader level. “Everyone at the college is talking about the basic skills problem — about how every year the incoming students are a little less prepared,” she said. “The college doesn’t want to keep increasing their sections of high school-level math. This program is part of the solution.”

The college doesn’t want to keep increasing their sections of high school-level math. This program is part of the solution.

– North Orange County program staff

Course selection and content. Appropriate course selection is important to a successful dual enrollment program. Across the Concurrent Courses programs, the partners have been working together to carefully think through the selection of courses offered. Community colleges offer a vast array of courses across a broad range of subject matter. While the college partners are most familiar with the course content, the high school and regional occupational program partners best know the students their programs are hoping to reach. Course selection may be informed by the goal of a particular program — whether to provide an entry point to a college career-technical pathway, to improve students’ academic skills or to give students tools that will help them succeed in college. All of these foci are present in the courses offered across the Concurrent Courses sites.

The Concurrent Courses initiative is a career-focused dual enrollment initiative by design. There is some evidence that students find career-technical education more engaging than traditional academic subject matter and that it can improve some student outcomes (Kazis, 2005). CTE courses may also help young people explore and decide on a career path. Many of the students participating in Concurrent Courses are in high school career academies (called Partnership Academies in California), small learning communities in which students follow a college-preparatory curriculum with a career-related theme. Adding a college course in the same career field may show students how to continue their education in that field, should they choose to do so.

In addition, some academy career fields clearly lead to good job opportunities. For example, students in a San Francisco biotechnology academy take an introductory stem cell biology course at the City College of San Francisco that gives them hands-on instruction in stem cell culturing. According to the high school science teacher, there are 850 biotechnology firms within commuting distance of San Francisco and many job opportunities for students who continue their studies in the City College program.

Given that the Concurrent Courses initiative's target population includes students who are struggling in high school, a hands-on CTE course may provide such students with a better chance of being successful than a college-level academic course. In Redding, for example, students with low grades in their high school classes are earning better grades in their Shasta College renewable energy courses. In another example, a Los Angeles City College film instructor who had been concerned about his students' results on the midterm test was later impressed with their final projects, all of which were well-executed films completed on time. All the students ended up passing the course, and the instructor came out of the experience with a strengthened belief that it is important to give students the option of excelling in an area other than test taking.

This is not to say that core or elective academic courses should not be offered as part of a comprehensive dual enrollment program. The goal of the Tulare Health Careers Pathway program is for students to complete some of the prerequisites for the college's registered nursing program, such as sociology and psychology. With a similar goal in mind, Health Professions High School in Sacramento has established a college anatomy and physiology class on the high school campus.

You can learn a lot easier doing it yourself instead of just staring at a projector or doing it on paper.

-Shasta student

Some of the more academically oriented courses have had mixed success in terms of student retention, however. In a theory-heavy child development course that used a dense textbook offered through the North Orange County program, fewer than half of the students who started the course completed it. Free tutoring was available, but according to the program coordinator, the students who most needed help did not take advantage of it.

Shoring up students' basic academic skills is a challenge experienced across the programs in the initiative. In general, high school students, particularly the ones recruited to Concurrent Courses, need special support to be successful in academic college courses. Several sites have tried to implement tutoring; none have been very successful. Trained tutors are difficult to find, and their schedules often are not compatible with those of the students. Two sites are trying different routes. In Long Beach, the four-year university includes a supplemental instruction component in the engineering survey course offered to the ACE Academy students. Tutors (who are college students) observe the class and then spend two hours with the students in the math lab immediately afterward. To help students become ready to take college courses, the City College of San Francisco sends its instructors to provide non-credit skill-building courses in mathematics and English at two partnering high schools.

College success courses are a helpful introduction to college coursework. These credit-bearing courses, also called student success or college orientation courses, are increasingly common on college campuses; in some cases, entering students are required to take them. Their content varies, but they usually provide students with information about the college and its programs and services and help students develop skills that will encourage their success. Studies have found that these courses can facilitate the development of information and peer networks that promote student persistence (Karp and Hughes, 2008).

College success courses are a helpful introduction to college coursework.

In Santa Barbara, the City College Personal Development 100 course is taught after school at partnering high schools. The purpose of the class is to help students develop study skills, such as time management, note taking and critical thinking, and to consider career goals and investigate colleges and college majors. In North Orange County, the Cypress College Counseling 150 class has similar goals and has become popular with the partnering high schools. The instructor, a college adjunct with a master's degree in educational counseling, supports the goals of the program's teaching pathway by having the students team-teach units of the textbook to one another. On a day the CCRC research team visited to make observations, two students taught the unit on skills for successful in-class learning, which covers the importance of taking and reviewing notes, theories of short- versus long-term memory, and different learning styles. The other students appeared thoroughly engaged and, at the end of the unit, were given the opportunity to evaluate their classmates' pedagogy.

In sum, it seems that course selection can strongly influence student persistence — courses that are engaging, relevant and hands-on are generally having greater success among the Concurrent Courses sites. Students should be encouraged to take college classes that are at the appropriate level — challenging yet manageable — so that they can begin to believe that college is for them, not beyond them.

Student mix. The California Education Code does not directly address the question of “student mix” — whether dual enrollment classes should be composed wholly of high school students or whether they should be integrated with regularly matriculated college students. But, for the purposes of receiving state apportionments, postsecondary institutions may claim full-time equivalent student (FTES) funding only when the course is advertised and open to all students (Senate Bill 338). Colleges may not claim per-student funding if the course is reserved for high school students. If the college does not collect FTES funding but is able to pay for the course instructor through other means (such as grant funds or payment by the high school), then the course may be reserved for high school students only.

Location has a strong influence on student mix. Most Concurrent Courses college partners — and California community colleges in general — have a long history of allowing special admission to high school students deemed qualified to take a college course if there is space available. Thus, on the college campus, high school students are usually mixed in with college students. In contrast, placing FTES-funded dual enrollment courses on high school campuses often deters regular college students from enrolling. The Concurrent Courses partnerships abide by the law in advertising their initiative courses, but they are generally able to fill those courses almost entirely with the targeted population of high school students. There is no intent to exclude college students; the partnerships simply want to ensure that these opportunities are available to the high school students. A Santa Barbara administrator said that when regular college students enroll for these courses, they usually drop them after being made aware of the high school location.

Dual enrollment courses on both college and high school campuses have been impacted by the California budget crisis and by state code that gives special-admit students the lowest priority for registration. On community college campuses, the number of courses and course sections available has been reduced while enrollment has increased, shutting out dual enrollment students. By the same token, if regularly matriculated students find it difficult to register for the courses of their choice on the college campus, as is the case now, they may turn to the courses located on high school campuses, further squeezing dual enrollment students out.

CCRC research suggests that the mix of students in dual enrollment courses influences the perceived authenticity of the experience. Some student focus group participants commented that being in college courses with only their high school peers does not differentiate the experience from high school. “You know all the students,” a San Francisco student said, “so you feel like you’re just in another high school class.”

When you’re in a class with adults, it’s more of a college-level environment. You feel more professional.

– San Francisco student

In contrast, sharing a classroom with regular college students can encourage high school students to take school more seriously. “When you’re in a class with adults,” another San Francisco student said, “it’s more of a college-level environment. You feel more professional.” Student focus group participants and school-level personnel suggested that greater levels of seriousness and maturity were displayed by the dual enrollment students in mixed courses, where other college students may serve as role models

and also as peers. Across all the sites, very few student focus group participants indicated having relatives or peers who had successfully navigated through postsecondary education. Having such students take dual enrollment courses with college students could certainly be helpful. Indeed, research suggests that increasing access to college-going peer groups encourages high academic expectations and college aspirations among students (Tierney, Bailey, Constantine, Finkelstein and Hurd, 2009).

On the other hand, some students remarked that taking college courses with their high school classmates provided them with a positive sense of comfort and familiarity. “It can be intimidating going to class with college students,” a Santa Barbara focus group student said. Some students indicated feeling more confident about participating in class when the class was composed of their high school peers. However, the degree of familiarity among students can also be a distraction. “[We’re] mostly friends, so we’ll talk and whisper to each other [during class],” a student in an ACE Academy course at the high school said about a dual enrollment course. “[In classes] with other students we don’t know, we’ll pay more attention to the teacher.” Similar feedback and observation of this behavior was found at other sites.

Credit earning. When high school students take courses for dual credit, they are awarded both high school and college credits for a college course. Often, high schools award more credits for a college course than for a regular high school course. For example, a one-semester college course may fulfill a year-long high school requirement. The opportunity to receive dual credit can be a significant incentive for students to participate in dual enrollment programs, since enrolling can save money and time, particularly for those with packed schedules. When asked for comments on the Concurrent Courses initiative during a spring 2009 survey, a Santa Barbara student wrote, “[It’s] a great program, nice to get both high school and college credit.”

The opportunity to receive dual credit can be a significant incentive for students to participate in dual enrollment programs, since enrolling can save money and time.

However, not every Concurrent Courses site awards high school credit for dual enrollment courses. In California, individual high school and community college district governing boards have the ability to decide whether a dual enrollment course will yield both high school and college credit (California Education Code Section 76001). In North Orange County, the high school board does not permit the granting of dual credit. The board may be concerned that high school course offerings would be supplanted by dual enrollment, thereby threatening teachers’ jobs.

Even where dual credit is available, this type of credit is not always awarded automatically. State dual enrollment regulations require that high school students in college courses be treated as adults, which means that high schools do not automatically have direct access to student records, such as transcripts. In Sacramento and Tulare, for example, the burden is on the student to ensure that dual credit is awarded. Students must go to the college campus (even when the college course is held at the high school), obtain a copy of their transcript, and return it to their high school counselors. This requirement makes it difficult for high schools to keep track of students’ enrollment and progress in college courses, and it affects students’ ability to gain dual credit.

Time of day. California state law does not dictate which time of day — before, during or after school — dual enrollment courses may be offered. Before the fiscal crisis, California experienced an increase in both before- and after-school academic and non-academic offerings as a result of increased attention paid to academic standards and desires to extend the school day.⁶ As budgets become more constrained, school districts are developing strategies to improve academic standards and extend the school day in cost-efficient ways. At certain schools, dual enrollment courses can be an integral part of those strategies. But considerations around when to offer dual enrollment courses vary from site to site and are influenced by scheduling, benefits to students and potential barriers to participation.

Before school. Offering dual enrollment courses before school — during “zero period,” as it is often called — presents both benefits and challenges. Zero-period courses allow schools to accommodate students with heavy class schedules and after-school obligations. Offering dual enrollment courses before school changes the structure of opportunity⁷ for students in that they do not have to choose between dual enrollment and after-school extracurricular activities. At Arthur A. Benjamin Health Professions High School, for instance, seniors who take dual enrollment during zero period are able to use their free time at the end of the day to participate in internships with local healthcare providers. Students also have more time to take advantage of after-school clubs, sports and academic assistance. This strategy is particularly effective for high-needs high schools with tight class schedules (particularly those running on a block schedule) and a limited capacity to increase course offerings beyond the core classes.

The challenge with courses offered before school, however, is that students must be motivated and have the transportation available to get to school early. The Health Professions High School zero period class suffered from poor attendance and retention rates. The instructor commented that the students who were consistently in attendance were more motivated and had a history of academic achievement. This course was later moved to after school, and it experienced improved attendance. The instructor said that students were noticeably more alert and ready to work.

During school. When dual enrollment is offered on the high school campus and integrated into the regular school day, it generally broadens the pool of students able to participate. Unlike courses offered before or after school, courses offered during school do not conflict with out-of-school-time obligations and limits on transportation.

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These courses are advantageous because they automatically count toward average daily attendance (ADA) and when taught by a high school instructor, there is no need for the district to allocate additional funding for instructional time. Even when the courses are taught by college adjuncts, the district rarely has to pay.⁸ Dual enrollment on the high school campus also increases the high school’s course offerings, particularly more advanced classes.

⁶ It is generally believed that extending instructional time beyond the regular school day has both intrinsic and extrinsic benefits for students — particularly for those who lack the resources to improve the quality of their out-of-school time. The hours after school are the peak time for youth violence and engagement in risky behaviors, such as drug and alcohol abuse. For more information, see Chung (2000).

⁷ “Structure of opportunity” refers to the way in which institutions (such as schools) are organized and how their organization shapes opportunities to gain particular rewards or achieve certain goals.

⁸ In the Santa Barbara program, where over 80 sections of dual enrollment are offered on the high school campus during the regular school day, the high school district does not have to use additional funds for teachers. Santa Barbara City College faculty members are paid through the college.

However, in small schools where the master schedule is tight, increasing the number of course offerings could have a negative impact. In one Concurrent Courses high school, a school counselor indicated during an interview that adding more classes to the master schedule would mean increased competition for students and potentially strained relationships with postsecondary partners and the regional occupational program (ROP). While there is certainly a demand for more diversity in high school course options, spreading the same number of students over a greater number of courses could cause some courses to become under-enrolled. If dual enrollment courses, in partnership with colleges, are offering students college credit, this could potentially take away from ROP courses that do not offer such credit. As a result, in Santa Barbara, where there is a significant ROP presence, the partnership has arranged for some regional occupational program courses to yield college credit.

In addition, concerns about college course authenticity surface when courses are integrated into the regular school day. Faculty, teachers and students from the ACE Academy agreed that having a class at the high school during the school day diminished students' ability to take the course seriously. "The class feels like a high school class," an ACE focus group student said. For this reason, among others, some Concurrent Courses sites offer dual enrollment during the school day on the college campus. These courses are typically offered toward the end of the school day, after minimum school day requirements have been met.

After school. Four of the Concurrent Courses partnerships offer dual enrollment classes after school. In Los Angeles, the Unified School District has set a policy that if a college course is offered on the high school campus, it must be held beyond the school day (Los Angeles Unified School District Policy Bulletin, 2004).

After-school dual enrollment can be offered on the high school or college campus with little interference with class scheduling during the school day. The after-school model is particularly beneficial for programs that serve multiple secondary schools but do not have the resources to offer courses on each high school campus. In North Orange County, for example, dual enrollment courses rotate to different high schools each semester. Because the courses are offered after school, students from other schools across the district can participate, thus increasing the pool of students the program is able to serve.

However, courses offered after school can conflict with students' other needs and responsibilities, such as employment, sibling child care, clubs and sports, or after-school remediation and test preparation. Concurrent Courses program administrators and teachers at virtually every site identified these as critical barriers to student participation in after-school courses.

Discussion and Conclusion

Dual enrollment historically has been the province of higher-achieving students, who, often on their own initiative, take advanced academic courses. While this practice continues to serve an important purpose, many now view dual enrollment as a strategy to help a broader range of students make the transition from high school to college. The Concurrent Courses initiative attempts to promote dual enrollment for students who most need help with that transition. It aims to use the power of career pathways to motivate high school students to enroll and succeed in college classes.

Importantly, the Concurrent Courses initiative is not prescriptive, and its accomplishments suggest that there are multiple ways to do this work successfully. The eight participating partnerships received substantial support to pursue different ways of motivating students to enroll and succeed in college through career-focused dual enrollment. None of the partnerships were given a script for implementing dual enrollment; they only had to include dual enrollment opportunities within a career-focused pathway linking high school to college, and to provide supplemental supports.

Through nearly three years of program implementation, a great deal has been learned about the ways in which programs vary and how different programmatic decisions can encourage student participation and success. Context matters; each program has its own set of relationships among schools and colleges, its own fiscal challenges and its own geography. Thus, no single model can be recommended above all others. One community college site coordinator described her strategy as “systems plus customization” — putting systems into place for student recruitment, orientation and registration, but customizing courses and student support offerings for each partnering high school. Similarly, the authors of this study recommend that anyone implementing dual enrollment should consider their state and local context and what will be effective specifically for their school and for their students.

This study also suggests that state and local policy can be changed to help programs leverage opportunities to promote broader student participation in dual enrollment. Lifting restrictions requiring dual enrollment courses to be offered after school could result in programmatic decisions that increase student participation. Permitting the awarding of dual credit could allow more students who are struggling in high school to benefit from dual enrollment courses. Providing free local bus passes to all high school students would increase their access to college campus-based courses and services. And allowing high school students to register for classes at the same time as other incoming college students do so would further facilitate dual enrollment participation. Greater flexibility in programmatic decisions can make it easier for dual enrollment partnerships, especially in difficult financial times, to find ways to make their relationship work for everyone.

In addition to these general lessons, other themes emerged from the research that seem central to the development of successful dual enrollment programs. The first theme is authenticity: Under what conditions can dual enrollment be a true college experience? Dual enrollment courses that

resemble regular college courses in content and structure allow students to become more accustomed to the norms and behaviors that are expected in college. According to students in this study, an authentic college experience means less “hand-holding,” more individual responsibility for learning and being treated more like an adult. Since students from all types of courses reported having these kinds of experiences, it appears that sufficient authenticity can be achieved whether a course is offered on a high school or college campus, and with a college professor or college-credentialed high school teacher.

Another prominent theme is student supports: How can struggling students best be supported in order to promote their success? The first step is to select appropriate courses that will be engaging and meaningful to the students and provide a foundation for continued success. Three types of courses were offered as dual enrollment in the Concurrent Courses initiative: academic, career-technical (CTE), and student success. Academic courses were sometimes a good option, especially when they were culturally relevant to the participating students, but the CTE classes offered special appeal to many students. Student success classes are an increasingly popular part of the community college landscape — this study’s fieldwork findings suggest that they can offer great benefits to students, particularly those who are underrepresented newcomers to postsecondary education. Offering a college success class as an introductory dual enrollment course is a good way to prepare students for success before enrollment in more rigorous college coursework.

Supporting students includes a broad range of services that foster success in college coursework and build capacity for college matriculation and persistence.

Ultimately, supporting students extends beyond appropriate course offerings and ought to include the availability of a broad range of services that foster success in college coursework and build capacity for college matriculation and persistence. Success by the Concurrent Courses partnerships in providing academic supports has been uneven primarily because student participation was unpredictable. Building academic support into extended class time is one solution for reaching more students more effectively than attempting to schedule interventions such as one-on-one tutoring. Professional development can also help by providing instructors with the tools to support and engage struggling students within the classroom.

Additional evidence of the benefits of particular program features will emerge from further analysis of the Concurrent Courses initiative. Forthcoming quantitative results should provide some guidance as to whether the features discussed here make more or less of a difference in student outcomes. For now, qualitative findings suggest that the early college experiences provided by the initiative have been beneficial to many students who otherwise might not have had such opportunities. “[Concurrent Courses] is a really good program for inner-city kids who don’t have these opportunities,” said a focus group participant in Los Angeles. “It broadens our options.” “Before taking this college class,” said another student from North Orange County, “I wasn’t really sure that I was going to attend any college at all. But [the program] really helped me prepare for college, and now I know I can attend any college I set my mind to.” Experiences such as these have the potential to have a positive impact on students’ decisions and futures.

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INSIGHT DIFFERENT APPROACHES TO DUAL ENROLLMENT

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