The Dual Enrollment Playbook

A Guide to Equitable Acceleration for Students

THE ASPEN INSTITUTE
COLLEGE EXCELLENCE PROGRAM

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Introduction

Imagine a student we'll call Ruby. Ruby is one of more than 1 million U.S. high schoolers participating in dual enrollment—that is to say, she's enrolled in college courses while in high school, earning credits that count simultaneously toward her diploma and a college degree.[1]

This path has many benefits: more rigorous classes, exposure to college, a heightened sense of purpose, and savings of money and time. Research suggests that dual enrollment students are more likely than others to graduate from high school, enroll in college, and complete college degrees.[2]

As a Latina student from a low-income family, with parents who didn't go to college, Ruby doesn't reflect the majority of students in dual enrollment in a typical school district, but she is a natural fit for the opportunity. Her middle school teachers, committed to accelerating as many students as possible, placed her in advanced math classes, and her high school teachers convinced her that accelerated options, and a college degree, were very much in reach.

Ruby was sold on the idea of taking more rigorous courses for free and shaving time and money off her college education. But she didn't pass the math section of the placement exam. Her counselor pushed her to try again and got her into a boot camp to prepare for the test. Ruby passed, and the first thing she did after signing up for dual enrollment was to sit with an advisor who mapped out a pathway, course by course, that matched Ruby's interests and dreams. When she struggled in one college class, she was shy to admit it, but her professor alerted her counselor, and Ruby got the help she needed.

Ruby graduated from high school as a college sophomore. Every one of her 30 dual enrollment credits counted toward her bachelor's degree in her chosen major, saving her a year's worth of college tuition and setting her on the road to a great career.

It doesn't sound that complicated: Offer students acceleration, get them on a college plan with credits that count, and support them along the way. It certainly sounds promising to school systems and community colleges, which have doubled the size of their dual enrollment programs over eight years. And to state legislatures, which in 2019 alone enacted 37 bills expanding access to dual enrollment.[3] While more students participate in the historically popular Advanced Placement (AP) program, the growing interest in dual enrollment has expanded opportunities for students to get on a path to a college credential while in high school.[4]

But as dual enrollment grows across the country, evidence shows that students, especially those who otherwise might not have a clear path to postsecondary education, are often shortchanged. They never learn about dual enrollment; their parents can't afford the tuition, fees, or transportation to campus; their K-12 education didn't prepare them well enough; or they're excluded altogether from the opportunity.

[1] The Integrated Postsecondary Education Data System does not track participation in dual enrollment. Our analysis of IPEDS data shows that more than 1.2 million students age 17 and younger were enrolled in fall 2017. However, this category is only a proxy for dual enrollment students and leaves out students enrolled in spring and summer. The most recent federal data shows that between the 2002-03 and 2010-11 school years, the number of dual enrollment participants nearly doubled, from 813,000 to 1.4 million. See Marken, S., Gray, L., & Lewis, L. (2013). *Dual Enrollment Programs and Courses for High School Students at Postsecondary Institutions: 2010–11*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.
[2] What Works Clearinghouse. (2017). *Dual Enrollment Programs*.

[3] Education Commission of the States. (2020). *Dual Enrollment Access*.
[4] More than 2.8 million students took an AP exam in 2019. College Board. *Annual AP Program Participation 1956-2019*.

Especially when they are from groups historically underrepresented in college, students can only accrue the full benefits of dual enrollment when programs are deliberately designed to close equity gaps and effectively executed. The Aspen Institute and the Community College Research Center identified nine dual enrollment programs in Florida, Ohio, and Washington that had high participation rates for historically underrepresented students of color (which this report defines as Black, Latinx, Indigenous, and Pacific Islander students) and strong outcomes for these students in course success, credit accumulation, and college enrollment and persistence.[5] Field research revealed the partnerships, practices, and policies that result in equitable access and success.

Historically underrepresented students of color and students from low-income backgrounds are more likely than other students to attend segregated K-12 schools that don't prepare them well for college. These disadvantages snowball, contributing to substantial and persistent inequities by race and ethnicity in educational outcomes, including degree completion and access to well-paying careers. Advanced coursework in high school can change the equation, by creating an easily accessible pathway to higher education.

But dual enrollment can also exacerbate disadvantages when it is not designed with equity as a primary goal. As with other acceleration options, such as AP and International Baccalaureate (IB), there is substantial variation by race and income, across and within states and districts, in access to dual enrollment and postsecondary success of students who participate. On average, 12 percent of white students participate in dual enrollment, compared to 7 percent of Black students and 8 percent of Hispanic students.[6]

It is, however, possible to do better. One in five school districts across the country have closed the gap in access to dual enrollment courses by race.[7] The sites we researched show that districts and colleges can deliver equitable access to and success in high-quality dual enrollment when intentional strategy is paired with innovation and commitment.

This playbook details lessons for high school, district, and college leaders in ensuring that traditionally underrepresented students have equitable access to and success in high-quality dual enrollment programs. With more than 1 million students counting on it, and even more students missing out, it's an opportunity we can't afford to ignore. ◼

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[5] Due to the COVID-19 pandemic, we were only able to visit seven of these nine sites in person. For the purposes of this research, "historically underrepresented students of color" and "students of color" refers to Black, Latinx, Indigenous, and Pacific Islander students. Most sites researched largely served Black or Latinx students. See the appendix for a full explanation of the research methodology.

[6] For a recent analysis of dual enrollment and AP participation nationally, see Xu, D., Fink, J., & Solanki, S. (2019). *College Acceleration for All? Mapping Racial/Ethnic Gaps in Advanced Placement and Dual Enrollment Participation*. New York, NY: Community College Research Center. For dual enrollment outcomes, see Fink, J., Jenkins, D., & Yanaguira, T. (2017). *What Happens to Students who Take Community College "Dual Enrollment" Courses in High School?* New York, NY: Community College Research Center.

[7] In further analysis, the authors determined that 19 percent and 23 percent of school districts nationally had above-median rates of dual enrollment participation for Black and Hispanic students, respectively, and gaps of less than 1 percentage point compared to white students. Xu, D., Fink, J., & Solanki, S. *College Acceleration for All?*.

A STUDENT'S JOURNEY

Ruby is a Latina student from a low-income family. She will be the first in her family to go to college.

Ruby begins at an elementary school that offers all children an advanced curriculum and trains teachers to infuse college-prep skills like note-taking and inquiry.

Ruby continues advanced curriculum and college-prep programming.

Elementary School

Middle School

At school events and in teacher meetings, Ruby's parents are continually told that their daughter and her classmates have accessible pathways to college.

In 4th grade, Latinx college students visit Ruby's classroom to talk about their paths, and Ruby goes on a field trip to a local college.

Ruby's principal, having noted her GPA, suggests she attend an informational session about dual enrollment.

In 8th grade, Ruby enrolls in algebra, a trajectory that makes it possible to take college math during high school.

In 9th grade, Ruby and her classmates are invited to take the college placement test (at no cost). She passes English, but not math. She attends afterschool prep sessions, retakes the test, and passes math.

Ruby meets with an advisor from the college who visits her school weekly. With her advisor, Ruby selects a college program, picks two classes, and fits them into her high school schedule.

Ruby's professor notices her struggling in one course, reaches out to her, and sends an alert to her high school counselor. On their advice, Ruby gets the help she needs from the college tutoring center.

Ruby graduates high school with 30 college credits—a full year's worth. She's honored at her high school graduation, and enrolls full-time in college with a head start.

High School

College

Ruby and her counselor talk about Ruby's career interests and college aspirations; the counselor encourages Ruby to take college courses during high school.

Ruby and her classmates take a bus twice a week to the college for dual enrollment classes.

Ruby joins a campus club for Latina students and starts to feel like a "real" college student.

A PRIMER ON
DUAL ENROLLMENT

Dual enrollment refers to college classes taken by high school students through a partnership with a college. In this publication, we focus on community college courses, because most high school students taking dual enrollment do so in partnership with community colleges rather than four-year institutions.[8]

Dual enrollment courses include those aligned to degrees and credentials in both liberal arts and workforce fields. Delivery can take many forms. Eighty-six percent of dual enrollment students take classes at a high school, taught by a college instructor or a high school instructor credentialed to teach college classes. Some educators say that when dual enrollment is located in the high school, teachers and counselors can better monitor students' behavior and progress and provide support when needed. It is, they say, a good intermediate step on the road to greater independence.

Seventeen percent of dual enrollment students take courses on the college campus from a college instructor, and another 8 percent take them online.[9] Some colleges insist that most dual enrollment courses be taught on campus by college faculty, because this allows them to maintain control over quality and rigor. They also believe that when students are exposed to college campuses, classroom norms, and other college students, they can more easily acclimate to college and improve their readiness to attend and succeed after high school.[10] Finally, some high schools have agreements with community colleges that allow them to offer career and technical education courses that will count toward future college credit.

While programs may also be described as "dual credit" or "concurrent enrollment," we use the term "dual enrollment" to encompass all these options. Whatever the name, these courses help students fulfill high school graduation requirements and simultaneously make

progress toward a postsecondary degree or workforce credential. In some cases, dual enrollment students earn enough credits to graduate from high school with an associate degree.

Funding structures and costs vary widely by state (and sometimes within states if the state offers more than one program or devolves authority to localities). Students may have to pay all program costs, including the standard college tuition, fees, and books, or the school, district, college, and state may cover all or some of these costs. To participate, students typically must meet certain eligibility requirements, which also vary by state policy and local agreements. These requirements can include an age or grade-level threshold; minimum grade-point average; qualifying scores on a college placement test, PSAT, SAT, ACT, or state assessment; and written approval from a teacher, counselor, principal, or parent.

This publication does not address other models of acceleration, including AP, IB, the Cambridge Advanced International Certificate of Education Diploma (AICE), and early college high schools, a specific type of special-ized high school in which students take dual enrollment courses as part of a curriculum that integrates high school and college coursework.[11] Many high schools offer a mix of acceleration options, though some focus on only one. Each of these programs differs in terms of content, college admissions benefits, and credit accumulation, and each has its merits. For instance, students earn college credit from dual enrollment with a passing grade in the course, whereas students must receive a certain score on an AP exam to earn college credit. These dual enrollment credits may also be accepted more readily by in-state universities with existing transfer agreements with community colleges, while many selective colleges accept AP credits but not dual enrollment credits.

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[8] Fink, J., Jenkins, D., & Yanaguira, T. *What Happens to Students who Take Community College "Dual Enrollment" Courses in High School?*

[9] These numbers do not add to 100 percent because students may take courses at more than one location. See US Department of Education. (2019). *Dual Enrollment: Participation and Characteristics.*

[10] Karp, Melinda M. (2012). "'I don't know, I've never been to college!' Dual enrollment as a college readiness strategy." *New Directions for Higher Education* 2012, no. 158, 21–28.

[11] Research shows that early college high schools lead to strong postsecondary outcomes, especially for underrepresented students. This playbook does not include these schools because there already is a wealth of literature on them and less on how to advance equity in dual enrollment overall. Also, the dual enrollment programs we examine here have the potential to serve many more students.

Five Principles to Advance Equity in High-Quality Dual Enrollment

Advancing equity in high-quality dual enrollment requires an intentional design aligned to certain principles. Simply offering more classes is not enough. Nor is attaining equal outcomes in mediocre programs. For instance, if Black, Latinx, Indigenous, and Pacific Islander students are passing a course that isn't designed or taught well, their performance may be equal to white students enrolled in an excellent course elsewhere, but those outcomes are not equitable. College, district, and school leaders must ensure that historically underrepresented students of color have equitable access to and success in high-quality dual enrollment programs. To do so, leaders must make intentional, substantive investments to advance equity.

Through our research, we identified five principles that undergird the strategies and practices of equitable dual enrollment partnerships.

> PRINCIPLE I: Set a shared vision and goals that prioritize equity
>
> PRINCIPLE II: Expand equitable access
>
> PRINCIPLE III: Connect students to advising and supports that ensure equitable outcomes
>
> PRINCIPLE IV: Provide high-quality instruction that builds students' competence and confidence
>
> PRINCIPLE V: Organize teams and develop relationships to maximize potential

Our recommendations are based on visits to effective dual enrollment programs across three states that have diverse contexts and varied approaches. When we use the terms "effective," "excellence," and "high-quality," we mean not that the programs are popular or financially healthy but that they have strong outcomes for students: They earned passing grades (C or better) in their dual enrollment courses, accumulated at least nine college credits while in high school, and enrolled in and completed one year of college after high school graduation (whether at the community college or elsewhere).

While we selected partnerships across a range of state and local contexts, they do not represent every possible scenario, and not all strategies are directly applicable across all dual enrollment sites—but the principles are broad enough to apply. Additionally, though our primary equity focus was on race and ethnicity, we also learned about how dual enrollment programs effectively support low-income students, first-generation college students, and English language learners.

The focus of this publication is on institutional levers, not policy ones. But where relevant, we explain the policies that shaped the institutional practices we observed. In particular, they often determine which students are eligible for dual enrollment courses and how they must demonstrate eligibility, the location and modality of courses students may take, whether students can access career and technical options as part of their acceleration plan, how dual enrollment is funded, and whether tuition is free for students.[12] Leaders should understand where they might advocate for policies that could advance equity in a lasting way and how policies that expand dual enrollment without race-conscious efforts to equalize access may only widen equity gaps.[13]

[12] For recommendations for equity-focused state dual enrollment policy, see Matthews, Jr., L., (2020). *Accelerating Students from High School to College and Careers.* Tallahassee, FL: ExcelinEd; Moore, C. (2019). *Making Equity Intentional: The Role of State Policy in Removing Barriers for Underserved Students to Access Dual Enrollment Opportunities.* Washington, DC: HCM Strategists; *Unlocking Potential: A State Policy Roadmap for Equity & Quality in College in High School Programs.* (2019). College in the High School Alliance and Level Up.

[13] Jones, T. & Nichols, A. H., (2020). *Hard Truths: Why Only Race-Conscious Policies Can Fix Racism in Higher Education.* Washington, DC: The Education Trust.

The five principles in this playbook reflect the lessons that will make the most difference for historically underrepresented students of color, but these strategies may benefit students from low-income and other backgrounds as well. For each principle, we name several strategies, with examples, that the colleges and high schools we studied use to advance equitable access to and success in high-quality dual enrollment courses. Online,

we provide hands-on tools for guiding work at high schools and colleges, including institutional self-assessments and discussion guides for partners.

When leaders apply these principles and champion practices and policies that prioritize equity as the ultimate goal, dual enrollment can truly accelerate the path to college and meaningful careers for all students. ■

TABLE 1: **STATEWIDE DUAL ENROLLMENT POLICIES**[14]

		FLORIDA: DUAL ENROLLMENT	OHIO: COLLEGE CREDIT PLUS	WASHINGTON: RUNNING START	WASHINGTON: COLLEGE IN THE HIGH SCHOOL
COURSE OFFERINGS	Classes at the high school	X	X		X
	Classes at the college	X	X	X	
	Online classes	X	X	X	
	CTE options included[a]	X	X		
ELIGIBILITY REQUIREMENTS[b]	Grade level requirement	Grades 6–12	Grades 7–12	Grades 11–12	Grades 10–12
	GPA requirement	X		X	X
	Testing requirement[c]	X	X	X	X
	Exceptions to eligibility requirements allowed	X	X	X	X
FUNDING	District pays	X	X	X[d]	
	Students and families bear some costs			X	X[e]
	Schools receive funding for dual enrollment via scorecards	X	X		

[a] In addition to Running Start and College in the High School, Washington has a robust college CTE program for high schoolers.
[b] Entry requirements for both Washington programs are set by the postsecondary institutions.
[c] Florida and Ohio have waived these requirements due to the COVID-19 pandemic.
[d] Colleges receive 93 percent of the district's per-pupil funding for participating students.
[e] Districts and colleges work out agreements locally.

[14] Compiled from the Florida Department of Education, Ohio Department of Education, Washington Student Achievement Council, and Education Commission of the States.

Five Principles to Advance Equity in High-Quality Dual Enrollment

Principle

I

SET A SHARED VISION AND GOALS THAT PRIORITIZE EQUITY

Principle

II

EXPAND EQUITABLE ACCESS

Principle

III

CONNECT STUDENTS TO ADVISING AND SUPPORTS THAT ENSURE EQUITABLE OUTCOMES

Principle

IV

PROVIDE HIGH-QUALITY INSTRUCTION THAT BUILDS STUDENTS' COMPETENCE AND CONFIDENCE

Principle

V

ORGANIZE TEAMS AND DEVELOP RELATIONSHIPS TO MAXIMIZE POTENTIAL

Principle

I

SET A SHARED VISION AND GOALS THAT PRIORITIZE EQUITY

The most equitable dual enrollment programs are driven by clear and thoughtful vision, strategy, and goals, and they make the success of all students a priority. Often, dual enrollment suffers from a number of limitations: It's viewed as a niche extra rather than a core acceleration strategy; it's underutilized as a way to advance college attainment and social mobility; and equity gaps are ignored (then grow). In successful programs, on the other hand, colleges, districts, and schools approach dual enrollment proactively, with a clear vision and strategies centered on equitable access and success.

While those on the front lines of dual enrollment—instructors and advisors—must engage in effective strategies if dual enrollment is to succeed, those strategies result from vision developed by leaders. In excellent dual enrollment partnerships, college presidents, K-12 superintendents, and high school principals make clear why they are committing to equity in dual enrollment and communicate this vision to stakeholders within their institutions and across their partnerships. For these leaders, dual enrollment is intertwined with other mission-aligned goals to provide a quality education to all students, expand educational opportunity in struggling communities, and connect students to college so they can enjoy rewarding lives and careers.

Where dual enrollment succeeds, it's also because leaders have considered all the policy and revenue implications, committed to doing what is best for students, and allocated resources accordingly—even when faced with financial disincentives. They've convinced a variety of audiences that dual enrollment is a key commitment, and that students from diverse backgrounds deserve the opportunity and will succeed.

To elevate a vision and purpose for dual enrollment and create a partnership-wide commitment to equity, colleges, districts, and high schools must:

1	2	3	4
Connect dual enrollment to a broader vision	**Commit to equity in dual enrollment**	**Consider partners' incentives and constraints**	**Develop an equity-minded culture**

Strategy 1:
Connect dual enrollment to a broader vision

Where dual enrollment is equitable and successful, it is a foundational part of institutional and partnership-wide access and equity strategies. College, district, and high school leaders have a clear vision for why they are committing to equity in dual enrollment, linking this to other mission-aligned goals about access, equity, and success. Among other goals, they aim to:

Maximize rigor and affirm aspirations for all students. For St. Lucie Public Schools in eastern Florida, dual enrollment is part of a broader commitment to provide all students with a rigorous, high-quality education. At Treasure Coast High School, an urban, Title I school predominantly serving Black and Latinx students, this means that administrators, faculty, and staff do not preserve advanced courses for the most privileged. Rather, they act on the belief that all students should be encouraged to try some form of college-level course, including dual enrollment, through local partner Indian River State College and courses for the Cambridge AICE. To ensure more students qualify for these opportunities, the district tracks and promotes enrollment in courses in middle school that will prepare students for acceleration in high school, including honors classes and algebra.

Increase the region's college-going rate. About 10 years ago, staff from Valencia College in Orlando and the School District of Osceola County brought together local community leaders to tackle a shared challenge: The county ranked among the lowest in Florida for college enrollment among high school graduates. As part of their joint "Got College?" initiative, Valencia and the district analyzed data to identify equity gaps within schools and track students who had taken the dual enrollment placement test but hadn't enrolled at Valencia. These initiatives helped increased the county's college-going rate from 40 percent in 2010 to 51 percent seven years later.

Advance economic mobility and regional workforce development. Dual enrollment is an important way

to accelerate students to meaningful careers and, in so doing, to advance talent development on behalf of a community or region. Some schools and colleges view their dual enrollment programs as part of a larger ecosystem of college access and career preparation. This means thinking about how the trajectory ideally leads to opportunities beyond an associate degree at the community college—namely bachelor's degrees and well-paying, in-demand jobs in the region.

At both Lorain County Community College (LCCC) outside Cleveland and Indian River State College (IRSC) on Florida's Treasure Coast, dual enrollment is intertwined with strategies to promote socioeconomic mobility and connect lower-income residents to good jobs with local employers seeking talented workers. LCCC President Marcia Ballinger is driven by "a moral imperative to have the kind of dual enrollment programs that reach down and pull students up." LCCC's latest strategic plan, "10,000 Degrees of Impact," includes expanding dual enrollment as a strategic goal to prepare future generations of Ohioans and reduce college debt. With the understanding that bachelor's and even master's degrees are key to that vision, the college has built bachelor's degree programs at partner universities into its dual enrollment pathways, through an initiative called MyUniversity Pathways.

Similarly, Edwin Massey, who recently retired as IRSC's president, sees dual enrollment as part of the college's mission to provide affordable, high-quality education linked to regional workforce needs. Dual enrollment is particularly necessary in the most impoverished parts of IRSC's four-county service area, such as rural Okeechobee and urban Port St. Lucie, where partnerships with high schools are the primary means to connect students to IRSC's programs, which the college has mapped to good local jobs. Students are encouraged to pick a college pathway as soon as they begin taking college classes, linking their dual enrollment coursework to in-demand careers as teachers, nurses, emergency medical technicians, police officers, firefighters, and skilled workers in construction, agriculture, and advanced manufacturing. This connection benefits employers as

well as students, since employers often approach IRSC for help diversifying their workforces.

Serve rural communities. Dual enrollment allows Wenatchee Valley College (WVC), which has a service area that stretches over 10,000 square miles of central Washington State, to better serve its rural communities and a nearby Indian reservation. Washington State has two forms of dual enrollment: Running Start, where students take classes on campus, and College in the High School. WVC has expanded the College in the High School model at schools whose students cannot travel to the college to participate in Running Start. The college has also allocated some grant funds to supply rural schools with technology and equipment to enable virtual instruction, such as carts with a computer, speakers, cameras, and a large-screen television.

Strategy 2:
Commit to equity in dual enrollment

It's possible for a dual enrollment program to appear to be thriving while it is actually leaving out many students of color, students from low-income backgrounds, and first-generation students who would benefit from the early exposure and preparation for college. Where students truly have equitable access to and success in dual enrollment, senior leaders have advanced a vision for equity and translated it into goals and strategies that put this priority at the center. Their commitment to better preparing underrepresented students for college and careers through dual enrollment is supported with intentional investments in staff and resources, shifting mindsets and cultures, and, when necessary, workarounds to policies and structures that disadvantage certain students.

These leaders understand that they must not only add dual enrollment courses and related student supports, but that they must also identify particular schools and communities for additional support. For colleges, that means analyzing their service area for schools in which students are underrepresented in dual enrollment and working creatively with them to increase participation.

> **It's possible for a dual enrollment program to appear to be thriving while it is actually leaving out many students of color, students from low-income backgrounds, and first-generation students.**

In some districts and high schools, leaders now view their role not just as getting students to graduation but also setting them up for college and careers—to "path every student to a meaningful postsecondary opportunity," said Tim Yeomans, who recently retired as superintendent of the Puyallup School District south of Tacoma, Washington. This requires schools to identify students who are qualified for advanced coursework (often by monitoring GPAs and state test results), to set the expectation that these students all take and succeed in accelerated coursework, and to better prepare those who do not yet meet eligibility requirements. Ideally, school and district leaders assess participation and outcomes gaps by race and income across all acceleration opportunities.

Define the purpose of dual enrollment with partners

Institutions have many reasons to pursue dual enrollment. Among them:

• Reducing costs for students and families and reducing the time it takes to earn a degree

- Increasing academic rigor in preparation for college and increasing the chances of attaining a degree, especially for underrepresented students

- Introducing students to college-level expectations and helping them develop self-confidence

- Advancing students' sense of purpose by exposing them to postsecondary fields of study

- Increasing revenue and enrollment for high schools and community colleges

- Meeting K-12 state accountability metrics that reward dual enrollment participation

The high schools and community colleges we visited varied in which of these goals they valued and in whether they had explicitly defined their goals at all. When looking to strengthen dual enrollment, leaders should meet to discuss each institution's goals, identifying those that overlap and those that are unique. Such conversations could help schools identify the practices on which they aim to focus, determine which structures are best for delivery,

and provide a way for partners to share key goals, such as increasing equitable access and success.

Evaluate equity gaps and set targets to close them

Ideally, dual enrollment partners systematically measure disparities in participation and outcomes and act collaboratively to address them, by creating new initiatives and ending existing practices that may be creating barriers unintentionally.

At some colleges and schools, those efforts stem from institution-wide diversity, equity, and inclusion initiatives. Indian River State College, for example, formed the Achievement Task Force in 2017 to develop strategies for improving equity across the student journey. One of its working groups focused on improving equity in pre-college programs, with an emphasis on dual enrollment. The task force started with data analysis to identify gaps and then built strategies to close those gaps. Looking at disaggregated data, IRSC found only minimal disparities in the dual enrollment success rates by race and ethnicity,

TABLE 2: **DATA ANALYSIS FOR SETTING GOALS TO CLOSE EQUITY GAPS**

MEASURE	DATA	SOURCES
Access	• Number of students in the high school, by race and ethnicity • Number of students taking dual enrollment, by race and ethnicity • Participation rates, by race and ethnicity • Gap in participation rates of white students and students of color	High school or district
Success	*For each indicator, analyze rates for white students and historically underrepresented students of color and the gap, if any, between the rates.* • Dual enrollment course pass rates (C or better) • Percentage of students who complete 9+ semester-equivalent college credits through dual enrollment while in high school • Rate of college enrollment within one year of high school graduation • Fall-to-spring persistence rates in the first year of college after high school	College National Student Clearinghouse

but participation rates were lower for Black and Latinx students. The review suggested that Black and Latinx students succeeded once given the opportunity, but that too few were being made aware of the college's dual enrollment offerings or receiving the help they needed to take advantage of them.

The data on equitable access prompted IRSC to discuss with districts and high schools how they could jointly address participation gaps for Black and Latinx students, by proactively encouraging all students to take advantage of dual enrollment. The college also began working with community-based organizations to increase awareness of dual enrollment in low-income Black neighborhoods and hosting a "men of color" event for high school students. IRSC leaders are also thinking about how to connect dual enrollment to Ignite, a transfer pathway with Florida A&M University, a historically Black public university.

For some college and school leaders, it helps to articulate numerical goals for closing participation and outcomes gaps for students of color. When Valencia College and the School District of Osceola County committed to increasing the county's college-going rate, they agreed on a specific goal: 50 percent by 2021. (They met this goal in 2016, five years ahead of schedule.) The shared goal affected how Valencia and the district developed joint programming and prioritized new commitments, such as Valencia's opening of a new campus in the previously underserved Poinciana community.

Ideally, partners set goals to both increase participation and strengthen outcomes of Black, Latinx, Indigenous, Pacific Islander, and other underrepresented student groups. The methodology used in this report, detailed in Table 2 (on page 14), could be a starting point for setting baseline goals and tracking progress toward these goals. (Additional recommendations for data to collect and share between partners can be found on page 54.) In addition to the suggested measures, high school leaders can review participation rates in honors and other key preparatory courses, as well as grade distributions in all courses for gaps by race and ethnicity.

> **In excellent partnerships, high schools do not dissuade students from taking classes at the college if that acceleration option fits them best, even when it means losing funding.**

Strategy 3:
Consider partners' incentives and constraints

It's important that partners understand each other's incentives under state and local dual enrollment policies and work to advance equity despite potential policy and revenue constraints. State law often determines critical program elements, such as eligibility requirements, funding allocations, and instructor qualifications. Partners aware of these conditions can seek to maximize the benefits for both institutions as well as their students. They may also want to reach out to policymakers to advance policies that could improve access and success for underrepresented students in dual enrollment.

Partners must understand where the expansion of dual enrollment has some negative consequences and what policies allow flexibility to broaden access. Take state funding as an example. In excellent partnerships, high schools prioritize equity and access over revenue—that is, they do not dissuade students from taking classes at the college if that acceleration option fits them best, even when it means losing per-pupil state funding. And colleges

may offer dual enrollment courses at high schools when students have trouble traveling to campus, even though this arrangement typically yields them less revenue than one in which courses are taught at the college.

Ideally, states fund dual enrollment in a way that is sustainable for colleges and schools—especially under-resourced institutions with relatively large numbers of historically underrepresented students of color. Funding structures that require schools and colleges to pay for the tuition, fees, and books for enrolled students (as opposed to having the state cover all or part of these costs) can make partners wary of expanding dual enrollment. Some states provide subsidies to secondary and postsecondary partners to replace funds spent on dual enrollment students' tuition, fees, and books.

States also may include incentives for dual enrollment and other acceleration strategies in performance-based funding systems for middle and high schools. In Florida, for example, high schools are graded on an "acceleration success" component, a measure that includes the percentage of students who succeed in a dual enrollment course; pass an AP, IB, or Cambridge AICE test; or earn an industry certification. These performance incentives help offset funds that high schools pay colleges for participating students. They also can make dual enrollment a more attractive option for schools than AP, because acceleration success credit is granted when students pass dual enrollment classes with a C- or better, while to be credited for AP success, students must pass an exam whose success rates nationally vary widely by race and income.

Build dual enrollment agreements that promote equity

Most colleges and schools formalize their partnerships in memoranda of understanding and develop articulation agreements to set course equivalencies and credit transfer. These agreements also serve as an opportunity for partners to discuss how state policies and their competing incentives affect them. Partners then forge arrangements that balance financial and staffing needs with the

commitments that best support diverse students. The equity-minded practices that partners agree to in formal agreements may include:

• Committing to flexible entry requirements or agreeing to apply for state programs that waive eligibility requirements (where allowed by state law)

• Using funding from the state or revenue collected from a partner to cover the cost of tuition, fees, books, and transportation for students or to augment staff who conduct outreach to families and advise dual enrollment students

• Expanding dual enrollment offerings at the high school and helping credential more high school teachers to qualify to teach dual enrollment

• Accepting passing scores in AP, IB, and Cambridge AICE exams for course credit at the college, which can complement dual enrollment credits to move students toward an associate degree while in high school [15]

Driven by "return on mission" over return on investment, Valencia College has created arrangements with its district partners that prioritize student supports over tuition revenue. Valencia receives more than $1.3 million from the School District of Osceola County to cover tuition for dual enrollment students, per Florida law. Valencia and the district worked out a financial agreement in which Valencia uses a portion of the funds it receives from the district to provide support services for dual enrollment students. The money goes toward busing students at four targeted high schools to a Valencia campus and paying the salaries of transition coaches at Osceola high schools.

[15] Some high schools and colleges use passing scores from AP, IB, and AICE exams to grant students associate degrees by high school graduation, complementing any credits earned from dual enrollment courses. For example, through the "Pathways to College" program, Ronald W. Reagan/Doral Senior High School and Miami Dade College combine passing scores from AP and AICE exams and successfully completed dual enrollment courses to grant students an associate of arts degree. Pathways to College is a model that will be replicated at other high schools across Miami-Dade County.

Strategy 4:
Develop an equity-minded culture

Some educators don't believe that dual enrollment and other accelerated options are appropriate for all students. They might think that many students of color and students from low-income backgrounds are incapable of college-level work, and that inevitable failure would extinguish the confidence of students already less likely to go to college. Others may hold implicit biases and inadvertently perpetuate racialized expectations about which students are "advanced." Leaders must convince these individuals to support acceleration nonetheless.

Most leaders we spoke with found that getting an entire community to believe in a vision of equity and expanded dual enrollment required persistence over many years. They had to convince individuals to see students of color as capable of college-level work and to believe in the urgency of supporting their acceleration. They did so by holding up examples of success and tailoring different messages to faculty, students, families, and other stakeholders. In some cases, leaders recruited new program heads and faculty who shared their expressed vision of equity and excellence.

Build a culture of high expectations

Many sites we visited have had some form of dual enrollment in place for many years, and no longer faced resistance. College faculty largely accepted the presence of high school students in their classrooms, even remarking that they were some of their most engaged and motivated learners. Professor Rajesh Lal at Pierce College said that his adult students seem to enjoy the "youthful exuberance" of high school students in their classes.

But even where dual enrollment itself has been normalized, efforts to advance equity within the program are not assured. Perhaps a counselor doesn't inform Black and Latinx students about dual enrollment because she assumes they won't qualify or aren't planning to go to college. Or a school accepts that a high failure rate on AP tests reflects the students' abilities rather than the quality of instruction.

> **Successful leaders instill high expectations for all students— a belief that all students can and will succeed in advanced work— throughout their schools.**

These attitudes can change. Successful leaders instill high expectations for all students—a belief that all students can and will succeed in advanced work— throughout their schools, and they commit to providing the necessary support.

Bridgeport High School in central Washington experienced such a cultural transformation. The high school is located in a small, primarily Latinx community where most parents are agricultural workers who have not gone to college. In the early 2000s, the high school was one of the worst-performing schools in the state. Principal Tamra Jackson, then an English teacher, saw an opportunity to build a new culture. She expanded AP offerings and worked with Wenatchee Valley College to add more dual enrollment courses at the high school. Administrators began to automatically place students—including special education students—into more advanced coursework. She also sought out teachers who were qualified to teach college-level classes and felt strongly about equity.

At first, teachers, students, and parents resisted the advanced curriculum. (Bridgeport's first dual enrollment course, English 101, initially enrolled only three students.)

Some teachers feared the coursework would be too difficult and that they were setting students up for failure. Some parents worried that the advanced work would push their children into college too early, causing them to miss out on a true high school experience. But the principal was firm: The school was going to set high expectations for students because students were capable of the work.

It took years for Jackson to gain the trust of the community. "You can't slam this thing into place and expect it to work," said Scott Sattler, the district superintendent and former school principal. "It has grown over time." Bridgeport alumni who have gone on to college and successful careers return to the school to share their stories and provide proof of how acceleration changed the course of their lives. Advanced coursework is now accepted as the norm for Bridgeport students—with parents even demanding more options for their children. Bridgeport now boasts excellent graduation and college enrollment outcomes. ■

Principle

II
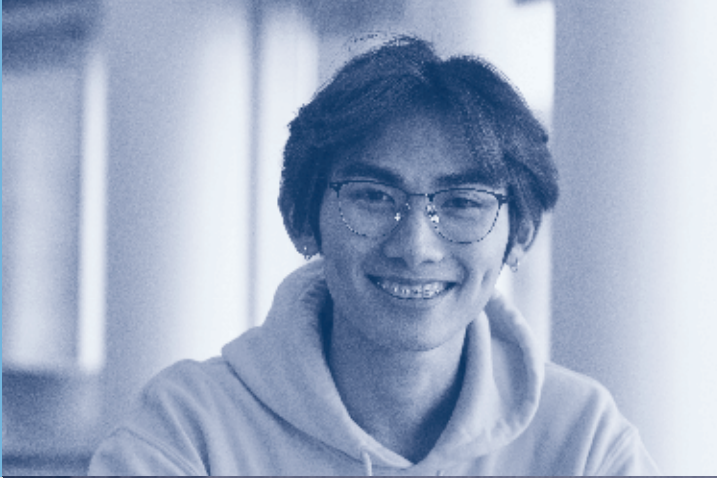
EXPAND EQUITABLE ACCESS

Colleges and high schools with equitable dual enrollment programs build cultures in which all students—especially students of color—see college and college acceleration as viable, desirable options. With a guiding belief that all students can succeed in college coursework if given the right support, they work tirelessly to reach out to communities of color and eliminate bias and other barriers working against equitable access

These schools make acceleration the default, placing all academically qualified students directly into advanced courses and requiring them to opt out rather than in. They meet with these students, sometimes repeatedly, to tell them that they are capable of success in advanced coursework and have the talent to succeed in college, instilling self-belief and raising aspirations in students who may be hearing this message for the first time. Those who don't qualify right away for dual enrollment are strongly encouraged to take advantage of additional opportunities to meet the requirements.

Most school districts have racial equity gaps in dual enrollment participation.[16] With eligibility often limited to students who are prepared to pass high-stakes placement tests, secure their own transportation to campus, and (in some cases) pay some combination of tuition, fees, and books, it's no surprise that Black and Latinx students participate at lower rates. Partners who successfully minimize these systemic barriers do so through focused, intensive strategy. They revamp processes that contribute to inequity and build new systems that increase the number of eligible students and support them in participating.

To expand access to dual enrollment to underrepresented student populations, colleges, districts, and high schools must:

1	2	3	4	5
Build early awareness and aspirations	**Improve outreach to communities of color**	**Recruit actively and strategically**	**Limit the impact of placement testing**	**Address costs and logistics**

[16] Xu, D., Fink, J., & Solanki, S. *College Acceleration for All?*

Strategy 1:
Build early awareness and aspirations

The high school and college leaders we spoke with didn't just believe that all students should have the opportunity to benefit from advanced coursework; they transmitted that belief to students and their families. And they did so early, setting students up from a young age to aim for college diplomas and to see dual enrollment as a great step toward that goal.

Create a culture of acceleration in and before high school

School leaders committed to equitable dual enrollment believe, and help others understand, that despite the forces working against equitable access, students of all backgrounds—especially those who otherwise might not be considered "college-bound"—should have the opportunity to benefit from advanced coursework in high school. And they back up this conviction with cultures and structures that ensure equity and teach students the requisite foundational knowledge and skills.

They start by offering a rigorous curriculum to all students. They ensure that courses taken in 9th and 10th grade, and even in middle school, align with what students will need to know to be prepared eventually for dual enrollment. And they expose students to external programs such as Advancement Via Individual Determination (AVID), Gear Up, and College Spark, which help students from low-income backgrounds and first-generation students develop strong study habits, learn about college and visit campuses, and get assistance applying to college and for financial aid.

Educators should not wait until students are in high school to plant the seed about dual enrollment. In the districts we visited, with the support of the high schools, middle school teachers and guidance counselors talk up dual enrollment and other accelerated courses and invite current dual enrollment students to speak with middle schoolers about the benefits of acceleration. At Bridgeport High School,

8th graders spend one day each fall and spring shadowing juniors and seniors who are taking college courses. The goal is to get them excited about the opportunity to take advanced courses in high school. The younger students take notes on the classes and report on the experience as a class assignment.

Indian River State College holds "Great Explorations" events, in which middle and high school students from their four-county service area visit the campus to explore programs. They get hands-on experiences in classrooms, labs, and studios, and they meet with advisors to develop a college plan. Often these efforts advance equity goals. For example, staff and students in the college's TRIO program have partnered with local middle schools on events to promote college specifically to men of color. At a recent event, someone from IRSC brought a cap and gown to a middle school and set up a selfie booth so students could take photos of—and envision—themselves as college graduates.

Celebrate the success of dual enrollment students

One way to support these students' aspirations is by recognizing their successes. Many high schools do this at commencement. At Lorain High School outside Cleveland, one of the most diverse high schools in the state, graduating seniors are recognized in groups by the number of college credits they earned in high school. Steubenville High School in eastern Ohio names graduates who completed associate degrees through dual enrollment (many of whom are students of color) on a plaque alongside athletic accomplishments in the school's trophy case.

Recognizing the accomplishments of diverse dual enrollment students is a way not just to honor students for their accomplishments, but to signal the program's value to others who may be unaware of it. The president of Wenatchee Valley College attends Bridgeport High School's graduation ceremonies, where he awards associate degrees to students immediately after they receive their high school diplomas from the district superintendent. Last year, seven of the graduating class of 45 students were awarded their high school diplomas and associate degrees

simultaneously. The public awarding of these degrees has reshaped families' expectations. "The whole community sees that, and it is really empowering to continue our cultural shift," said Principal Jackson. "Parents say, 'I want my kid to be one of those seven.'"

Strategy 2:
Improve outreach to communities of color

Most schools and colleges hold regular information sessions for prospective students and advertise dual enrollment through multiple means: printed materials, radio commercials, social media, and more. School and college leaders in effective dual enrollment partnerships recognize that these efforts are a start, but they're not sufficient for inclusive outreach and community engagement.

Frequently, families with no college experience haven't heard of dual enrollment, or they don't understand its value or the process to enroll. They have heard that college costs tens of thousands of dollars a year and think that's the case for dual enrollment, too. The array of confusing terms— "dual enrollment," "dual credit," "concurrent enrollment," "early college"—doesn't help. Undocumented parents or guardians may be fearful of providing personal information on enrollment forms.

Building awareness and overcoming misconceptions takes work. School and college leaders who go above and beyond in pursuit of equitable access work creatively throughout their communities to build trust, raise awareness, dispel myths, and increase demand for dual enrollment opportunities.

Communicate clearly and directly with families

Colleges, school districts, and high schools that are effective in increasing enrollment among first-generation students and students of color send some key messages again and again: Dual enrollment is free or low-cost (including for undocumented students who aren't eligible for federal and sometimes state financial aid), it's an efficient path to college credit for all students, and it's not

Frequently, families with no college experience have heard that college costs tens of thousands of dollars a year and think that's the case for dual enrollment, too.

an exclusive opportunity but rather a great option even for students who haven't thought about college.

These programs translate documents into Spanish and other languages where necessary and include photos and testimonials from students of color. They host information nights for parents and prospective students, varying the timing to accommodate working parents and bringing translators to events. But attending events can still be challenging for parents juggling multiple jobs and caring for young children. So creative efforts are necessary.

At Liberty High School in Osceola County, the assistant principal started mailing personalized letters to qualified students to increase participation in dual enrollment coursework through Valencia College. Atop each letter was an enthusiastic statement: "Congratulations, you have the opportunity to take free college courses!" This was meant to address the misperception among local Central American immigrants that accelerated courses were only for affluent students.

Coupled with the school's personalized efforts to reach families, the district's multicultural department organizes an institute that trains parents to become leaders in their

communities, with a focus on college access. District staff educate parents on how to help their children on the path to college, explaining topics such as FAFSA completion and college acceleration.

Engage community partners in outreach

To reach low-income communities and communities of color, colleges find they can't simply host dual enrollment information nights and hope people will come. Instead,

they spread awareness by engaging with civic and religious organizations, such as churches, local NAACP chapters, and other organizations families already know and trust.

Palm Beach State College in south Florida has had success building relationships with two key community partners: local Boys & Girls Clubs chapters and municipal leaders. President Ava Parker sees dual enrollment as a key part of the college's community engagement efforts. The college regularly brings students from the Boys & Girls Clubs to

FIGURE 1: **DUAL ENROLLMENT MARKETING MATERIALS**
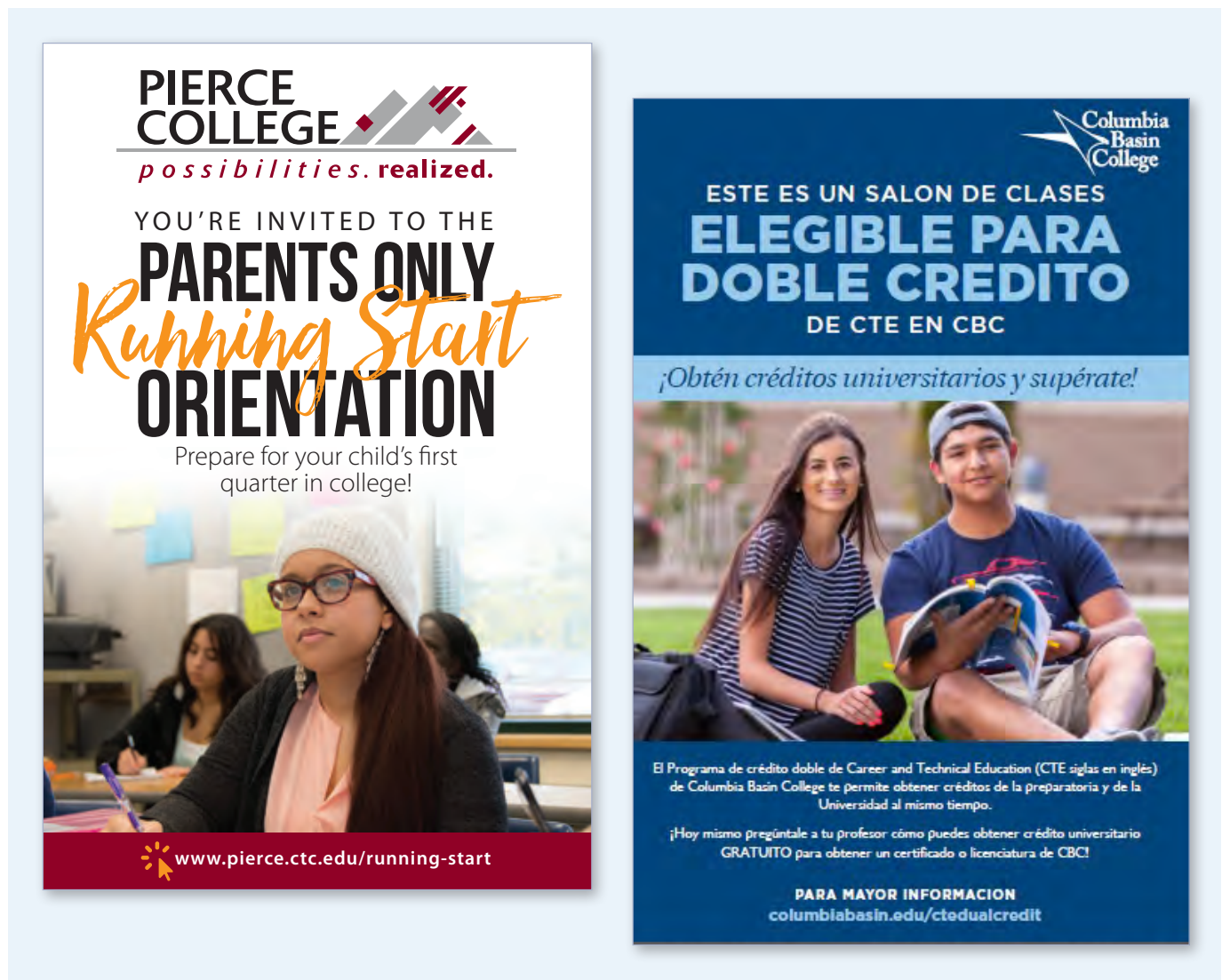
campus, explaining what it takes to apply to college and the benefits of getting there through dual enrollment. As part of this "concerted effort to convince students of color" that dual enrollment is an option for them, Parker said, the college has also engaged some local officials to use their networks to reach out to families. Having a trusted mayor sponsor an event, for example, can go a long way toward increasing turnout and conveying the message that the opportunity is not, as some may think, too good to be true.

Strategy 3:
Recruit actively and strategically

Champions of equitable dual enrollment provide the right support, create policies, and implement practices to counteract systems that serve as barriers to dual enrollment and other advanced coursework. Using data analysis, partnerships, and one-on-one relationships with students, they proactively recruit students rather than waiting for them to seek out the opportunity.

Identify and actively recruit qualifying students

Many students who might benefit from dual enrollment would miss out on the opportunity if not for proactive recruitment. Data-driven efforts to eliminate participation gaps are common at schools aiming to create equity in AP courses. These schools use the College Board's "AP Potential" reports to identify students with strong scores on the PSAT who are not enrolled in AP courses. School leaders and counselors then meet with the missing students to make them aware of opportunities and encourage them to participate. At some schools, they begin to place qualifying students into AP courses by default— giving them the choice to opt out rather than requiring them to opt in.[17]

Schools can apply a similar data-driven approach to recruiting qualified students of color who are missing from dual enrollment. They can identify students by reviewing grade-point averages, state exam results, SAT and ACT

scores, and college placement tests taken by potential dual enrollment students who passed the test but didn't enroll. They also can reach out to students whose GPAs were just below the eligibility cutoff, encouraging them to improve their grades so that they qualify in future terms.

The assistant principal at Liberty High School regularly examines ACT scores among students who are not signed up for any dual enrollment or AP courses, tracks them down between classes, and asks, "Why aren't you taking college classes?" This one-on-one outreach is labor-intensive, but staff found the individual connections and conversations crucial for encouraging students and communicating the value of the opportunity.

Focus outreach on specific high schools

It's common for the more affluent and less racially diverse high schools in a college's service area to have more students in dual enrollment.[18] Colleges that strive for more equitable access should identify participation gaps by analyzing a variety of data on the high schools: population by race and ethnicity, income level, and English language learner status; dual enrollment participation overall; and participation for different student groups compared to their representation in the school. Armed with these data, leaders can then ask themselves: Which high schools should we focus on to more equitably serve our community? What additional investments will those schools need?

Through such an analysis, Valencia College identified four high schools in higher-poverty areas where students of color were participating in dual enrollment at significantly lower rates than students at other nearby schools. Similarly, Lorain County Community College observed relatively few students participating from Lorain High School and Elyria High School, compared with students from smaller, less racially diverse schools in the county. To expand dual enrollment at these schools, the colleges worked with their district and school partners on

[17] Equal Opportunity Schools, for example, leads a national effort to equalize access and outcomes in AP and IB for students of color and students from low-income backgrounds with a data-driven approach.

[18] United States Government Accountability Office. (2018). *Public High Schools with More Students in Poverty and Smaller Schools Provide Fewer Academic Offerings to Prepare for College.* Washington, DC; ExcelinEd. (2018). *College and Career Pathways: Equity and Access.* Tallahassee, FL.

strategies to reach students, including busing students to a college campus for dual enrollment courses and adding more services at the schools, including application and orientation sessions and boot camps to prepare students for the placement test.

Strategy 4:
Limit impact of placement testing

Research has found that placement tests aren't always a reliable indicator of students' likelihood of success in dual enrollment courses.[19] Still, 25 states require testing for students to place into dual enrollment, which poses a barrier for many students.[20] The three states we visited—Florida, Ohio, and Washington—generally use testing as one factor to determine eligibility. But the high schools and colleges we visited refuse to frame the test as the ultimate determinant of which students are ready for college. Rather, they encourage students to think of the test as a hurdle they will be able to surmount. They have found innovative ways to prepare students academically, equalize access to testing, test and retest all students as a default, and even erect detours around the requirement altogether.

Expand placement test access

There are several paths schools can take to help more students pass the placement tests required for dual enrollment.

First, they can make testing free and easily accessible. Colleges we visited increased dual enrollment participation significantly by making placement tests free (absorbing the testing fee, which is typically about $10 per student) and offering them frequently at the high school, rather than requiring students to travel to the college.

> EGCC provides all 8th graders with free placement testing, and the district covers the costs for high school students to retest if their scores are close to passing.

Second, they can test (and retest) everyone. There are often gaps by race and family income in who takes the placement test for dual enrollment. A number of high school and college leaders address this problem by having all students take the test, rather than simply waiting to see who signs up.

At Steubenville High School, it used to be that only advanced students were invited for placement testing, though other students could sign up if they were interested. The incoming dual enrollment coordinator reached out to her partner at Eastern Gateway Community College (EGCC) to propose testing all students each year, covering the costs, and working with teachers to make testing accessible for special education students. A $270,000 grant from a community foundation enabled the high school to launch the initiative. Now, EGCC provides all 8th graders with free placement testing each February, and the district covers the costs for high school students to retest each November if their scores are close to passing. Educators say the strategy has helped increase dual enrollment participation for Black and Latinx students and those from low-income backgrounds.

[19] Scott-Clayton, J., Crosta, P. M., & Belfield, C. R. (2014). "Improving the Targeting of Treatment: Evidence from College Remediation." *Educational Evaluation and Policy Analysis* 36, no. 3, 371–393.

[20] During the COVID-19 pandemic, some states, including Florida and Ohio, waived testing requirements. For state-by-state eligibility requirements, see Education Commission of the States. *Dual Enrollment–All State Profiles.*

Better prepare students for placement tests

Many students are well-equipped to succeed in dual enrollment but just need a refresher to pass the placement exam. Many colleges and high schools host boot camps after school in which students review math and English material included on the placement test. Others have found success using diagnostic placement tools, such as ALEKS, that enable students and coaches to identify and work through the specific topics they still need to master.

Create alternative ways for students to gain access

While there is a lot schools can do to help students pass the placement test, ultimately they may decide the best strategy is to find ways around it. As mentioned, Lorain County Community College found that students from two high schools in its service area were underrepresented in dual enrollment compared to students from schools in wealthier parts of the county. Realizing that the placement test was the primary barrier for many students of color and students from low-income backgrounds, LCCC worked with the school district to apply for state waivers that allow for alternative placement measures. (Ohio introduced the waivers in 2017 to improve equitable access to dual enrollment.) The waiver allowed Lorain High School to start an early college program for a cohort of 9th grade students—primarily students from low-income backgrounds and students of color—without requiring placement testing. Students have the same dual enrollment opportunity no matter how they enter, and the college and district provide appropriate supports to maximize their chances for success.

Another strategy is to lower test requirements for certain courses or for students on the threshold of passing. Many colleges already have no or lowered test requirements for some courses, often student success and career and technical education classes. Schools can start students in these courses to expose them to college, build their confidence, and boost their skills so they can score higher on future placement tests and qualify for more restricted coursework. Some colleges allow students to participate in dual enrollment if they pass only one section of the placement test. For example, students who pass the English section but not the math section could take dual enrollment courses in the humanities but not in STEM. Some states may also allow colleges flexibility to provide dual enrollment to students who test just below the score cutoff. Many colleges in Florida have used this provision to extend their student success courses to these students, granting them some exposure to college before high school graduation. Many also have policies that allow high school seniors to become eligible for dual enrollment by using their weighted GPAs to meet the 3.0 requirement and requiring them to pass only the English or math component of the placement test, instead of both.

Strategy 5:
Address costs and logistics

Models for funding dual enrollment vary widely across the country. In about half of states, students are responsible for all or some of the tuition, making it difficult for many to participate and significantly impeding efforts for equitable access. Depending on the local funding agreement, students may have to pay the standard college tuition rate. Other states cap the maximum tuition students can be charged. In Utah, state law prevents students from paying more than $30 per credit hour, or $5 if they qualify for free or reduced-price lunch.

Even if tuition is free, as it is in about half of states, students may struggle to afford other expenses, namely fees and books.[21] Transportation can also be a barrier. No matter what else colleges and districts do to advance equitable access, they won't succeed if students can't pay for or get to their classes.

Reduce costs for tuition, fees, and books

Where tuition isn't free for students, schools and colleges can consider using funds from their institutional foundations to offset costs. States can explore applying

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[21] These numbers are approximate, as some states offer more than one dual enrollment program with different funding structures. See Education Commission of the States and Zinth, J. (2019). *Funding for Equity: Designing State Dual Enrollment Funding Models to Close Equity Gaps.* College in the High School Alliance.

funds from the federal Every Student Succeeds Act.[22] Some states also offer waivers or scholarships programs to defray costs for students from low-income backgrounds. Bridgeport High School in Washington, for example, receives tuition subsidies for college courses taught at the high school through awards the state grants to rural districts. Nebraska offers a scholarship program that covers tuition and fees for students who qualify for federal support programs based on income.

In Washington, Running Start tuition is free for students, but colleges can still charge fees that cover activities and campus services (around $300 per quarter for students at the college full-time). The state offers fee waivers for students from low-income families and foster youth. Pierce College reminds all eligible students to apply for waivers at multiple moments in the enrollment process, including during their first advising appointments and at a session for parents, to make sure they don't miss out.

Colleges also can ease the financial burden through their approach to textbooks. Whether the student pays for textbooks or the school district does, one cost-effective strategy is to keep the same textbook for certain courses for a few years, so that districts can reuse books multiple times. This strategy doesn't work, though, when textbook companies require students to use one-time-only codes to access course content online. In these cases, leaders at many colleges have created dedicated funds to purchase textbooks for dual enrollment students who can't afford them, and they are using more free, open-license resources.

Bridge the transportation gap

While most students take dual enrollment courses at their high schools, 17 percent travel to a college campus.[23]

There are many benefits to this approach: Students get to experience a more authentic college experience, interact with older and often more diverse classmates, acclimate themselves to campus, and enjoy a new social environment. (This last benefit is especially appealing to students who dislike the interpersonal dynamics at their high schools.) But it can be hard for high school students, especially those of limited means, to get to the college campus for class.

Some schools and colleges address this barrier by defraying transportation costs. They provide buses to shuttle high school students to and from the college, or they work with regional transit authorities to provide free passes and create express bus routes. At Columbia Basin College in southeastern Washington, which serves a community dispersed across three cities and an expansive rural area without public transit, a gas fund helps students from low-income backgrounds afford the drive to campus.

Alternatively, colleges can work to bring their classes to the students. They can expand dual enrollment offerings at the high school, especially in rural communities, or offer courses at satellite sites and regional campuses. The technology carts that Wenatchee Valley College secured through a U.S. Rural Utilities Service grant enables rural and tribal students to take dual enrollment courses from a high school and community education center distant from campus.

Finally, even before the COVID-19 pandemic moved instruction online, many schools relied on virtual learning for dual enrollment, not just to increase access for students but also to find enough qualified instructors. Sometimes, they pair face-to-face learning with online components. For example, Lorain County Community College offers numerous sections of anatomy and physiology that are taught virtually by a college instructor to a classroom of students who are physically at the high school and supported on site by a supplemental high school instructor. The college instructor also checks in occasionally with students in person. ◾

[22] Moore, C. Making Equity Intentional. We visited states where tuition is primarily free. The exception is Washington: While it's free to enroll in Running Start, through which students attend class on college campuses, tuition is required for the state's College in the High School program. Many states do not have a free-tuition dual enrollment option, and these costs can be insurmountable for students from low-income backgrounds. In addition to taking advantage of federal funds, states that currently charge tuition to students can consider other funding structures that reduce or eliminate these costs. Zinth, J., *Funding for Equity* provides a range of funding models that do not require students to bear tuition costs.

[23] US Department of Education. (2019). *Dual Enrollment: Participation and Characteristics.*

Principle

III

CONNECT STUDENTS TO ADVISING AND SUPPORTS THAT ENSURE EQUITABLE OUTCOMES

Even students with the greatest advantages can find it difficult to select the right courses and programs in college. Think, then, about how hard it is for a teenager who has never set foot on a college campus, or who has no family members who have experienced higher education. There are so many mistakes to make: Choosing courses that count toward a high school diploma but not their chosen college degree or major; taking two different classes that count for the same college credit. Whether or not dual enrollment students aim to graduate from high school with an associate degree, they should be earning credits that count toward something. Instead, many students wind up with what one administrator called a "frankentranscript," a patchwork of credits earned from a variety of advanced courses that may have been interesting but don't contribute to a college degree.

Research has shown that the students more likely to need extra support to avoid these mistakes are also more likely to believe that asking for help demonstrates a lack of competence; therefore, they may not seek out assistance when they are struggling.[24] So the best dual enrollment systems systematically offer excellent advising, going above and beyond to nurture students.

To start, they help students understand the degrees and pathways that match their life goals and may lead to well-paying careers. They help students design course plans that both meet their high school requirements and set them up to fulfill their college and career goals. College and high school teams coordinate with one another on each student's progress. And they provide extra help to the students who are most likely to need it.

Approaches to dual enrollment advising vary. Typically, high school counselors are the first line of support. Sometimes they advise students throughout their dual enrollment program, but ideally a college advisor steps in, either at the college or the high school. Some programs assign each student multiple advisors, from both the college and high school.

No matter the arrangement, to deliver high-quality advising and support, and to ensure that students of color benefit equitably, colleges, districts, and high schools must:

1	2	3
Provide strong academic advising aligned to smart choices	**Coordinate advising across partners**	**Proactively provide supports for struggling students**

[24] Karp, M., O'Gara, L., & Hughes, K. L. (2008). *Do Support Services at Community Colleges Encourage Success or Reproduce Disadvantage?* New York, NY: Community College Research Center.

Strategy 1:
Provide strong academic advising aligned to smart choices

Planning a dual enrollment schedule can be complicated. Students must balance several things at once: fulfilling high school graduation requirements, earning credits that apply to a college degree program, exploring new subjects and potential careers, and figuring out the logistics of attending college. Students from low-income backgrounds and historically underrepresented students of color are at higher risk of getting this balance wrong, enrolling in college courses that will not serve them best in the long run.

Excellent schools and colleges give dual enrollment students considerable personal guidance, helping them explore their interests but also using pathways and maps to make sure courses count toward a degree or credential, thus ensuring students are making purposeful choices about their future. Still, intensive advising can easily perpetuate gaps—for example, counselors might direct their attention to those already on a college pathway and overlook or misdirect students they don't consider college-bound—so these advising practices must be embedded within a school culture focused on equitable college attainment.

Provide all students with career and college exploration

High school counselors are often the first people to help students explore and plan for what comes after their diploma. To do so, they must develop an understanding of their students' interests and motivations. At Liberty High School, counselor-student meetings focus on helping students align their career goals with specific academic options—a process that not only allows students to select the right dual enrollment courses and pathways but also serves to motivate them because they now "understand their 'why,'" as one counselor put it.

In Washington, all students complete a "High School and Beyond" plan, which they start by the end of 8th grade

with the help of a website that shows them which courses they should take to prepare them for specific careers and where jobs are available in the state. The plan can be used to help students plot dual enrollment pathways that fit their overall goals. Some schools approach planning by using online career-interest tools, like Naviance; others have dual enrollment students research and give presentations on a career field as part of a required college success course.

Encourage students to choose the right mix of acceleration options

At many high schools, dual enrollment is only one of many ways that students can take an advanced curriculum and earn college credits. Schools may offer other early college programs—AP, IB, or the Cambridge AICE—and CTE courses that can earn students credit through articulation agreements with colleges.

Which options are right for a given student depends on that student's goals. Students intending to apply to selective colleges may take more AP courses, which are more likely than community college courses to be granted credit at those schools. But dual enrollment may be the smoothest path toward earning credit at an in-state public university, or entering police and fire academies and starting apprenticeships in the trades immediately after high school. Counselors should help students explore the options and choose the program most likely to get them to their desired endpoint.

Emerald Ridge High School in the Puyallup School District offers four types of accelerated options, each with its own costs and eligibility requirements: AP courses, CTE courses that articulate for credit at local colleges (including magnet programs in marine biology and aviation), math courses through Central Washington University taught by high school teachers, and dual enrollment at Pierce College.

The process to connect students to accelerated coursework begins in middle school, when students complete an interest assessment and begin working on their High

School and Beyond plans. Counselors present all four as good choices, with the goal that every student takes at least one advanced course before graduating from high school. They meet with 10th graders individually to identify what acceleration options are best based on their interests and plans after high school.

It's important to understand that AP, like dual enrollment, has a history of inequitable access: White, Asian, and higher-income students are more likely to attend a school that offers AP, enroll in AP classes, and pass AP exams.[25] Without care, schools offering a mix of options may find that these students disproportionally take AP, while students from low-income backgrounds and students of color take dual enrollment. Schools must make sure that students are not tracked into acceleration options by race or income, but rather that they are encouraged to pursue the program that will help them achieve their greatest aspirations. To guard against systemic bias, schools should evaluate the enrollment and outcomes for students both within and across these different options.

A few schools and colleges are starting to approach the range of acceleration options in an integrated way. At Bridgeport High School, certain courses that have substantial overlap in content—such as U.S. History— are taught simultaneously as a dual enrollment course through Wenatchee Valley College and as an AP course. One teacher provides the course to the "same students, in the same room, at the same time, covering the same information, and making sure we're hitting all objectives for the college and all the objectives for AP," said Principal Jackson. While only students who pass the placement test can officially take the course through dual enrollment, the college will grant credit for any student who passes the AP exam. By offering these options concurrently, the school, which is small and serves mostly students of color from low-income backgrounds, can allow more students to participate in acceleration in the way that suits them best and earn college credit regardless of the placement testing constraint.

25 Theokas, C., & Saaris, R. (2013). *Finding America's Missing AP and IB Students*. Washington, DC: The Education Trust and Equal Opportunity Schools; Finn, Jr., C., & Scanlan, A. (2020). T*he Role of Advanced Placement in Bridging Excellence Gaps*. Washington, DC: The Thomas B. Fordham Institute.

> **Schools must make sure that students are not tracked into acceleration options by race or income, but rather that they are encouraged to pursue the program that will help them achieve their greatest aspirations.**

Align courses with a long-term plan

For their students to succeed in dual enrollment, especially the students of color who face obstacles in their path to a college degree, it is not enough for schools and colleges to ensure that students do well in their courses. Taken collectively, those courses should also advance students toward their college and career goals. Edwin Massey from IRSC believes that to improve college access and success for students of color, males in particular, it is important to show them how higher education connects to careers with strong job prospects. "Let's show students what they can earn…and how they can get from here to there," he said, "and show them how they can save money by starting on the plan in high school through dual enrollment."

For many students, securing a job in a fulfilling career will require a bachelor's degree and possibly a graduate degree. Dual enrollment should connect them to this longer-term path. Students must understand that requirements for college-level degree programs vary by major, and that it matters which college courses count toward a career credential or associate degree—and, ideally, to a specific bachelor's degree and well-paying career.

Often colleges and schools simply encourage dual enrollment students to take general education courses without prompting them to consider where they will lead. This can mislead students and families and create frustration when students' credits don't transfer to a four-year university or apply to program and major requirements. Some students have family members with

college experience who can help them navigate through ambiguity. But for populations that have long been underserved, the lack of clear college pathways can limit the benefits of dual enrollment by requiring students to spend more time (and money) taking classes required for their chosen majors.

These students benefit significantly when colleges provide them with program maps—concrete sets of courses that lead to specific degrees and careers. One Pierce College student said he appreciated the advice from his high school counselor on which courses to take, but his college advisor also asked, "What do you want to be? What do you want to get out of this?"

Pierce is one of several colleges that have started integrating dual enrollment into collegewide initiatives to reform programs around clear pathways, often described as "guided pathways," building maps that show clearly and precisely how courses will transfer to bachelor's degrees at university partners. Pierce has organized its offerings into six broad career pathways, such as business and STEM. "Some students say that they're just here for the AA, but we explain that an AA without direction can result in needing four additional years at your transfer school," said Christine McMullin, director of advising and entry services. Pierce has introduced its partner school districts to guides of course sequences aligned to its pathways. At the end of each document is a template that helps students

FIGURE 2: **SAMPLE PROGRAM MAPS**

Program maps help students understand how their dual enrollment courses apply to college programs and explore how those programs prepare them for in-demand jobs.

and counselors create a customized plan. Since general education courses alone will not prepare associate degree holders to transfer in a major with junior standing, the college wants every dual enrollment student who is taking more than just a few courses to be following a map by the end of their first quarter.

Similarly, Lorain County Community College's MyUniversity Pathways map the courses dual enrollment students should take at the high school, community college, and four-year levels to earn a bachelor's degree in one of more than three dozen popular majors at partner universities. The maps also show which courses count toward high school graduation. (LCCC also offers dual enrollment students scholarships toward completing these bachelor's pathways.) When students aim to eventually transfer, the college wants to be clear from the start about how they get there. Students are told, "If you do A, B, and C, you can earn a bachelor's degree," said Marcia Ballinger, LCCC's president. "We really need to keep them on plan and on point."

It's not up to only the dual enrollment partners to build more seamless transfer paths. Because most dual enrollment happens at community colleges, students seeking bachelor's degrees typically have to transfer their credits to programs at four-year institutions. To allow students to do this effectively and efficiently, four-year partners must accept dual enrollment courses for credit. And community college leaders must discuss the implications of dual enrollment with their transfer partners. Will credit transfer policies apply to credits earned in high school? Will courses taught by qualified high school instructors be accepted for credit?

Integrate CTE courses fully, with credit

Dual enrollment partners must find the best ways to enable students to get credit toward associate and bachelor's degrees for coursework in career and technical education. High school students may enroll in CTE dual enrollment classes because they are especially engaging, teach skills required in the workforce, and prepare them explicitly for careers. Yet often they find that the CTE credits don't apply

to degree programs at colleges. This is especially an issue for students from low-income backgrounds and students of color, who are often disproportionally represented in high school CTE programs.

Some colleges, such as Columbia Basin College and Indian River State College, have created systems to automatically record CTE credits on college transcripts. Even in those cases, CTE credits sometimes don't apply toward associate or bachelor's degrees in a similar field. For example, some CTE coursework in criminal justice may prepare students primarily for a security certificate but may not apply toward an associate or bachelor's degree in criminal justice. IRSC has tried to address this problem by creating maps that connect high school CTE to associate and bachelor's degrees in applied science, which prepare students for well-paying, high-demand jobs in the college's service area. Colleges need to do more along these lines, particularly given recent research indicating that college graduates will be more competitive in the labor market if they have technical skills in addition to degrees.[26]

Strategy 2:
Coordinate advising across partners

High school counselors are asked to do a lot for large numbers of students, from directing them to academic supports to tending to their emotional well-being to helping them choose and apply to colleges.[27] Dual enrollment demands that they also become de facto college academic advisors, a challenge that is difficult and, at times, impossible.

To effectively advise students, especially those from populations that have been poorly served in higher education, high school counselors must know what advice to give, and they need a full picture of their students' progress. Many high school counselors benefit from the expertise of a point person on the college team who can

[26] Schneider, M. & Sigelman, M, (2018). *Saving the Liberal Arts: Making the Bachelor's Degree a Better Path to Labor Market Success.* Washington, DC: American Enterprise Institute.
[27] Nationally, the student-to-counselor ratio averaged 430-to-1 in the 2018-19 school year. American School Counselor Association. *School-to-Counselor Ratio 2018-2019.*

explain the dual enrollment options and how they connect (or don't) to college degrees and career pathways. Even with a strong working relationship with counterparts at the college, they often are unable to track their students' progress due to privacy laws. A high school counselor may have no idea that a student is struggling in dual enrollment, learning that the student failed a course only upon receiving the student's transcript. They then must scramble to help the student recover credit. In the worst-case scenario, students may be unable to graduate from

FIGURE 3:

PALM BEACH STATE COLLEGE'S DUAL ENROLLMENT WEBSITE FOR HIGH SCHOOL COUNSELORS

high school on time because of issues previously unknown to their advisors. Excellent dual enrollment partners build systems to provide high school counselors the information they need to make sure their shared students are successful.

Train high school counselors on college requirements

High school counselors must understand exactly what it takes for their dual enrollment students to receive an associate degree: the required classes, the pathways, the overlap with high school courses. Because students often take what they say as gospel, "we don't want to feed them inaccurate information," said one counselor at Treasure Coast High School.

Many colleges host annual events at which they introduce high school counselors to program requirements and new course offerings and train them on the information systems used to monitor students' progress at the college. In addition, college advisors remain in regular communication with their high school counterparts throughout the year.

Another way to inform high school counselors is through the college website. Palm Beach State College shares easily understandable resources online, including enrollment authorization forms and guides that lay out required courses for each major (including those required to transfer to a university) and show how college credit translates to high school credit for each class.

Exchange information on students

Dual enrollment students are subject to the Family Educational Rights and Privacy Act (FERPA), which protects college students' academic records. The college often cannot share information about students with parents or high school counselors. To maintain compliance with the act while enabling advisors to monitor individual student progress and reach out to high schools when needed, some colleges and high schools have dual enrollment students sign a FERPA waiver. Given the

importance of such support, the state of Washington is amending its Running Start registration form to make it easy for students to authorize the college to communicate with their high school counselors.

Another solution to the FERPA issue is to grant high school counselors direct access to the college's student information system. Indian River State College allows high school counselors and faculty to monitor their students' progress directly on the college's portal. They can view guided pathway selections, see how far students have come on their academic plans, and view notes written by advisors, faculty, and other staff about each student.

Strategy 3:
Proactively provide supports for struggling students

While dual enrollment programs typically limit participation to students with higher GPAs and test scores—students who theoretically will not have difficulty with college coursework or the relative independence of taking courses on the college campus—it is inevitable that some students will experience challenges, whether for academic, social-emotional, or other reasons. It's also possible that nobody will notice.

In the short term, failing a course can delay high school graduation. And course failure can have devastating impacts beyond high school. Because dual enrollment courses show up on official college transcripts, failing grades and repeated classes can limit a student's future eligibility for financial aid; acceptance to a college, program, or major; and, ultimately, attainment of a bachelor's degree.

Some advisors are proactive: They check in with students regularly on the phone or in the hallway, even when the students haven't asked for help. But to ensure student success, especially success for historically underserved students, it's not enough to rely on individuals to take the initiative in this way. Equitable dual enrollment programs offer a web of intentional supports, with clear expectations for advising, mandatory touchpoints for students (since,

as the saying goes, "students don't do 'optional'"), and systems to monitor student progress and intervene where necessary.

Offer supports and encourage students to use them

Colleges offer support services for students generally, including tutoring, transfer and career advising, mental health counseling, and liaisons to outside services, such as public benefits. Dual enrollment students are entitled to these services as well, in addition to whatever their high school offers. But they may not know about them, realize they qualify for them, or feel comfortable seeking them out. So schools and colleges have to actively make students aware of such resources (through orientations or signs and brochures, for example) and normalize their use. Ali Walker-Stromdahl, an English professor at Pierce College, integrates writing center tutors into the classroom. Her aim is to "flip the belief that seeking help is negative," reduce barriers to accessing support that disproportionately affect students of color, and demonstrate the value of engaging with academic support services, in part by making them unavoidable.

Peer mentoring can also be a comfortable, effective way to connect dual enrollment students to supports. Wenatchee Valley College's Running Start advising team assigns high school seniors to mentor juniors and asks that mentors check in with their mentees at least once a week virtually and twice a month in person. Mentors help acquaint their mentees with the college and share tips from their own experiences. They also notify the advising team if their mentees are unresponsive, so that college advisors can see whether the student needs other help.

Practice intrusive advising

Jackie Reeves, the dual enrollment coordinator at Steubenville High School, regularly checks students' grades and seeks out those who seem to need help so she can recommend tutoring and other resources. She connects every day with college professors who are on their way to teach at the high school so that they can share any concerns about students.

These are great practices. Importantly, they are also paired with systematic approaches to student support. For instance, the Steubenville counseling team audits the transcripts of all dual enrollment students in their junior year to assess their progress to the associate degree. Tailored counseling follows.

Dual enrollment partners who prioritize equity don't rely on individual counselors to design their own ways to reach students. They erect systems and set expectations so that students can't avoid guidance and support. These practices mirror recommendations from widespread research on reforming advising to be more seamless and proactive for high school and college students generally.[28]

This means that advising for dual enrollment students— indeed, for all students—should be mandatory instead of optional at certain checkpoints. Schools have different approaches to this. At Eastmont High School in the Wenatchee Valley, parents attend a student's initial dual enrollment counseling session to discuss how credits earned will relate to their child's goals and plans; they also join regular follow-up sessions with counselors and students. Wenatchee Valley College requires students to participate in group advising sessions with the college's dedicated dual enrollment advisors six times during their junior year and in individual sessions four times during their senior year.

Community colleges often use early alert systems, which prompt faculty to submit notes about students who are missing assignments or otherwise performing poorly. The notes trigger an alert to advisors and others, which ideally results in individual follow-up to ensure students get the help they need. It's important that early alert systems capture dual enrollment students, and it's even better when the systems include high school counselors in the loop. When an Indian River State College professor notices that a student is struggling, they can click to notify the student's high school counselor. In addition to

participating in the college's early alert system, IRSC faculty are required to submit grades during the fourth and eighth weeks of the term. These grades feed into a dashboard created for college advisors. If students are struggling in a critical course for their selected pathway, advisors reach out to students immediately.

Colleges and schools can also use alert systems to reach out to students preemptively. Several years ago, Pierce College built a predictive model of students' likelihood to persist in college. The model included seven variables, including total credits, enrollment status (full-time or part-time), students' employment (full-time or part-time, on or off campus), and GPA. Advisors received lists of both Running Start and other college students at different levels of risk and reached out to them to offer support. The effort paid off: Calls made by advisors in the month prior to the start of school led to increased retention.

Integrate students into college life

Students are more likely to persist when they feel connected to their school.[29] This sense of belonging is especially important for Black and Latinx students, who may feel out of place, and thus disengaged, at predominately white institutions. One way to mitigate this risk for dual enrollment students based at the college is to make sure they feel they are a part of campus life— that they see themselves as real college students. At Pierce College, advisors make dual enrollment students aware of student life activities as a means of keeping them connected and engaged. Dual enrollment students are commonly involved in student government—one was recently even a student body president—and many participate and hold leadership positions in identity-based clubs like the Muslim Student Association. This integration is especially critical for students who are socially disconnected from high school and ready to move on. ◾

28 Klempin, S., Kalamkarian, H., Pellegrino, L., & Barnett, E. (2019). "A Framework for Advising Reform." In O'Banion, T. (Ed.) *Academic Advising in the Community College*. Lanham, MD: Rowman & Littlefield and the American Association of Community Colleges.

29 Museus, S.D. (2014). "The Culturally Engaging Campus Environments (CECE) Model: A New Theory of College Success Among Racially Diverse Student Populations." In Palmer, M. B. (Ed.) *Higher Education: Handbook of Theory and Research*. New York, NY: Springer.

Principle

IV

PROVIDE HIGH-QUALITY INSTRUCTION THAT BUILDS STUDENTS' COMPETENCE AND CONFIDENCE

I deally, students enter dual enrollment academically prepared because their middle and high schools provided rigorous courses and made sure that as many students as possible took them. In the best cases, schools monitor enrollment disparities in honors and gifted classes and place students in courses that will make them eligible for college-level work in high school.

But college work can be difficult even for students who took advanced courses in their K-12 schools. A lot may differ from high school classes: the volume and rigor of material, the writing requirements, the balance between seat time and independent work, the level of critical thinking expected. And for students who attended mediocre schools or who were tracked away from college-prep classes, the transition from high school to college courses is even more challenging.

Dual enrollment providers who are committed to equity mindfully bridge this gap. They orient college faculty to teaching students new to college learning, and when dual enrollment is taught in high schools, they help high school teachers teach to college-level expectations. They collaborate to ensure dual enrollment courses meet standards of rigor and instructional quality no matter where or by whom they are taught.

Instructors also play an important role in orienting students to college-style teaching by explaining college norms, like office hours, and clarifying standards for assignments from day one. They provide engaging instruction. They set high expectations while convincing students they're capable of meeting them, and they prioritize equity and inclusion in the classroom.

Simply put, the best dual enrollment instructors don't let students sink or swim. They provide instruction that leaves students—especially those underrepresented in higher education—academically prepared to successfully continue their college education and confident in their potential.

To provide a high-quality academic experience to a diverse population, colleges, districts, and high schools must:

1	2	3	4
Understand how K-12 courses enable or impede acceleration	**Acclimate students to college expectations**	**Build confidence through excellent teaching**	**Support faculty to enable high-quality instruction**

Strategy 1:
Understand how K-12 courses enable or impede acceleration

Too many historically underrepresented students of color and students from low-income backgrounds enter high school unprepared for acceleration opportunities, not because they are incapable, but because they have been tracked out of college-prep courses. Math sequences especially can determine whether students are on a college track. For instance, students who are placed into a gifted track in middle school likely will have taken Algebra II by 10th grade, potentially positioning them to enroll in college math courses later in high school. Meanwhile, students taking classes that hew to traditional grade levels may not take Algebra II until the end of high school, thus missing out on the option for accelerated math.

Dual enrollment programs have a far better chance of equalizing opportunity when all students are placed in college-prep classes in high school. And that is possible when they have received rigorous, advanced instruction starting in elementary school. St. Lucie Public Schools, for instance, is resequencing math courses and strengthening instruction starting in elementary school to ensure that all students, including those at high-poverty schools, leave 8th grade with the math they need to take accelerated courses in high school. The district has also created a comprehensive data monitoring system that tracks whether students have taken any honors coursework in middle school and whether they are enrolled in algebra in 8th grade. This will help district and school leaders determine whether there are equity gaps for those who complete honors coursework and an accelerated math sequence.

While those responsible for dual enrollment may not, on their own, be able to influence these deep-seated structures, leaders can communicate the link between early course progressions and acceleration. And there may be ways to bridge the gap, such as having counselors visit middle schools to inform students about courses to complete by 8th grade to be on track for dual enrollment in high school.

Align high school and college curricula and pedagogy

Valencia College and the School District of Osceola County regularly convene college faculty and high school teachers to align math and English curricula and standards so that high school students are prepared for college-level work, either through dual enrollment or after graduation. They plan to expand this approach to humanities and science faculty, too. Instructors examine high school curricula course by course to align desired learning outcomes, and they share assignments, assessments, and approaches to teaching difficult topics.

When administrators from the college and the district compared course success rates by discipline and high school, they found that students at some schools did worse than others. After data showed math as one of the greatest areas of challenge, further investigation revealed that some high schools didn't have enough math teachers on staff to prepare students for college-level math courses. Some colleges that offer dual enrollment might have seen this as a problem for the school district to solve on its own. Instead, Valencia and the district jointly hired eight college math instructors who teach most of their course load at the high schools and receive special training on effective practices for teaching high school students. "Who better to prepare high school students for college math than college math instructors?" said Kathleen Plinske, executive vice president and provost.

Strategy 2:
Acclimate students to college expectations

A student enrolling in college courses for the first time, especially one whose relatives didn't go to college, may be taken aback at the new expectations. Especially for students whose K-12 schools lacked rigor and whose teachers didn't set high expectations, the climate change can be striking. As one student at Okeechobee High School said, "When I go to the college, it's more serious. You are there on your own time, and you need to learn what you need to learn." On top of that are a new vocabulary (unfamiliar lingo includes "office hours" and "syllabus") and new customs (such as the etiquette of emailing professors).

Excellent colleges and schools are intentional about helping students learn how to "do college." They teach students about new expectations and college study skills in workshops, mandatory orientations, or college success courses.

Instructors play an important role here. They might give students a practice exam within the first week or two of class so that they understand right away what a college-level test looks like, or they might make sure to explain clearly what they actually mean when they tell students to "study." Instructors at Indian River State College give students "guided notes," a template for students to fill in for each class, and they try to be explicit about what material is the most important. They also often provide students with examples of high-quality work.

The classroom environment plays a role, too. Although it would be easier from a scheduling standpoint to put dual enrollment students in the same class sections, Valencia College intentionally intersperses high schoolers in sections with other college students to ensure an authentic college classroom experience. Administrators believe that being in a classroom with students of varied ages and backgrounds exposes dual enrollment students to a greater diversity of thinking and experiences than what they would get if they took courses mainly with other high school students.

The college environment can be difficult to recreate at a high school, but some schools try to do so by hosting college courses in their own classrooms or wings. The dual enrollment program at Lorain High School, for instance, is located in a designated wing of the high school that is shared with Lorain County Community College. The co-location creates a school-within-a-school, which also serves as a small LCCC branch campus where community members can access computer labs and take courses in the evenings.

ORIENTING STUDENTS THROUGH COLLEGE SUCCESS COURSES

College success courses—also called "student success" or "introduction to college" courses—are commonly offered to help new students at community colleges. They are often mandatory, including for dual enrollment students, as research has demonstrated that taking such a class can increase course completion and persistence in the first year of college.[30]

The structure and curriculum of these courses varies, but they typically introduce students to academic structures and campus resources, help them with academic and career planning, teach study habits and other skills, and deepen their sense of self and belonging. For example, Pierce College's College 110, which all Running Start students are required to take, covers topics including:

– Career interest assessment

– Education planning

– College services and resources

– Information competency and library resources

– Reading, note-taking, and test-taking strategies

– Time management

– Growth mindset

– Academic persistence and resilience

– Understanding syllabi

– Personal strengths

[30] Karp, M., and Stacey, G. (2013). *Student Success Courses for Sustained Impact.* New York, NY: Community College Research Center.

Strategy 3:
Build confidence through excellent teaching

Research has shown that traditional, lecture-based instruction can serve students poorly, and the consequences may be more severe for students of color and those from low-income backgrounds who have already been ill-served by the education system.[31] Effective dual enrollment programs prepare students for the lecture-based teaching they're bound to encounter in at least some of their college classes. But they also expose students to instructional techniques that require them to be active learners, which has been shown to engage students and build their confidence. And ideally, their curricula are both culturally and linguistically responsive.

Ultimately, excellent instructors keep all students appropriately motivated and challenged. Valencia College, for example, has infused a commitment to active learning, equity, and building students' sense of belonging into its tenure and professional development practices.[32] Most faculty take advantage of the offerings of a well-resourced, strategically designed teaching and learning center to improve instruction and assess the impact of new teaching methods on student learning. Dual enrollment students, like other college students, benefit from the resulting high quality of instruction.

Use active and co-curricular learning techniques

Excellent college instructors promote active learning for all of their students, using techniques such as "flipped" classrooms, in which lectures are delivered online and class time is used for discussion, lab work, and exercises. At Pierce College, in addition to moving away from lectures, faculty are integrating technology into the classroom, such as by creating structured time for students to use computers to do research in class, engage with library resources and software, and connect in real time using mobile devices.

Another way to engage dual enrollment students is to provide them with hands-on lab opportunities in science courses, even if they have yet to take all of the prerequisites. Science faculty at Lorain County Community College work with groups of dual enrollment students on undergraduate research projects in the college's labs, under the philosophy that they will learn by doing and build community along the way. A psychology professor engages dual enrollment research groups in projects in which they study problems in their communities. "What goes on in class is great," she tells students, "but what goes on outside of class will get you a job." In fact, the Cleveland Clinic hires many of her former dual enrollment students as interns because of the practical skills they gained from her classes.

Use culturally and linguistically responsive pedagogy

Research has demonstrated that culturally responsive teaching—instruction that draws from and value students' experiences, prior knowledge, and ways of knowing, in particular from cultures historically excluded from academia—supports the academic success of students of color, English language learners, and students from low-income backgrounds.[33] In particular, it can help these students learn how to become strong independent learners, a skill that is fundamental to thriving in school.[34]

Pierce College has committed to an anti-racist curriculum, with its faculty working to develop inclusive and culturally responsive teaching practices that serve its diverse dual enrollment population well. Faculty are encouraged to come up with pedagogical strategies focused on equity

[31] Capon, N. & Kuhn, D. (2004). "What's So Good About Problem-Based Learning?," Cognition and Instruction 22, no. 1, 61-79; Freeman, S., et al. (2014). "Active Learning Increases Student Performance in Science, Engineering, and Mathematics." *Proceedings of the National Academy of Sciences of the United States of America* 111, no. 23, 8410–8415.

[32] Valencia's tenure system has been recognized as among the most effective in the community college sector. See *Building a Faculty Culture of Student Success.* (2013). Washington, DC: The Aspen Institute.

[33] Ladson-Billings, G. (1995). "Toward a Theory of Culturally Relevant Pedagogy." *American Educational Research Journal* 32, no. 3, 465-491; Pappamihiel, N. E., & Moreno, M. (2011). "Retaining Latino Students: Culturally Responsive Instruction in Colleges and Universities." *Journal of Hispanic Higher Education* 10, no. 4, 331–344; Booker, K. (2016). "Connection and Commitment: How Sense of Belonging and Classroom Community Influence Degree Persistence for African American Undergraduate Women." International *Journal of Teaching and Learning in Higher Education* 28, no. 2, 218–229.

[34] *Supporting Students to Be Independent Learners: State and District Actions for the Pandemic Era.* (2020). Washington, DC: The Aspen Institute.

and to adapt reading lists and assignments to be more inclusive and flexible. One English professor, for instance, has moved away from assigning academic essays in her composition courses, instead allowing students to select their own project formats (such as fiction writing and video production) and encouraging more narrative writing to link academia to students' lives. She selects texts outside of the traditional white canon and encourages students to identify additional readings that reflect their experiences.

Provide additional academic support

Academic support staff at Indian River State College have developed study guides and offer review sessions ahead of exams for "killer courses" such as Statistics 101, Biology 101, Accounting 101, and Anatomy and Physiology—all of which are critical foundation classes for many programs that have significant dual enrollment participation but high failure rates. This kind of support has cascading effects, because when students start to fail in their most challenging courses, they pay less attention to their other courses. Moreover, the study skills they learn are applicable in any class.

High schools also provide extra help for dual enrollment students: study sessions before tests, afterschool drop-in hours, Saturday support sessions in the computer lab. At Wahluke High School in southeastern Washington, teachers tutor students who take dual enrollment on the campus of Columbia Basin College, an hour's drive away, even though these students are no longer in their own classes.

Strategy 4:
Support faculty to enable high-quality instruction

Regardless of where courses are taught, colleges and high schools must support instructors so they are prepared to teach dual enrollment. College professors are teaching younger students, who may be unused to college and juggling college courses with high school classes and extracurricular activities; high school

Science faculty at Lorain County Community College work with groups of dual enrollment students on undergraduate research projects in the college's labs.

teachers are teaching more advanced material than they do typically—and in both cases, it's especially important to reach students of color and students from low-income backgrounds. As it is, much professional development, particularly in colleges, is voluntary and focused on the professional growth of faculty within disciplines, rather than centered on a specific, strategic agenda to improve the quality of instruction.

The most compelling models of professional development for equitable dual enrollment involve collaboration between college and high school faculty members to align curricula, strengthen pedagogy, and ensure course outcomes are met.

Select faculty committed to teaching dual enrollment students

Some college faculty enjoy teaching high school students; others do not. Because dual enrollment is so important to Eastern Gateway Community College, it has become standard practice for hiring committees to ask candidates about their interest in teaching high school students. The college's president has given the dual enrollment director authority to select which instructors will teach dual enrollment students who are taking college classes in the high school.

A few EGCC faculty members work full-time in high schools. This enables them to better monitor student performance and provide more consistent advising. Relatively flexible language in the high school teachers' union contract allows EGCC faculty to teach at the high school unsupervised. Other contracts might mandate that high school teachers co-teach college courses or simply be present in the room with college faculty, a provision that raises the cost of these courses and limits the number of courses that can be offered.

High schools can expand in-school dual enrollment offerings only if teachers have the required credentials to teach college classes, typically a master's degree and at least 18 credit hours in the subject they are teaching. Some high school instructors may not hold advanced degrees or may have master's degrees in teaching or education. Some high schools actively seek out new instructors with the requisite advanced coursework, and community colleges can connect high school teachers to courses that will provide them the necessary credentials at four-year partners.

Create structures for collaborative faculty relationships

Collaboration among faculty can be an effective way to make sure that dual enrollment courses at the high school provide a genuine college-like experience that prepares students for higher education, especially students of color and students from low-income backgrounds.

Two years ago, Wenatchee Valley College went through the accreditation process through the National Alliance of Concurrent Enrollment Partnerships. Following the accreditor's recommendations, the college assigned faculty to serve as liaisons for high school teachers who teach dual enrollment courses in their disciplines. These faculty members receive a small stipend, which shows the value the college attaches to this role. Initially, one focus of the liaisons' work with high school teachers was ensuring that syllabi are of high quality and consistent with what the high school students would encounter in a course on campus. (English classes in the high schools and at the college now have the same syllabi, textbooks, and assignments.) College and high school faculty were also encouraged to find ways to create a college-like classroom environment in high schools—for example, by creating office hours.

High school and college counterparts meet at least twice a year, and college liaisons conduct annual classroom observations of their high school counterparts. When one math professor visits the high school, she observes students' participation and interactions with the teacher, then provides feedback to the teacher. High school teachers are also invited to observe classes on the college campus and attend department meetings and trainings, practices that build mutual respect and encourage sharing of innovative practices.

Encourage faculty to assess teaching practices

Professional development isn't always about training; at some colleges, formalized systems allow faculty to improve by examining their practices and innovating in structured, measured ways.

Pierce College has undertaken collegewide efforts to close gaps in course success and graduation by race, gender, and other factors. As one aspect of these efforts, the college supports faculty in carrying out action research projects in which they develop and test specific strategies to improve classroom teaching, especially for students of color. A dashboard in Tableau shows instructors course success rates over time and by different subgroups of students, so they can evaluate the effectiveness of their innovations. One professor, for his project, put aside his traditional research assignment and instead allowed students to select their own modality and topic, as long as they met the required outcomes (as assessed by rubrics the professor and students designed together). The data showed performance gaps closing for Black and Latinx students in just one year. ◼

Principle

V

ORGANIZE TEAMS AND DEVELOP RELATIONSHIPS TO MAXIMIZE POTENTIAL

The foundation of dual enrollment is the partnership between a high school (and its district) and a college. A dual enrollment program can achieve truly equitable access and outcomes only when leaders and practitioners at the high school, district, and college trust each other and are similarly committed to equity-oriented goals. Where partnerships click, it's not just the dual enrollment program teams that are connected, but all the other contributors, too, including senior leaders, faculty, and counselors.

Excellent partners work together to solve shared problems, including lower participation and success rates of students of color. They prioritize innovations that remove barriers to participation for these students and support them to ensure they're successful. They regularly talk through challenges in their work, from existing equity gaps to the alignment of curriculum to the academic progress of students. And they share necessary information and exchange data to assess programs, monitor equity gaps, and make improvements.

To build strong underlying partnerships that promote equity, colleges, districts, and high schools must:

1	2	3
Elevate equity-focused dual enrollment teams	**Build relationships at all levels**	**Assess outcomes and enact data-driven improvements**

Strategy 1:
Elevate equity-focused dual enrollment teams

There are several key actors at the heart of successful dual enrollment partnerships: usually, a dedicated director at the college or school, a counselor or assistant principal who serves as the dual enrollment director in addition to other responsibilities, and perhaps a larger team at the college. Often these are the people who first championed the program's equity goals. Through their daily work and their relationships with each other, they prioritize access and success for students of color and students from low-income backgrounds.

Most colleges have at least one staff member tasked with managing relationships with dual enrollment partners and serving as a point of contact for dual enrollment students. How they organize staff may vary. Because having a dedicated point of contact helps to build relationships and trust with local schools, colleges that serve a broad service

area or have multiple campuses might consider employing a larger dual enrollment team and assigning a subset of high schools to each staff member. Each coordinator becomes the primary relationship manager for their assigned schools, running information sessions, helping students enroll in college courses, and serving as general academic advisors for dual enrollment students. Colleges with expansive rural service areas might dedicate more staff to conducting outreach to rural high schools to ensure they are sufficiently serving rural communities.

It's critical that all individuals tasked with advancing dual enrollment are selected because they care about and will focus deeply on expanding equitable access and success— and that where this mindset isn't pervasive, college and school leaders invest in professional development to foster such a culture. Where providers have minimized gaps in participation and outcomes, there is often a deep dedication from most or all of the dual enrollment team to expanding opportunity for students. They find workarounds to state policies limiting access, encourage

FIGURE 4: **ANATOMY OF AN EFFECTIVE DUAL ENROLLMENT DIRECTOR**

EQUITY ADVOCATE	Challenges assumptions that students of color will not be successful in dual enrollment; commits to using dual enrollment to expand opportunity; identifies and redesigns inequitable policies and practices
COLLABORATIVE AND RESPONSIVE PARTNER	Builds relationships and trust with K-12 partners and students; stays in regular contact with all partners; works to understand partners' needs; ensures partners' expectations for quality are met
PROBLEM SOLVER	Commits to making the program work well and takes the initiative to make changes; develops creative programming; immediately addresses problems when they arise
POLICY KNOWLEDGE SOURCE	Understands the implications of national, state, and local policies on their programs and stays informed of policy changes

their partners to build structures to better identify and support underrepresented students, and push their own institutions to prioritize serving students of color and students from low-income backgrounds.

In addition to serving critical roles as equity advocates, dual enrollment directors and teams conduct daily program management. They forge relationships and triage any problems that arise. The most effective dual enrollment directors often have a customer service orientation. Some visit high schools nearly every day. Regardless of the frequency of those visits, they need to build trusting relationships. In particular, the dual enrollment director or team at the college must be highly responsive to and supportive of high school counselors, who have limited time for each student and sometimes minimal information on college processes and requirements. Many principals and counselors praised the dual enrollment directors and staffs who always took their calls (or called back promptly) and answered emails quickly.

Strategy 2:
Build relationships at all levels

For many institutions, partnering on dual enrollment is not new. Pierce College was one of the first colleges in Washington State to pilot Running Start in the 1980s, and Lorain County Community College has worked with some of its high school partners since the 1990s. But people and positions change. No matter how long dual enrollment programs have existed, colleges and schools must always be mindful of building and maintaining strong interpersonal relationships.

It's important to invest in all partnerships, but it's also telling to see where colleges and schools formed the deepest relationships. Many of the colleges we researched prioritize their relationships with underserved high schools—such as Indian River State College's relationship with rural Okeechobee High School, Valencia College's with outlying high schools in Osceola County, Wenatchee Valley College's with rural schools and the Indian reservation, and Palm Beach State College's with the

majority Black high schools near its Gardens Campus. Colleges should strive to be a good partner to all schools and districts, but advancing equity may also require devoting more time and resources to selected schools.

Develop relationships between colleges, districts, and schools

Excellent dual enrollment partners form strong relationships between counterparts at all levels, including senior institutional leaders, dual enrollment program directors, CTE program directors, faculty, and counselors. As noted, collaboration among counselors and instructors is crucial to coordinate advising, set instructional quality and standards, and mutually support students. But it is a mistake to leave collaboration only to ground-level practitioners.

For dual enrollment programs to be effectively coordinated, resourced, and assessed in ways that serve all students well, strong relationships are also crucial among senior leaders (the college president or their delegate, the K-12 superintendent, and principals) and among those who oversee the dual enrollment program (a dedicated dual enrollment director or, as is the case at many high schools, an assistant principal or counselor).[35] Regular meetings are not primarily administrative; rather, they are forums through which to deepen relationships, solve problems, and discuss mutual commitments. It's critical that equity be a focus of these conversations and a named priority from senior and programmatic leaders at both partners. Having the backing of an equity-minded partner can also put pressure on any internal skeptics who have been reluctant to embrace the proposed initiatives and other changes. For example, at Okeechobee High School, forming relationships with equity-focused allies at the college helped the new principal push through changes that created more equitable access to dual enrollment at the school.

[35] For research on how tiered leadership is necessary for institutional transformation, see Klempin, S., and Karp, M. (2017). *Leadership for Transformative Change: Lessons From Technology-Mediated Reform in Broad-Access Colleges.* New York, NY: Community College Research Center.

Palm Beach State College takes a layered approach to working with the school district and high schools.[36] Senior college and district leaders meet monthly to discuss dual enrollment strategy and policies. Counterparts across institutions both attend: the college's vice president of academic affairs and the district's chief academic officer, both chief information officers, and so on. President Ava Parker encourages provosts at the college's five campuses to form relationships with the principals of nearby high schools (or a designee, such as an assistant principal or the director of counseling). To coordinate student registration and course enrollment, the college's dual enrollment coordinator works with designated counselors across all schools with administrative support from the college registrar's team. Additionally, some college advisors are based at high schools to provide direct support to high school counselors and students.

It's important for such meetings to be prioritized and consistent. Leaders at Valencia College and the School District of Osceola County meet monthly to set dual enrollment strategy. "When you meet as regularly [with K-12 partners] as with someone at the college, it feels like [you're on the] same team," said Valencia Executive Vice President and Provost Kathleen Plinske.

To operationalize strategies set in the leadership meetings, dual enrollment managers, Valencia transition coaches, and other front-line staff have separate tactical meetings. They brainstorm solutions for barriers that have been discovered, develop marketing and recruitment strategies, and plan for shared events.

Relationships can be bolstered outside the meeting room, too. Many partners in effective dual enrollment collaborations attend and promote unrelated events hosted by their partners, such as a football game or a graduation ceremony, to demonstrate their support. In 2002, when Tamra Jackson was an English teacher at Bridgeport High School working with Wenatchee Valley College to establish dual enrollment offerings, she embedded herself into

the WVC English department, attending staff meetings and retreats. As the program grew, and Jackson became Bridgeport's principal, she continued to stay close with the college—and now even sits on its board of trustees.

Extend partnerships beyond the community college and K-12 district

If dual enrollment is to truly offer students a pathway beyond the associate degree, to further degrees and employment, formalized institutional relationships must reflect this extended ecosystem. Dual enrollment partners should connect with other partners from industry and four-year colleges and universities so that efforts are comprehensive and aligned. One example is the use of regional consortia to organize career and technical education programs. Through these consortia, CTE programs at colleges and high schools work together closely on their offerings and form relationships with regional employers to connect students to good jobs.

Columbia Basin College and seven regional school districts formed a regional CTE cooperative in the 1960s to coordinate delivery of higher-cost programs, identify the need for new programs, and avoid program duplication. Sixty years later, the cooperative continues to be the means to assess demand for new programs, sunset or reduce programs with diminishing workforce needs, and ensure programs are appropriately spread across the region. The CTE directors meet every other Monday to discuss changing policies, student needs, and regional workforce needs. They sit on each other's employer advisory committees. Through the cooperative, Columbia Basin also works with high schools to ensure articulation from high school courses to the college and to see that these course offerings apply to college programs that will prepare students for good jobs that are in demand in the region, such as teacher education, cybersecurity, and computer engineering.

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[36] School districts in Florida overlap with county designations. Because Palm Beach State College serves Palm Beach County, it has only one district partner, the School District of Palm Beach County.

Strategy 3:
Assess outcomes and enact data-driven improvements

Excellent dual enrollment programs monitor data about participation and outcomes for a variety of reasons. They know that they can address equity issues only if they systematically track enrollment and student outcomes. They must fulfill state reporting obligations and need to stay abreast of any implications for performance funding. And they know that by exchanging information, all partners will be able to play their part in improving opportunity for their shared student population.

Develop internal dashboards to monitor participation and outcomes

Data dashboards allow for timely analysis of the dual enrollment student population, outcomes, and other key

programmatic information. These dashboards provide indicators of equitable access and outcomes in dual enrollment, allowing partners to monitor trends and assess progress on closing equity gaps.

One approach is to layer dual enrollment into existing campus dashboards, so that college staff can filter disaggregated data on student demographics, course completion, degree completion, and other topics for dual enrollment students only.

An alternative approach is to build a dashboard dedicated to dual enrollment student metrics. Valencia College has built a dual enrollment dashboard that includes student enrollment and demographics disaggregated by race and income, information on courses and modality, and success measures, such as GPAs and completed credit hours. All Valencia staff can access the dashboard and run reports on individual students, subsets of students,

FIGURE 5: **VALENCIA COLLEGE'S DUAL ENROLLMENT DASHBOARD**
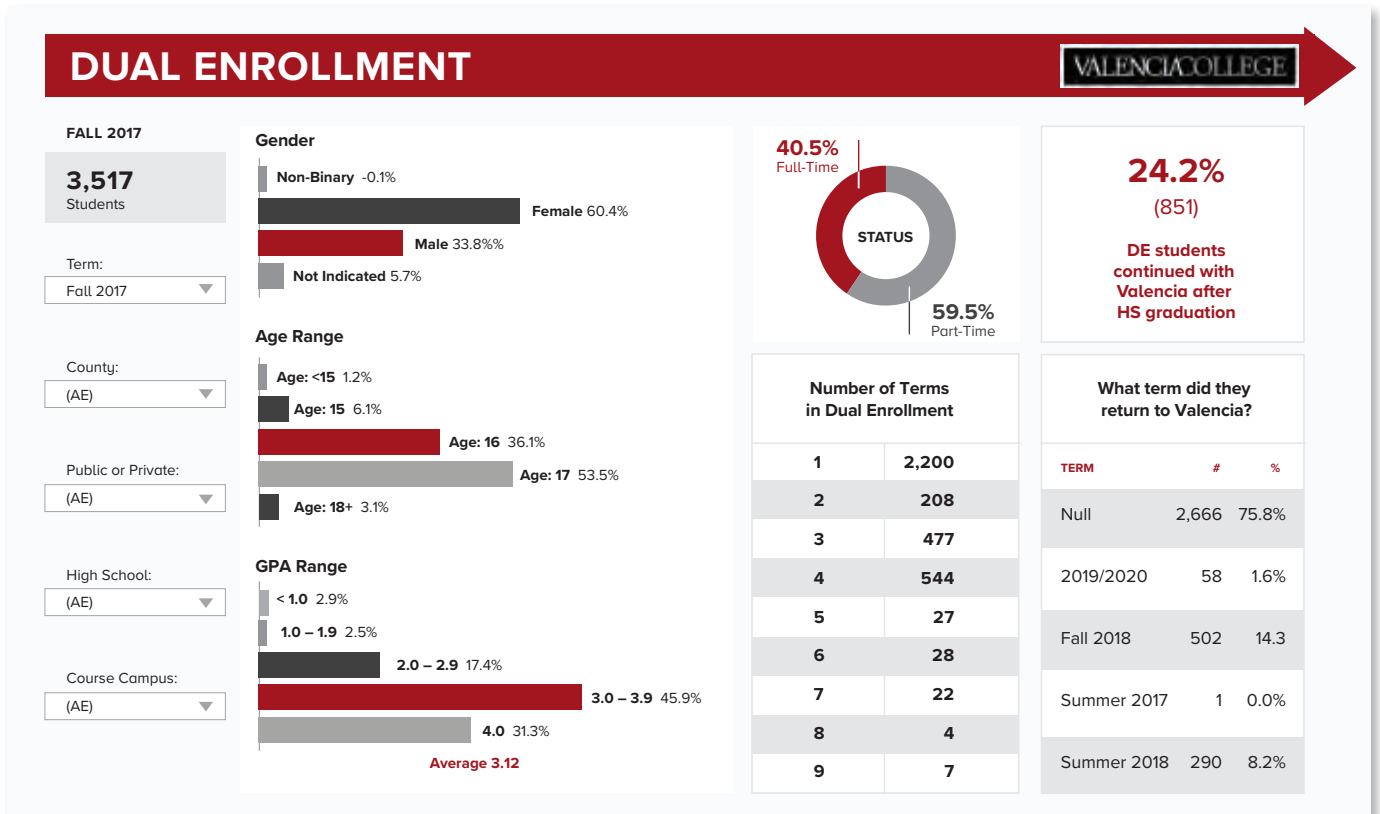
and the entire dual enrollment population. The team can quickly answer questions as detailed as "What percentage of dual enrollment students who take English Composition 1 get a B or above?" or "How many Black students with at least a 3.0 GPA have applied for dual enrollment from Osceola High School?"

Many schools and districts also use data systems to better monitor students and track progress on state accountability metrics. Four years ago, the St. Lucie Public Schools implemented an intensive data monitoring system, starting with graduation rates. Over the next few years, the district added other indicators, including the Florida accountability metrics, into the system. District administrators began conducting regular visits to high schools to accustom them to working with the data and using it to improve student outcomes. Graduation coaches at each high school have been charged with monitoring these data and implementing interventions at their schools. In four years, St. Lucie has increased its graduation rate from 70 percent to 90 percent overall, with notable improvements among students of color.

Share data with partners

It's critical for partners to systematically exchange information about participation and outcomes. If only one-half of the dual enrollment partnership has access to rich student success data, true improvement is impossible. Some colleges share their full data dashboards with schools and districts or build specific dashboards for each district partner. Lorain County Community College's dashboards track a variety of participation and success metrics over 10 years. The college operates dual enrollment dashboards with a few different views: all dual enrollment, county-wide, and customized for each partner district. The district-specific dashboards are also distributed as two-page summaries that list key metrics on dual enrollment student participation, demographics, and outcomes, disaggregated by various characteristics, as seen in Figure 6.

In addition to these overall program views, there are ways colleges share important data at discrete moments in the dual enrollment student lifecycle. Pierce College's

TABLE 3: **SUGGESTED DATA FOR DUAL ENROLLMENT DASHBOARDS**

- **Number of students who participate in dual enrollment by race and ethnicity, gender, free and reduced-price lunch and/or Pell status, and high school**

- **Number of terms student has participated in dual enrollment**

- **GPA by student characteristics (e.g., race, income, home high school)**

- **Credit hours attempted by student characteristics**

- **Credit hours completed by student characteristics**

- **Course pass rates by student characteristics**

- **Course modality (at the college, at the high school, online)**

- **Location of course (which college campus)**

- **Number of students who continue at the college after high school, their course completion rates and grades, retention rates, and credential completion by race and ethnicity**

- **Rate of college enrollment by race and ethnicity and by type of college acceleration taken, and name of institution where students enrolled**[37]

[37] To conduct this analysis, connect data from the National Student Clearinghouse on where students enrolled in college with their school records.
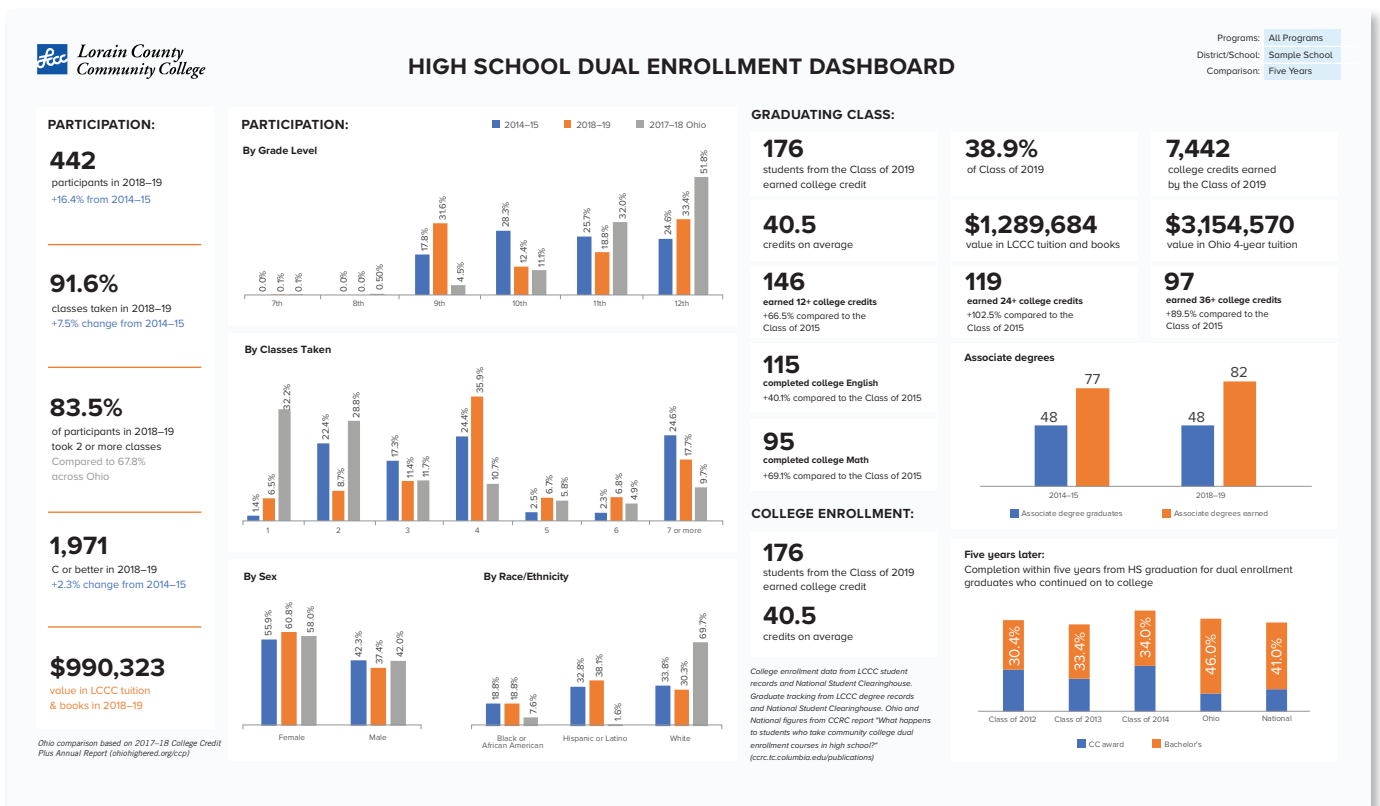
institutional research team recently mapped local 10th graders' readiness for college-level math. They found a correlation between the number of students who were not meeting the math standard and low participation in dual enrollment. For example, in one school district with low Running Start participation, only 17 percent of students were prepared for college-level math in 10th grade. This analysis will inform upcoming conversations with the district about readiness and access, particularly as it illuminates racial inequity in participation. Ultimately, the analysis will help both institutions support students as they prepare for higher education.

During the two times each year students can sign up for dual enrollment, Valencia College sends a weekly update to the district that lists the students who have taken the placement test and which sections they have passed, and the students who have applied for dual enrollment and their status. High school counselors use this information to remind students who did not pass the test to retake it and those who haven't completed their applications to do so.

Valencia also integrates dual enrollment into the Central Florida Education Ecosystem Database, the robust data system it has developed in partnership with its two school district partners and the University of Central Florida. The system tracks students from pre-kindergarten to college and allows users to produce data visualizations on student enrollment and outcomes and disaggregate by many characteristics, including participation in dual enrollment and race and ethnicity. Such a system can be used to identify opportunities to improve equity in access and completion, especially in fields of economic importance to the region. Valencia's president, Sandy Shugart, said the database will be indispensable for achieving a key goal: increasing the college's graduation rate for students of color to more than 50 percent. ◼

FIGURE 6: LORAIN COUNTY COMMUNITY COLLEGE'S DUAL ENROLLMENT DASHBOARD

HIGH SCHOOL DUAL ENROLLMENT DASHBOARD

Lorain County Community College

Programs: All Programs
District/School: Sample School
Comparison: Five Years

PARTICIPATION:

442 participants in 2018–19 +16.4% from 2014–15

91.6% classes taken in 2018–19 +7.5% change from 2014–15

83.5% of participants in 2018–19 took 2 or more classes Compared to 67.8% across Ohio

1,971 C or better in 2018–19 +2.3% change from 2014–15

$990,323 value in LCCC tuition & books in 2018–19

Ohio comparison based on 2017–18 College Credit Plus Annual Report (ohiohighered.org/ccp)

PARTICIPATION:

Legend: 2014–15 | 2018–19 | 2017–18 Ohio

By Grade Level

Grade	2014–15	2018–19	2017–18 Ohio
7th	0.0%	0.1%	0.1%
8th	0.0%	0.0%	0.50%
9th	17.8%	31.6%	4.5%
10th	28.3%	12.4%	11.1%
11th	25.7%	18.8%	32.0%
12th	24.6%	33.4%	51.8%

By Classes Taken

Classes	2014–15	2018–19	2017–18 Ohio
1	14%	6.5%	32.2%
2	22.4%	8.7%	28.8%
3	17.3%	11.4%	11.7%
4	24.4%	35.9%	10.7%
5	2.5%	6.7%	5.8%
6	2.3%	6.8%	4.9%
7 or more	24.6%	17.7%	9.7%

By Sex

Sex	2014–15	2018–19	2017–18 Ohio
Female	55.9%	60.8%	58.0%
Male	42.3%	37.4%	42.0%

By Race/Ethnicity

Race/Ethnicity	2014–15	2018–19	2017–18 Ohio
Black or African American	18.8%	18.8%	7.6%
Hispanic or Latino	32.8%	38.1%	1.6%
White	33.8%	30.3%	69.7%

GRADUATING CLASS:

176 students from the Class of 2019 earned college credit

40.5 credits on average

146 earned 12+ college credits +66.5% compared to the Class of 2015

115 completed college English +40.1% compared to the Class of 2015

95 completed college Math +69.1% compared to the Class of 2015

38.9% of Class of 2019

$1,289,684 value in LCCC tuition and books

119 earned 24+ college credits +102.5% compared to the Class of 2015

7,442 college credits earned by the Class of 2019

$3,154,570 value in Ohio 4-year tuition

97 earned 36+ college credits +89.5% compared to the Class of 2015

Associate degrees

Year	Associate degree graduates	Associate degrees earned
2014–15	48	77
2018–19	48	82

COLLEGE ENROLLMENT:

176 students from the Class of 2019 earned college credit

40.5 credits on average

College enrollment data from LCCC student records and National Student Clearinghouse. Graduate tracking from LCCC degree records and National Student Clearinghouse. Ohio and National figures from CCRC report "What happens to students who take community college dual enrollment courses in high school?" (ccrc.tc.columbia.edu/publications)

Five years later:
Completion within five years from HS graduation for dual enrollment graduates who continued on to college

	CC award	Bachelor's
Class of 2012		30.4%
Class of 2013		33.4%
Class of 2014		34.0%
Ohio		46.0%
National		41.0%

Conclusion

The rapid growth of dual enrollment offers an unprecedented opportunity to deliver college-level education to millions more high school students. If community colleges and high schools get it right, many more students of every race, ethnicity, and income level will experience greater academic rigor and arrive at college with a head start toward earning a degree. The hope in that vision seems especially important at a moment when the United States faces acute crises in the economy, public health, and racial justice.

But it's not a given that our nation will fulfill this promise. Historically, advanced educational opportunities have been structured so that only some students get access, with Black, Latinx, Indigenous, and Pacific Islander students most often left out. Without an intentional, intensive course correction, data show that the same imbalance will happen with dual enrollment.

The high schools and community colleges featured in this playbook point to a better way forward. They show how equity-minded leadership, thoughtful access strategies, strong student advising, and high-quality coursework can provide Black, Latinx, Indigenous, and Pacific Islander students a successful and productive dual enrollment experience. This playbook and the accompanying tools are designed to help other educators follow suit. We look forward to learning even more as committed leaders and educators put these strategies into action and advance equity in dual enrollment in new ways. ∎

Appendix:
Research Methodology

Step 1: Quantitative Analysis

CCRC and Aspen developed a selection methodology for identifying the nine fieldwork sites across our three partner states: Florida, Ohio, and Washington. Using de-identified student administrative data shared by the state education agencies, we analyzed access and outcomes among public high school students participating in dual enrollment with one of the state's community colleges. We identified pairings of high schools and community colleges that had above-average participation rates in dual enrollment and achieved strong outcomes for historically underrepresented students of color specifically.

Select pairings with high dual enrollment participation from students of color

From the universe of all possible pairings in each state, we kept those with at least 10 students of color from a high school graduating class who participated in dual enrollment at some point before high school graduation, and pairs that included high schools with relatively high dual enrollment participation rates for students of color (at or above the statewide median for participation among students of color in dual enrollment).

Select pairings with positive outcomes for students of color and minimal racial equity gaps

We then analyzed gaps in the following four outcomes between white students and students of color:

1. Dual enrollment course pass rates (C or higher) while in high school

2. Dual enrollment credit accumulation (completed at least nine college-level semester credits) while in high school

3. Rate of any college attendance within one year after high school

4. Rate of first-year persistence in college (conditional on college attendance)

Select final pairings for further screening

To rank the final list of pairs, two indexes were created:

1. Pair performance for students of color: Each pair was given one point for each of the four student outcomes for which the pair was at or above the median among the finalist pairs.

2. Pair performance for equity gap between students of color and white students: Each pair was given one point for each of the four student outcomes for which the pair was below the median gap (where smaller gaps correspond to students of color outperforming white students) among the finalist pairs.

The lists of pair finalists were then sorted by the two indexes, and we reached out to pairings with scores of threes and fours on both indexes. As a result, each of the pairs selected for screening calls had achieved relatively strong results for access to dual enrollment among students of color, success during and after dual enrollment, and closing racial equity gaps in measures of student success.

Step 2: Literature Review

We reviewed publications on best practices for dual enrollment, early college high schools, and other accelerated programs, as well as related work on advancing equity in higher education. From this literature review, we constructed a five-part framework that informed our interview guides and research protocols: (1) institutional commitment and strategy; (2) removing barriers to participation; (3) ensuring high-quality academic experiences; (4) focused outreach and support to advance equity; and (5) monitoring results.

Step 3: Screening Calls

From Step 1, we conducted phone interviews in which selected colleges, districts, and high schools described their practices, partnerships, and challenges, and why they believed they had achieved relatively strong results in our quantitative analysis. Calls were used both to gauge interest in participating in the study and to assess whether the strong outcomes appeared to be the result of intentional practices.

After each call, the interviewers documented and rated the institution's success in achieving equitable access and outcomes. The team selected the final sites for fieldwork based on individual ratings and ensured the selected sites represented varied geographic and demographic contexts.

Step 4: Site Visits

In fall 2019 and spring 2020, a group of two to five team members from Aspen and CCRC visited each site. Each visit included at least one day of interviews at the college and a second day of interviews at the high school. Some site visits also included a half- or full-day visit to a second high school or the district central office. In person, we visited seven colleges, 13 high schools, and two district offices. (Due to the coronavirus pandemic, the in-person site visits to Miami-Dade and Palm Beach counties were canceled.)

Including virtual site visits, we conducted 123 interviews with groups including institutional leaders, dual enrollment and CTE program heads, and other senior administrators and support staff; high school teachers and college instructors; counselors and advisors; students; and parents of current or former students.

Programs researched for this publication

SITE	KEY PARTNERS	PRIMARY DUAL ENROLLMENT MODEL
Miami-Dade County, FL	Miami Dade College Barbara Goleman Senior High School Ronald W. Reagan/Doral Senior High School	At the college
Okeechobee County and St. Lucie County, FL	Indian River State College Okeechobee High School Treasure Coast High School	At the college and high school
Osceola County, FL	Valencia College Liberty High School	At the college
West Palm Beach, FL	Palm Beach State College Palm Beach Lakes Community High School	At the college and high school
Lorain County, OH	Lorain County Community College Lorain High School Clearview High School	At the high school
Steubenville, OH	Eastern Gateway Community College Steubenville High School	At the high school
Puyallup, WA	Pierce College Emerald Ridge High School Puyallup High School	Primarily at the college, some at the high school
Tri-Cities, WA	Columbia Basin College Tri-Tech Skills Center Wahluke High School	At the college, CTE at the skills center
Wenatchee Valley, WA	Wenatchee Valley College Bridgeport High School Eastmont High School Wenatchee High School	At the college in urban and suburban areas, at the high school in rural areas

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