CHAPTER 10: ELIMINATING THE GAP BETWEEN HIGH SCHOOL AND COLLEGE:

What the Next Generation of Transition Programs Must Do

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JFF

BUILDING A FUTURE THAT WORKS.

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13 IDEAS THAT ARE TRANSFORMING THE COMMUNITY COLLEGE WORLD

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1. Introduction

The key to a career that makes a good living is no longer a high school diploma but a postsecondary credential or degree (Carnevale and Cheah 2018). While community colleges provide accessible paths to both, too many students exit high school and fail to take the next step into college—or start and drop out (*Remediation: Higher Education's Bridge* 2012). Especially for students who are the first in their families to go to college and from low-income backgrounds—for whom this is most likely to happen—improving the transition from high school into the first year of college is an important part of fulfilling the promise of community colleges to improve economies and economic mobility.

Increasing college completion is not merely a matter of high schools better preparing students or colleges implementing interventions for entering students. It also requires high schools and community colleges working together to make a smoother handoff of students between the two systems to set students up for success. This idea – *of high school-to-college transition partnerships* – has gained broad acceptance as a desirable practice at community colleges. This is a stark contrast from two decades ago, when the general attitude of community colleges toward high schools was "just give us students who are ready," and the primary goal of high schools was to get students to the graduation stage rather than through the college door. Now there is a growing appetite on both sides for collaborating to increase college success and arguably a movement toward intertwined missions: high schools have been pushed to expand their goals to include ensuring that their students are prepared for college and career, and community colleges have been pushed to think more about developing the pipeline of students transitioning into their institutions.

Embrace of high school-to-college transition partnerships has increased over the past two decades sparked by a number of societal trends, especially: more demand for young people to earn a postsecondary credential in order to find good jobs; increased

attention on low postsecondary completion rates, especially for people from low-income backgrounds who are hurt most by growing loan debt without credentials to show for it; and the realization that too many high school graduates are not ready for the next step into college, ending up stuck in college remediation.

This idea has spawned the spread of models aimed at smoothing the transition and truly preparing high school students for college success, including:

- dual enrollment and early college schools that enable students to earn college credit while in high school;
- 12th-grade college-transition courses that provide a route for underprepared seniors to avert remediation in college; and
- career pathways that deepen and apply academic learning by connecting the high school curriculum to postsecondary programs of study (and work-based learning).

But like many worthy notions, broader acceptance and expansion can lead to a wider range of quality and results, and some evidence suggests that there is stronger and weaker implementation of high school-to-college transition partnerships coinciding with their growth. One of the reasons for this variation is that strategies associated with the idea are often relegated to the periphery of other core changes that colleges are undertaking to improve student success.

The early success of these individual strategies has ironically put them at risk of being adopted as standalone (even symbolic) solutions rather than as strategies integral to larger systemic change goals, including: authentic alignment and partnerships with K-12 systems; credentialing paths that maximize short-term income outcomes and also provide opportunities for further education; and guided pathways that create a more coherent and structured educational experience so that more students reach key educational milestones and careers. This is the next generation of work surrounding collaborative high school-college efforts, if these efforts are to contribute in a meaningful way to the equitable and large-scale success of community college students.

In this chapter, the authors recount the evolution of efforts associated with high school-to-college transition partnerships, describe approaches that epitomize the integrated role they should play in community college improvement writ large, describe their impact so far and why it is not as great as it could be, and envision how this idea might look when it truly transforms community colleges.

II. Transitions: A Brief History

High schools and colleges are operated, funded, and governed by different sets of structures and policies. Even though the first community college, Joliet Junior College in Illinois, ironically grew in 1901 out of a high school wanting to make postsecondary education more accessible for its graduates (Joliet Junior College 2018), there is a fundamental difference between secondary and postsecondary education. High school is part of a compulsory system where the state requires students to attend, typically through high school age, and community college is a voluntary system where students choose to attend.

This accounts for many key differences that follow, including why public K-12 students pay nothing to attend, while college students pay tuition or receive aid from state and federal government to cover the cost of attendance. It is a factor in why K-12 learning standards, assessments, and graduation requirements are so often set by state governments, while states generally exert less control in public college systems, which have a tradition of academic freedom and shared governance with faculty. Also, as high schools operate in loco parentis, educators there generally view the support of students as being their responsibility. In contrast, students are in college by their own volition, and the general collegiate ethos is that it is the students' responsibility to manage their own learning—i.e., sink or swim—which is one of the reasons why the transition from high school to college can be so jarring for them.

A New Era of P-16 Efforts

There was little sense until the early 2000s that K-12 and postsecondary institutions ought to act more as aligned parts of a singular education pipeline than as loosely coupled systems. In the early years of the millennium, a convergence of interests, goals, innovations, and evidence fueled more systematic, state, and national attention to the need for secondary and postsecondary education to work better together. Larger forces began to push for the improvement of K-12, higher

education, and the transition between the two. They included both state and federal governments and philanthropy advocating for more consistently rigorous standards in elementary and secondary education, and higher completion rates in postsecondary education—particularly in community colleges. These separate pressures came together as policymakers and influencers realized that achieving each goal could be partly facilitated by having the K-12 system and higher education system work more as a P-16 system (the "P" is included to signal the importance of pre-kindergarten education).

K-12 Standards

The pinnacle of standards-based reform in K-12 education arguably spanned 2001 to 2009. It culminated with the formation by 48 governors and state education leaders of the Common Core State Standards Initiative to develop a shared set of K-12 standards in math and English that aligned with the expectations of higher education for entering students. The lead-up to this moment was marked by the landmark 2001 No Child Left Behind (NCLB) reauthorization of the Elementary and Secondary Education Act, itself an important development in K-12 standards-based reform. The law, a bold new assertion of the federal role in education, required that states assess students at specified grade levels based on state standards, make the results transparent to the public through an accounting of Annual Yearly Progress, and define consequences and supports for students and schools not meeting standards. NCLB and years of developments leading up to its passage actually laid bare that states in fact had very different education standards.

Thus, the Common Core effort was marked by both a commitment to common standards across states and the recognition that careers with good wages required postsecondary education. Accordingly, all state standards should be aligned to the knowledge and skills needed to be successful in math and English at the college level. This was a major force pushing K-12 and higher education system leaders to work together to align what was taught and assessed in high school with what colleges expected of entering students in nonremedial courses. It was a product of and punctuated by years of work during this period by national networks of states—including K-12, college, and industry representatives—convened by Achieve, Inc. (itself created by governors and leading businesses in 1996) and other advocates for more rigorous K-12 standards.

Correspondingly, many states also created statewide P-16 Councils—composed of leaders from local and state-level K-12 and postsecondary systems with (typically)

advisory authority (Education Commission of the States 2018)—and other local and state secondary-postsecondary groups whose goal was to better coordinate and align the systems, sometimes examining and recommending changes to high school graduation requirements and programs that could create a more seamless education pipeline.

Community College Improvement Efforts

At the same time, community colleges were feeling pressure from policymakers to raise student completion rates. Starting in 2004, Lumina Foundation and the Bill & Melinda Gates Foundation elevated attention to the need for community college improvement and lent support to colleges engaged in this endeavor, including Achieving the Dream, Completion by Design, and Jobs for the Future's (JFF) Postsecondary State Policy Network.

These initiatives often included a focus on the importance of secondary-postsecondary efforts to align standards and expectations so that more high school graduates entered college with momentum toward their goal of earning a degree or credential. For example, a JFF brief by Michael Collins on tenets for improving developmental education practices and policies included "preventative strategies" such as early assessment testing of high school students (Collins 2009). The multi-state, multi-college Completion by Design initiative developed and tested strategies within a "loss/momentum framework" for students that included a focus on "connection from interest in college enrollment to application"—including strategies such as early colleges and dual enrollment. By 2013, JFF documented that four states had incorporated dual enrollment into their higher education performance-based funding models—a major reform lever for states trying to improve college success rates—rewarding colleges that encouraged high school students to complete college courses early (Struhl 2013).

The Influence of Research

A surge of seminal research revealing significant misalignment between the requirements for high school graduation and college readiness further fueled improvement efforts. For example, a national study called the Stanford Bridge Project found that colleges in six states used a wide variety of homemade and standardized instruments to assess entering students for placement into college-level or remedial courses (Venezia et al. 2003). This lack of consistency and connection to K-12 standards—in addition

to the lack of K-12 guidance counseling—was especially damaging for first-generation college students who were least likely to be able to navigate this cacophony on their own. Clifford Adelman's research for the U.S. Department of Education, Answers in a Toolbox, showed the strong relationship between college success and a rigorous high school curriculum, particularly in math, and how many students did not take or have access to such a curriculum (Adelman 1999).

The Center for Higher Education Management Systems illustrated in stark terms, using milestones of educational pipeline progression, how few students actually completed college, earning a credential or degree. Roughly one in five ninth-graders graduated from high school on time, went directly to college, returned for their second year, and graduated within 150 percent of program time by 2006 (NCHEMS Information 2018). The pipeline metaphor began popping up at policy conferences focused on college readiness and success, and pointed to the need for action at multiple junctures to stem the steady loss of students.

JFF and other organizations also proposed ideas for promising policies and practices to fix these disconnections and create a more seamless P-16 system. In numerous publications, the Community College Research Center noted the rise of and potential for "high school to college" mechanisms, such as career pathways and dual enrollment, to support student success (Community College Research Center 2018). JFF conferences of policymakers and influencers in 2003 and 2007 issued calls to "Double the Numbers" of low-income students completing college. A JFF-edited volume by the same name and its 2007 companion book, Minding the Gap, took stock of some of the most promising state efforts and imagined the kinds of data systems, governance arrangements, incentives, and other infrastructure needed to better bridge the secondary and postsecondary systems. The books and convenings, notable for participation by many leading policymakers and influencers, constituted a rising chorus of voices harmonized around strategies targeting the transition between the final years of high school and the first years of college.

Innovations at Work

Coinciding with pressures for more coordination between secondary and postsecondary systems was emerging evidence about the positive effects of joint efforts aimed at improving college readiness and success. One of the most promising ideas JFF advanced was early college high schools, started by 13 state and national organizations with a large investment by The Bill & Melinda Gates Foundation. The blending of high school and two years of college in these schools for low-income youth provided an important lens for understanding how

secondary and postsecondary policies, systems, and cultures could work better together to create more seamless routes to degrees and credentials. The partnerships spawned by this investment created 280 schools in 25 states serving over 80,000 students annually.

Emerging research about these schools over the years suggested and eventually showed conclusively that the early college investments were paying off in improved high school graduation, college enrollment, and completion rates (Berger et al. 2014; Edmunds et al. 2015). Simultaneously, research suggested that expanding dual enrollment—a key component in early college schools that was scalable—could help more high school students enroll in and complete college, including low-income youth (Karp et al. 2007).

Other research widened the lens on the elements of successful college readiness and success programs, and confirmed the importance of secondary-postsecondary alignment and collaboration. The American Youth Policy Forum published a volume in 2009 that examined commonalities between 23 education programs with evidence from rigorous research of preparing students for college success (Hooker and Brand 2009). Among other findings, they noted that what bound the various approaches was a focus on "rigor and academic support," "relationships," and "partnerships and cross-systems collaboration."

Policies and State Systems Promote Growth

The clear need for stronger P-16 alignment combined with the emergence of promising approaches also led to increasingly bigger and bolder policies and investments promoting collaborative high school-college transition efforts by state policymakers and systems, solidifying their place among important strategies to improve student success in college.

EARLY ASSESSMENTS AND EXPANSION OF DUAL ENROLLMENT

Several states created policies to promote the expansion of the transition strategies that lead students to college completion by creating some infrastructure to support secondary and postsecondary system collaboration. The California State University's (CSU) Early Assessment Program, started in 2002, created a statewide opportunity for high school students to gauge their level of college readiness in English and math by taking an optional test during their junior year. Students could use the results to determine where they needed to improve during their senior year in order to be prepared for college-level study. Students demonstrating proficiency in those assessments were able to bypass

the CSU's mandatory English and math placement tests (The California State University 2018). This effort took a statewide approach to incorporating early assessments for college readiness and also led to CSU's early development of senior year transition courses enabling unprepared students, upon successful completion, to get up to speed and avoid developmental education in the freshman year.

Another place where states led the policy charge is in expanding dual enrollment opportunities. For example, 2005 HB 1 legislation in Texas required all districts to offer students the chance to earn at least 12 credits through dual credit opportunities including Advanced Placement or International Baccalaureate. In 2015, HB 505 removed restrictions on grade levels and number of courses that could be taken, thereby establishing the infrastructure within the state education system to offer access to dual enrollment to all students. Similarly in Ohio, the College Credit Plus Act mandated that all high schools provide pathways for participating students to earn 15 to 30 college credits toward a college major or career path. This policy intended to transform dual enrollment from an opportunity provided to select students in certain districts into a clearly defined program that is accessible for all.

CAREER PATHWAYS

In 2011, a report issued by the Harvard Graduate School of Education, *Pathways to Prosperity*, expanded the boundaries of the idea that high schools and community colleges ought to be working in tandem to promote student success (Symonds et al. 2011). It argued that many good careers in fast-growing industries were accessible without a bachelor's degree, but instead with postsecondary certificates and credentials in technical career areas including information technology, health care, and advanced manufacturing. Given this, it advocated for more models combining the early college approach with a focus on accelerating students toward these credentials and opportunities for further education—creating career pathways in grades 9 through 14.

With the country still in a slow recovery from the 2008 recession, this message resonated with policymakers. The U.S. Department of Labor invested $100 million in the Youth Career Connect program that emphasized career pathways in high school with an "Integration of Postsecondary Education and Training" (U.S. Department of Labor 2018).

States also made investments in high school career pathways, creating additional pressure and reward for working early with high school students, especially in coordinating and aligning pathways across high school and college. In the nation's

most populous state, the California Career Pathways Trust (California Department of Education 2018) provided a $500 million investment via two rounds of grants to create or expand career pathway programs in grade nine through the first two years of college. This program required that high schools and community colleges work together, coordinating and sharing resources in their pathway work.

Additional policies and programs in California provide further building blocks to support grades 9 through 14 career pathway expansion efforts.

POLICY SHIFTS

Increasing acceptance of the idea that high schools and colleges ought to couple their efforts to create stronger transitions into and through postsecondary has also been codified and encouraged in federal and state policy. In 2015, the federal Every Student Succeeds Act, the latest iteration of the Elementary and Secondary Education Act, heightened emphasis on postsecondary readiness for the K-12 system. Consequently, many states have opted to include dual enrollment, along with Advanced Placement and International Baccalaureate, as performance indicators in their state accountability systems for high schools.

The dual enrollment Pell Grant experiment provides an estimated 10,000 Pell-eligible high school students with opportunities to use dual enrollment to take community college coursework for free to test whether federal college aid can be used more efficiently (U.S. Department of Education 2018). Considered together, these policies serve to establish critical infrastructure for the cross-system partnerships needed to align and coordinate transition points between high school and college. They also elevate a cultural shift starting to take root that encourages K-12 and postsecondary systems to use these strategies to build more permanent bridges between each other and to use partnerships as a "new normal" for promoting student success.

III. A Good Idea Spreads

Again, the notion that colleges and K-12 districts should partner to improve student transitions across systems has rapidly taken root. Policy incentives and mandates, funder-driven initiatives, and community demands are increasingly pushing two-year colleges to expand their sphere of activity and influence down into the high school level, at the same time that high schools are being called on to demonstrate that their graduates are prepared for college and careers. The popularity of transition initiatives is evidenced by their impressive rate of uptake.

Between 1995 and 2015, the number of high school dual enrollees in community colleges more than quadrupled, rising from 163,000 to 745,000. By 2010, high school dual enrollees represented 15 percent of "first time in college" students in community colleges nationally. In a handful of states, they accounted as high as 25 to 37 percent (Fink, Jenkins, and Yanagiura 2017). The National Center for Education Statistics reported that approximately 1.4 million students nationwide were enrolled in dual enrollment courses during the 2010-11 school year—the most recent year for which such data were reported—though all signs point to continuing strong growth in the years since (Thomas et al. 2013). Particularly rapid rises can be seen in states that adopted policies designed to guarantee access to the opportunity for all high school students to earn a certain amount of college credit for free. In Texas, for instance, dual enrollment numbers swelled by 650 percent from 2000 to 2015 (Texas Higher Education Coordinating Board 2016). Community colleges serve over 90 percent of Texas' dual enrollees.

Within this context, the concept of transition courses, which are intended to address students' remedial needs before high school graduation, has similarly evolved from a set of boutique partnerships between school districts and colleges into a strategy that has been codified and scaled. A recent national study found that 17 states offered transition curricula through state-led initiatives in 2017—up from 8 states in 2012-13—and locally driven initiatives still abound (Fay, Barnett and Chavarín 2017).

Policymakers' enthusiasm for high school-to-college transition strategies does not appear to be waning. Instead, dual enrollment is such a high priority that nine state governors cited it among the policy priorities referenced in their State of the State addresses in 2018 (American Association of State Colleges and Universities 2018). Additionally, 16 governors mentioned career and technical education (CTE) among their top educational priorities, particularly in light of the changing economy and the rise of automation (Whinnery and Pompelia 2018). Many of these CTE proposals involve community and technical colleges in a key "bridging" role between secondary education and business.

Increased interest from both policymakers and the general public has created mounting pressure on school districts and community colleges to expand their collaborative efforts and reach an ever-greater number of students.

IV. Implementation: Principles of Strong Practice

While the idea of transition strategies such as dual enrollment, early college high schools, and career pathways has exploded in popularity, their design and implementation vary significantly. In many cases, adaptations of a model represent new innovations that could be more effective in a particular context, or that aim to address common barriers to scale or sustainability. Nonetheless, the most successful transition initiatives tend to retain a focus on a similar set of principles—best practices that research has linked to improved outcomes for older adolescents, underrepresented students, and those who are the first in their families to access higher education. These include:

1. Acceleration with support as the rule
2. Scaffolding transitions and supporting navigation of systems
3. Supportive relationships, building social capital, and culturally responsive practices

Each of these principles can be applied to a range of reform efforts in K-12 schools, as well as initiatives on college campuses. However, they are particularly powerful when employed as part of pathways that link the worlds of high school and college, ensuring that their influence is not lost as a student moves through the transition zone between the two.

Acceleration with Support as the Rule

To meet the heterogeneous needs of students coming to education with different levels of knowledge and skill, educational systems have historically varied curricular offerings rather than changed support systems and instruction to ensure that all students have access to equally rigorous curricula (Graham 1984). For example, when students struggle, educators are apt to slow down the pace of learning or put them in less rigorous courses that may not prepare them for college and careers. This approach fails large numbers of students who could have succeeded if stretched and sufficiently supported. Most college students who start out placed in developmental courses never

move on to the required college-level courses in the same subjects (*Remediation: Higher Education's Bridge* 2012).

Strong high school-to-college transition programs place an emphasis on keeping, deepening, and speeding the pace and rigor of learning joined with proper support and instructional innovation. The goal is not to hold students back until they have met traditional markers of college readiness, but rather to hasten their progress through extra interventions.

This is one of the reasons why Tennessee's program Seamless Alignment and Integrated Learning Support (SAILS) is effective. First designed by Chattanooga State Community College and local high school faculty, its success has spawned statewide expansion with investments by the legislature. High school students testing below the college-ready level on the ACT, who would likely take developmental coursework in college, have the opportunity to take SAILS in their senior year of high school instead. SAILS provides early intervention through blended learning lessons (online instruction coupled with high school teacher support) in key math competencies that students need for college success. When completed, students may take a tuition-free college math class while still in high school for dual credit. Students who pass all five competencies are guaranteed entry into college-level math at any public postsecondary institution in the state.

As the state has continued to expand SAILS, the program was projected to have reached over 50,000 Tennessee students by the 2016-17 school year. Two years earlier, the state projected that SAILS had already saved students about $64 million in tuition costs by avoiding developmental education (Higher Ed for Higher Standards 2016).

This principle is not about lowering standards, but about strengthening preparation strategies and support systems so that students have an equal opportunity to meet high standards. Instead of tracking students and focusing on only the highest achievers, exemplary transition programs share the premise that all students can achieve college and career readiness with the right interventions.

Scaffolding Transitions and Supporting Navigation of Systems

Transition programs were created and continue to exist, to a large extent, because it is widely acknowledged that the different levels of the education system operate as separate realms, with their own structures, cultural norms, and systems of rewards and punishment. Compared to high schools, higher education institutions—especially large, broad-access colleges—are notoriously challenging places to navigate. Succeeding in this context—or even

accessing the resources that are in place to help those who are struggling—often requires considerable insider knowledge, which is especially hard to come by for students who are the first in their families to pursue postsecondary education (Tinto 1993). Strong transition programs take many forms, but they share a common principle of "scaffolding" experiences early in the college trajectory and explicitly building the non-academic knowledge that contributes to persistence and completion.

As an example of a strategy that spans the gap between secondary and postsecondary education, many community colleges and their K-12 partners have experimented with placing high school dual enrollees in the same college success courses taken by incoming college students. These courses, which are offered for college credit and, in many cases, are required for degree-seeking students, typically introduce students to the college's library systems, academic support labs, and other resources, and include individualized academic and career planning. By taking these classes as early as ninth grade, students have a scaffolded opportunity to practice college success skills and hone them with increasing independence throughout high school.

Effective programs also provide structures and clear guidance to link the high school curriculum with college degrees and major requirements, as well as actual jobs in high-demand industries. While many students take a seemingly random assortment of dual enrollment courses based on their schedules or interests, some high school and college partnerships place a stronger emphasis on ensuring that dual enrollment is connected to a longer-term degree plan.

As one example, high school students in the Wonderful Agriculture Career Prep program, launched by the agrobusiness Wonderful Company in California's Central Valley, earn 40 to 60 college credits in specific career pathways such as plant science and agriculture technology. The program depends on partnerships with three community colleges, two four-year universities, and seven high schools. The partnership agreements between each college and high school spell out the required course sequence for each grade level to ensure that each student in the Ag Prep cohort meets the program's goals, and the curriculum also incorporates work-based learning. Students graduate with all the courses needed for admission to California's four-year universities, but they are also qualified with an associate's degree to move directly into a skilled job with Wonderful.

The Ag Prep program exemplifies a career pathway approach that integrates a rigorous academic curriculum and benefits from strong cross-sector partnerships.

The intentional program design takes the guesswork out of choosing college courses and uses students' time in high school as efficiently as possible.

Supportive Relationships, Social Capital Development, and Culturally Responsive Practices

Perhaps the most powerful element shared by strong transition programs is a focus on relationships, social capital, and culturally affirming practices. Personalization and strong relationships—between peers as well as between adult mentors and students—have been repeatedly cited as critical factors promoting a sense of integration in the postsecondary environment, which in turn promotes persistence (Karp 2011; Karp, Hughes, and O'Gara 2010; Bensimon 2007).

Positive relationships also build the social capital of first-generation students by increasing access to crucial information and resources to assist with academic as well as personal and financial challenges. The strong research base on the importance of relationships and social capital has influenced the spread of transition programs, college student success initiatives, and transfer preparation programs that are based on cohort models. These programs can be even more impactful when based in culturally responsive teaching and positive identity development, which aim to address the sense of isolation and, in many cases, exclusion and discrimination, that students from underrepresented groups often experience on college campuses (Bensimon 2007; Rendón 1994).

The Puente Program is an intersegmental program that draws on the assets of students' home cultures to support the success of first-generation students in California, many of whom are Latino. With an overall goal of increasing bachelor's degree completion for educationally disadvantaged students, and preparing these individuals to return to their communities as professionals and mentors, the program operates at 38 high schools and 65 community colleges. At both the high school and college levels, cohorts of Puente students take a sequence of English courses that draw heavily on Mexican and Latin American literature. College students also participate in a college success class taught by a Puente counselor and mentoring from local professionals; meanwhile, the high school counseling program engages entire families in college-planning workshops. The program has a long history of success at the community college level—measured by transfer rates that are higher than state averages for all students—and has also demonstrated academic gains for high school students (Puente, n.d.).

Even though Puente's high school and college programs were designed to operate as separate efforts, it is worth noting that both epitomize the principle of supportive relationships, social capital development, and culturally responsive practices. It is quite likely that local high schools and colleges with their own Puente programs in the same vicinity would easily find synergies by coupling their efforts, if they are not already.

The Potential Pitfalls of Replication

The examples highlighted in this section reflect research-based principles that promote successful transitions and college persistence. However, none of these models is a silver bullet, and trouble arises when initiatives are replicated without addressing the underlying dysfunction of disconnected systems.

Early college, dual enrollment, and career pathways have become part of the community college and K-12 lexicon. Ironically, that brand recognition runs the risk of losing sight of the principles of design and practice that drive the success or weakness of any approach that attempts to promote stronger high school-to-postsecondary transitions for students, especially traditionally underserved youth. When a model starts to be championed and perceived as a panacea, implementers may displace the goal. The goal is not to replicate the model (though that may be one step toward the real goal) but to use the principled strategies they coalesce to transform and systematize the ways that high schools and colleges work together to better serve all students.

V. Trouble on the Horizon?

Challenges with Evidence

For all the interest in and proliferation of transition programs, they vary widely and the research on their effectiveness is mixed. Rigorous research has found positive effects for dual enrollment and early college. But there are few rigorous studies of other transition efforts that find significant impact of their effectiveness in increasing college completion. There is descriptive evidence on success courses and transition courses, most of which is mixed. The logic of transition strategies is intuitive, but the empirical evidence that exists to this point is limited in its ability to guide their design, implementation, and establishment in state- and district-level policies across the nation. It is critical that research continues. One of the issues that might be blunting the impact of transition strategies is that they are typically implemented in isolation from other completion strategies.

Challenges with Variation

A challenge in understanding the impact of transition strategies is the wide variation in their design and implementation. Strategies with the same name—college success courses, for example—often have different curricular components making it difficult to compare results across them. After a 2012 study on student success courses found positive impacts, there was growth in the number of success courses implemented across the country (Karp et al. 2012). But the wide variation of success courses means that generalizing the effects are problematic and success outcomes vary. Similarly, with dual enrollment, curricular elements, policy structures, and outcomes there is a great deal of variance. The Community College Research Center has shown that although future college outcomes for dual enrollees nationally on balance are stronger than for non-dual enrollees, outcomes vary widely by state, suggesting that specific policies and practices matter (Fink, Jenkins, and Yanagiura 2017).

Challenges with Quality

Dual enrollment and early college are among the more robust transition strategies in part because they integrate high school and college. Yet even here, there is some debate around the rigor and quality of college credits that students take in high school. Raymund Paredes, Commissioner of Higher Education in Texas, raised the question of quality in an article in the *Austin American Statesman* when he noted that over 40,000 students taking dual enrollment courses in Texas had not demonstrated college readiness through the state's college-readiness assessment or the SAT or ACT. And unlike Advanced Placement, where students must pass an exam to earn credit, there is no mechanism to validate whether students have mastered learning outcomes associated with college courses. That said, rigorous research has shown that dual enrollees in Texas go on to enroll in and complete associate's and bachelor's degrees at significantly higher rates than other high school students with similar demographic backgrounds and academic achievement (Struhl and Vargas 2012).

Nonetheless, as dual enrollment expands, it is important that research sheds more light on the question of the equivalency between dual enrollment courses taken in high school and college courses taken on the college campus. While high school teachers must meet certain standards to be eligible to teach college courses for dual enrollment, faculty at the college have expressed concern over whether the courses taught by the high school are truly college-level courses. These concerns must be validated or refuted with more evidence.

Challenges of Isolated Interventions

Even as the field will need more research about the elements of good implementation, there is an equally if not larger challenge and opportunity in strengthening high school-to-college transitions. Such strategies often lack connection to more comprehensive student success strategies at community colleges. Admittedly, the goal of transition strategies varies. For some, such as transition courses, the primary goal is college readiness. For others, the goal is accumulation of college credits. And yet for others, like early college, the goal is completing an associate's degree.

High school transition strategies may not be living up to their potential for impact, in part, because they are all too often a single-point intervention that is not connected to a broader comprehensive student success strategy. From the evidence on completion in *Redesigning America's Community Colleges* it is known that

isolated interventions that do not consider a student's full pathway are less likely to result in successful completion. According to researchers at the Community College Research Center, "Simply putting into place a transition course, without deep dialogue and strong collaboration between the two sectors in order to help shape the student's entire senior year, is unlikely to improve student outcomes" (Bailey, Jaggars, and Jenkins 2015, 141). Any uptick in success outcomes that might occur from a single intervention washes out without sustained attention to the subsequent stages of a students' progress toward a credential (Bailey, Jaggars, and Jenkins 2015).

VI. Alternative Visions

The Future

Rather than considering transition strategies in and of themselves, there is an opportunity to increase their impact by considering them as a part of a coherent credential pathway that is aligned to students' education and work goals. Bailey et al. write that, ". . . transition curricula may be most helpful when students begin the process of academic and career exploration, for example, by exploring meta-majors available at local community colleges and state universities, which could allow students to transition more quickly into a specific programs of study when they enter college" (Bailey, Jaggars, and Jenkins, 2015, 141). This will require redesigning transition strategies because the majority, with the notable exception of early college, only consider the front-end of the student experience. Transition courses and summer bridge programs, for example, do not consider the full student experience along a credential pathway.

The premise that students need a more explicit choice architecture leading them to their end goal undergirds the guided pathway reform effort that is taking root in community colleges nationwide. (See Kay McClenney's chapter 5 in this book on Guided Pathways.) The guided pathway approach focuses course-taking on highly structured program maps for the students' full educational experience, from the time they enter college through the time they earn a credential. Guided pathways have four major components: clarify the path, help students choose a path, helps students stay on their path, and ensure that students are learning (PathwaysResources.org 2018). Guided pathways are informed by evidence from multiple disciplines, including behavioral economics, organizational effectiveness, learning theory, and lessons learned from implementation of major community college completion reform efforts over the last decade.

Guided pathway reforms have grown from a novel idea to a national movement in community colleges. A number of states have adopted or considered policies encouraging or requiring higher

education institutions to adopt guided pathways. For example, the California Community Colleges Chancellor's Office released the *Vision for Success* framing the Chancellor's vision for transforming the college system to increase student completion of degree/certificate programs, transfer to four-year institutions, and pathways to jobs providing a living wage. To support this vision, the 2017 legislation, SB 539, provides an incentive grant to help establish guided pathways as the vehicle for this transformation across all 114 community colleges. Pending legislation for the *Community College Student Achievement Act* will generate further incentives to create a ". . . coherent, integrated, and system-wide approach that provides students with instruction, advising, support services, and financial aid."

At the national level, the American Association of Community Colleges (AACC) is leading a major Pathways Project. Thirty colleges in 17 states are "building capacity for community colleges to design and implement structured academic and career pathways at scale, for all of their students" (AACC 2018).

Yet, guided pathway reforms typically focus on "regular" students who are enrolled in community college and do not strongly feature programming at the secondary level; in most cases, they have developed separately from the high school-to-college transition programs at the same institutions.

Drawing on the known evidence and the lessons from implementation, there is an opportunity to develop an alternative vision that integrates transition strategies more centrally into the guided pathway model. This integration requires rethinking both strategies and developing an alternative vision where they become a coherent completion agenda, as opposed to two different strategies, one primarily developed by faculty and administrators working in high school and the other developed by faculty and administrators working in colleges. Integrating transition strategies into guided pathways will require secondary and postsecondary collaboration on the design, delivery, and validation of a new model for which secondary and postsecondary share responsibility (Vargas 2015).

In *Redesigning America's Community Colleges*, Bailey, Jaggars, and Jenkins (2015) write that postsecondary institutions might need to first do the work of structuring and mapping a focused set of credential pathways within the institution. This is the first element of guided pathways—clarify the path. Clear and structured programs give high school students and their counselors better targets to aim at so that the standards and expectations for successfully transitioning from high school to college are more

transparent. But more than the clear signaling about standards, assessments, and performance expectations, closer integration transition strategies and guided pathways would include joint consideration of both career and transfer outcomes that are aligned with jobs that pay family-supporting wages and transfer to four-year institutions with junior status. Secondary and postsecondary collaboration is also needed at this stage to identify course sequences, including the specific mathematics and English gateway courses associated with different programs of study.

Lorain County Community College in Ohio provides an example of an institution that is already leading the way by linking its dual enrollment offerings with its institution-wide guided pathway reforms. The college has created roadmaps of courses spanning from ninth grade dual enrollment all the way to the completion of bachelor's degrees in more than 20 majors. Students in the My University Pathways program can finish their associate's degree by high school graduation and a bachelor's degree, offered in conjunction with the college's university partners, only two years later—at 80 percent lower cost than a traditional four-year degree plan.

Once the college-level programs of study are clearly mapped and student end goals have been thoroughly considered, secondary and postsecondary can collaborate on the second element of guided pathways—help students get on a path. The second element is primarily about providing support to help students clarify their education and work goals. This type of directed educational planning course-taking is not a typical feature of transition strategies. Dual enrollment, for example, is often a la carte. High school students may—and often do—take college-level courses that are not necessarily connected to each other, nor are they necessarily connected to a student's end goals for education and work. But dual enrollment can be jointly redesigned by secondary and postsecondary stakeholders to help students make progress toward their end goals. Early career exploration or exploration of meta-majors could occur at local colleges so that high school students develop early momentum in college-level programs of study when they transition to college. North Carolina moved in this direction by passing a state-level policy—*Career and College Promise*—that requires all college courses for dual credit to be aligned to one of three pathways—the general education core, CTE, or Cooperative Innovation High Schools (early colleges)—so that the courses count toward students' credentials.

The third element of guided pathways—help students stay on their path—is primarily about student progression through the college. This stage features ongoing advising, tracking student

progression, and helping students who are not progressing find credential pathways that might be a better fit for their goals. Secondary and postsecondary collaboration on a feedback loop could be helpful at this stage. Sharing information on high school students' performance in college-level programs of study may identify gaps in high school curriculum and identify areas that secondary and postsecondary faculty and administrators might improve.

The fourth element of guided pathways—ensure that students are learning—could benefit from secondary and postsecondary collaboration on developing learning outcomes for student pathways. Increasingly, project- and work-based learning are important elements of credential pathways as high schools and colleges attempt to prepare their students to be successful in collaborating with others and transitioning from school to work. While there are few examples of the secondary-postsecondary integration described above, the Pathways to Prosperity Initiative, co-led by JFF and the Harvard University Graduate School of Education, is a rare effort promoting this kind of integration of transitions strategies and guided pathways.

The guided pathway model has direct implications for how colleges are partnering with local high schools, as the pillars that undergird the model call for clarifying the path to college for students. The call to provide clear bridges between high school and college is pushing the systems to build the collaborative and cross-system partnership needed to do so, setting the stage for the pockets of transition programs and approaches to come together in more powerful ways—and at a much larger scale than we have seen in the past.

V. Conclusion

The idea that colleges and high schools should work together to create bridges and better transitions between their educational realms has transformed community colleges insofar as it is becoming normalized as something colleges need to do—and have a growing appetite for doing—to promote student success at their institutions. But as strategies associated with the idea are implemented and expanded, they will not live up to their potential to achieve transformative outcomes unless they are integral to other core changes that colleges are undertaking to improve student success and continue to be researched for their efficacy and variations in design. The guided pathway model is an example of how to think through scenarios for systemic integration of these collaborative secondary-postsecondary approaches precisely because it is a comprehensive framework that touches the core of the community college enterprise. But the main point is no less true for community colleges that are undertaking similar reforms by another name and developing partnerships with high schools to promote college readiness and success.

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