K-12 RESEARCH

MEANDERING TOWARD GRADUATION:

TRANSCRIPT OUTCOMES OF HIGH SCHOOL GRADUATES

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The Education Trust

TO THE POINT

- Despite the rhetoric around college and career readiness for *all* students, just 8 percent of high school graduates complete a full college- and career-preparatory curriculum.
- Nearly half of graduates complete neither a college- nor career-ready course sequence. Rather than aligning high school coursework with students' future goals, high schools are prioritizing credit accrual, which treats high school graduation as the end goal.
- College and career readiness is still a new expectation that will require significant change to school structures, culture, and instruction to prepare students for postsecondary study aligned with their interests. We highlight school- and district-based levers for practitioners to consider in order to maximize postsecondary readiness among students.

Over and over again, educators and policymakers alike mouth the mantra: ALL kids ready for college and careers. But there remains a giant gulf between that rhetoric and the reality of today's high school graduates. Among recent graduates, fewer than 1 in 10 have taken a foundational set of courses they'd need to be both college- and career-ready. And almost half completed neither a college-prep nor a career-prep course sequence.

MEANDERING TOWARD GRADUATION:

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BY MARNI BROMBERG AND CHRISTINA THEOKAS

As a high school student in Louisiana, Tre decided he wanted a career in dentistry.[1] His counselor said his best option was to pursue fewer academic credits in exchange for more elective credits toward the health field he was interested in, so he did exactly that. But once Tre graduated and got to community college, he wasn't so sure it was the best advice. There, he learned that he hadn't placed on the college level in any subject, and his college counselor questioned why he hadn't taken more science classes. Tre lasted less than a year taking remedial courses before he dropped out.

Alarmed by the plight of American high school graduates who end up like Tre — with a high school diploma, but no path forward to achieve long-term goals — policymakers and educators have been working for years to solve this longstanding problem. In the policy arena, states have increased course requirements for graduation, instituted high school exit exams, and, most recently, adopted new college- and career-ready standards — all with the intention to advance achievement and open up more opportunities for low-income students and students of color, many of whom have historically graduated with inferior credentials. On the ground, school and district leaders have experimented with their own strategies — including smaller schools, career academies, and whole-school reform models (e.g., early colleges) — each aimed at better preparing and connecting students to the vast array of postsecondary opportunities available to them.

For both educators and policymakers, the aspiration is to prepare students for college *and* career, because it is now clear that college and career are no longer two distinct pathways. Most students will need to earn a postsecondary credential in order to achieve a family-sustaining wage in today's economy.[2]

However, given unequal preparation at the outset of high school and the differing demands of different postsecondary settings, achieving this aspiration is not without its challenges. True, graduation rates have reached an all-time high and postsecondary enrollment rates are steadily rising.[3] But, like Tre, thousands of those new college students are testing into remedial reading, writing, or math courses because they don't have the foundation to perform at the levels demanded in college classes.[4] Employers, too, report that high school graduates don't have the basic foundational skills to start in entry-level positions.[5]

What's going on here? Are students being exposed to the foundational content that would prepare them to achieve their postsecondary goals? Are they being afforded experiences that groom them to problem solve, study effectively, and work productively in teams?

To get better answers to these questions, we dug into the most recent national database of high school transcripts to find out what it could tell us about the experiences and preparation of our nation's graduates. How many of our young people are completing a full college- and career-prep curriculum? How many also have grades that show evidence of mastery? And how do those patterns differ by race and socioeconomic status as well as students' own aspirations?

To be sure, course-taking and grades can only tell us so much about genuine readiness for success in college and careers. Indeed, research suggests that students need some combination of:

- Foundational academic **content knowledge**;
- **Cognitive strategies**, such as collecting information and identifying and solving problems;
- **Learning skills and dispositions**, such as goal-setting, persistence, time management, and study skills; and,
- **Specialized content knowledge** applicable to their intended path after graduation. Indeed, readiness for a postsecondary nursing program requires different knowledge than does a pre-law program.[6]

Future Education Trust analyses will attempt to bring some data to bear on other components of readiness. In the meantime, though, we believe the data on both college and career course-taking, as well as the grades earned in those classes, can serve as a valuable foundation for understanding the trends in postsecondary readiness.

The data suggest that students are meandering toward graduation. Rather than ensuring students have access to a cohesive curriculum that aligns high school coursework and students' future goals, high schools are prioritizing credit accrual, which treats graduation as the end goal. These data call attention to how far we have yet to travel to assure that all of our students — and most especially students from disadvantaged backgrounds and students of color — are fully prepared to take advantage of the full range of opportunities that await them after high school. Instead of being prepared for college *and* career, many of our students turn out to have been prepared for neither.

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What Comprises a College-Ready Curriculum?

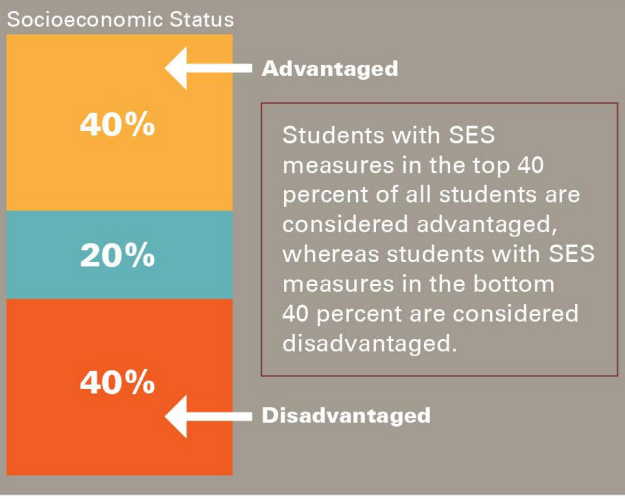
Subject	Credits	Specific Courses
English	4	N/A
Math	3	Algebra II
Science	3	Biology and Chemistry or Physics
Social Studies	3	U.S. or World History
Foreign Language	2	Same Language Study

What Comprises a Career-Ready Curriculum?

Subject	Credits	Specific Courses
Career Technical Education	3	In the Same Field

How Do We Measure "Advantage?"

Advantage refers to a student's socioeconomic status (SES), which is a measure of family income, parental occupational status, and parental education.



OUR ANALYSIS

To help us make sense of course-taking patterns, we examined transcript data from the High School Longitudinal Study, which follows a nationally representative group of ninth-graders from 2009 through 2013, the fall after their expected graduation.[7] We group high school graduates into the following categories based on the curriculum they've completed:

- **College-Prep Curriculum:** Consists of four credits in English; three credits in math, including algebra II; three credits in social studies, including U.S. history or world history; three credits in science, including biology and either chemistry or physics; and two credits in the same foreign language. *(See sidebar.)*[8] This definition is aligned with the entry requirements at many public colleges but does not indicate exposure to all of the experiences and knowledge a student might need to be ready for college.[9]
- **Career-Prep Curriculum:** Consists of three or more credits in a broad career field such as health science or business. *(See sidebar for a full list of career fields.)*[10] This definition assumes a concentration in high school will provide the foundation for a student to pursue postsecondary study in a career field but does not signal immediate readiness for a career after graduation.
- **College- and Career-Prep Curriculum:** Consists of both college-ready and career-ready course-taking sequences.
- **No Cohesive Curriculum:** Consists of neither the college-ready nor the career-ready sequence.

Certainly, we know course completion is an imperfect measure of readiness. Courses vary in expectations and quality, and credit accrual does not signal mastery. To address these problems, we have also examined grades earned in academic and career coursework as a proxy measure of whether learning has occurred. We recognize that grades are also a reflection of course expectations and student behaviors, but research has shown grade point averages (GPAs) to be predictive of college success — far more, actually, than test performance.[11]

We compare these data based on race and socioeconomic status. SES is a measure of relative advantage that accounts for multiple background characteristics, including family income, parental education, and parental occupations. When we refer to low-SES (or disadvantaged) students, we mean students in the bottom 40 percent of the SES distribution, and when we refer to high-SES (or advantaged) students, we mean those in the top 40 percent of the SES distribution.

Together, data on courses and grades can broaden our current understanding of who is college- and/or career-ready and which additional indicators we need to truly gauge readiness. Moreover, school and district leaders can repeat this analysis with their own data to better understand which of their students are prepared for postsecondary opportunities.

Which Careers Can Students Study in High School?

Career Field Category	16 Career Clusters
1. Agricultural and Natural Resources	Agriculture, Food, and Natural Resources
2. Business and Marketing	Business and Administration Finance Retail/Wholesale Sales and Services
3. Communications and Design	Arts, Audio-Video Technology, and Communications
4. Computer and Information Sciences, Engineering	Information Technology Scientific Research and Engineering
5. Trades	Architecture and Construction Manufacturing Transportation, Distribution, and Logistics
6. Consumer and Culinary Services	Human Services Hospitality and Tourism
7. Health Sciences	Health Sciences
8. Public Services	Education and Training Government and Public Administration Law, Public Safety, Corrections, and Security

These career categories are loosely aligned to the 16 career clusters that were designed by the Office of Career, Technical, and Adult Education at the U.S. Department of Education and sponsored by Advance CTE.

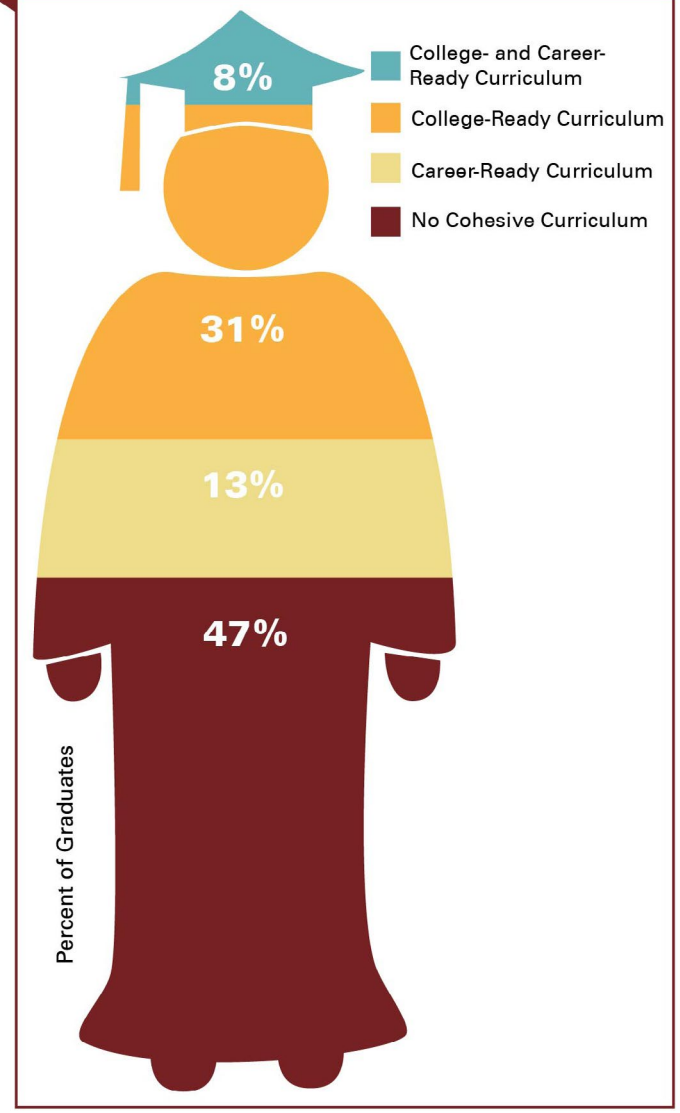
WHO COMPLETED WHICH COURSES?[12]

Only 8 percent of graduates completed a full college- and career-prep curriculum.

Despite the rhetorical commitment to college and career readiness for all students, only a small fraction of 2013 graduates completed both college- and career-preparatory course sequences in high school *(Figure 1)*. Rates of college- and career-ready course-taking are consistently low across student groups: Between 7 and 9 percent of white, black, and Latino graduates have taken a college-ready and career-ready sequence of courses *(Figure 2a)*.[13]

Some might think that students just can't cram both sets of courses into the typical high school schedule, but the full college- and career-ready sequence consists of only 18 credits; high school students earn, on average, 26 credits before graduation. So for the average student, there is plenty of space for college prep, career prep, and other electives.

Figure 1: Curriculum Type, 2013 Graduates



EDUCATOR IMPLICATIONS

All students will not follow the exact same path through high school, but educators must be aware of how different courses and sequences are going to build the academic foundation and career-ready skills all students need. Students must be set up for success immediately after high school (i.e., to meet eligibility requirements for postsecondary pathways) and later down the line (i.e., to have the requisite knowledge and skills if they want to change paths).

Some schools are already experimenting with methods for expanding college and career opportunities, like giving students credit for mastering college-level work outside of the traditional course structure.

We encourage high schools to examine which of their recent graduates are college- and career-ready. They should then take a critical look at their approach to providing students with foundational knowledge and skills as well as opportunities to pursue individual interests aligned to career goals.

SCHOOL-BASED LEVERS FOR CHANGE

- ***Transcript analysis:*** Which students can currently access both an academic and career-oriented curriculum?
- ***Master schedule:*** How are courses and time structured to provide students with the opportunity to gain necessary knowledge and skills and access content that interests them? Does tracking, formal or informal, prevent students from taking both academic and career courses?
- ***Credit policies:*** Do students have opportunities outside of the traditional course structure to attain knowledge and skills? What is the quality of these opportunities, and how are they recognized on transcripts?
- ***Graduation requirements:*** What are your state and/or local graduation requirements? Would additional requirements help prepare all students for college and careers?

Almost a third of graduates only complete a college-ready sequence.

Three in 10 graduates complete only a college-ready sequence, and if we combine this group with those who have completed a college- *and* career-ready sequence, about 4 in 10 have accessed a college-ready curriculum. Students from disadvantaged backgrounds were 14 percentage points less likely to complete a college-prep or college- and career-prep course sequence than advantaged students, but there were no significant differences between racial/ethnic groups *(Figures 2a and 2b)*.[14]

When we examine what is preventing students from completing a college-ready curriculum, we find that 57 percent of students who did not take a college-ready curriculum are missing *more than one* requirement — with the remaining 43 percent missing only one.

Figure 2a: College- and Career-Ready Course-Taking, by Race (2013)

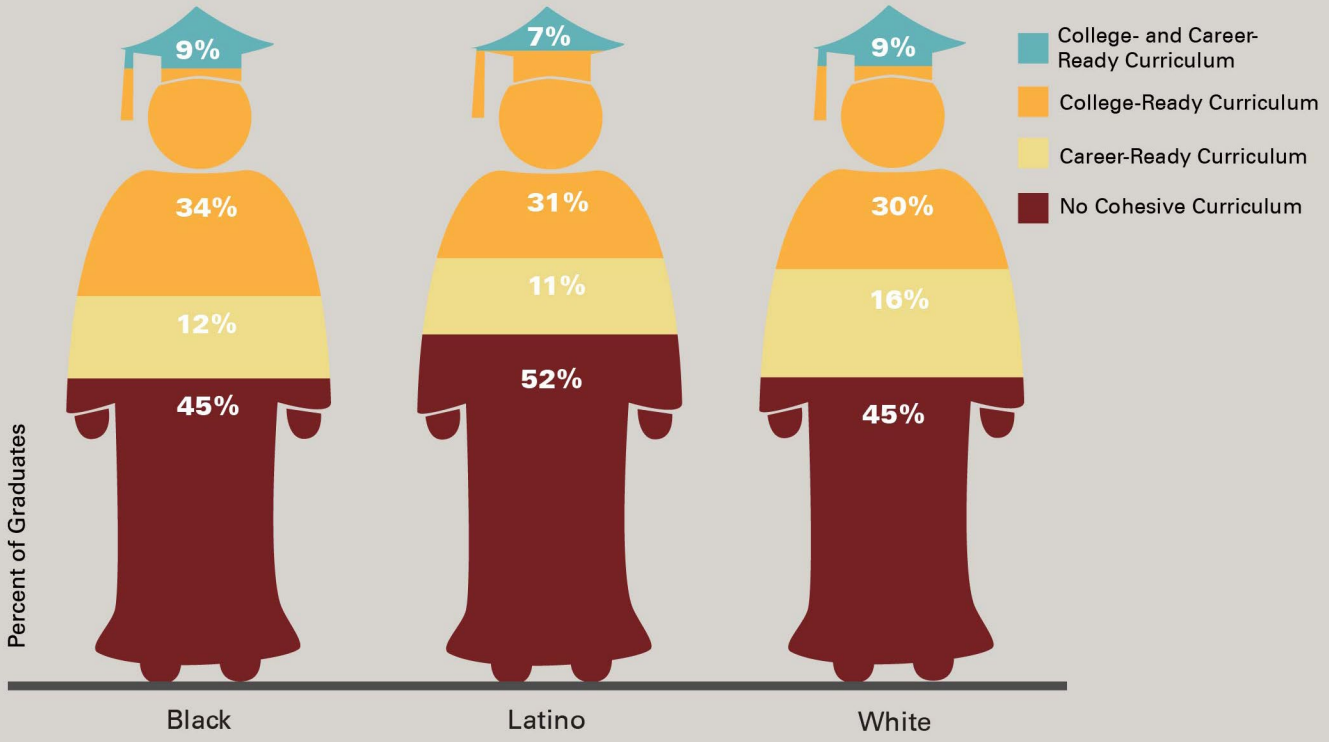
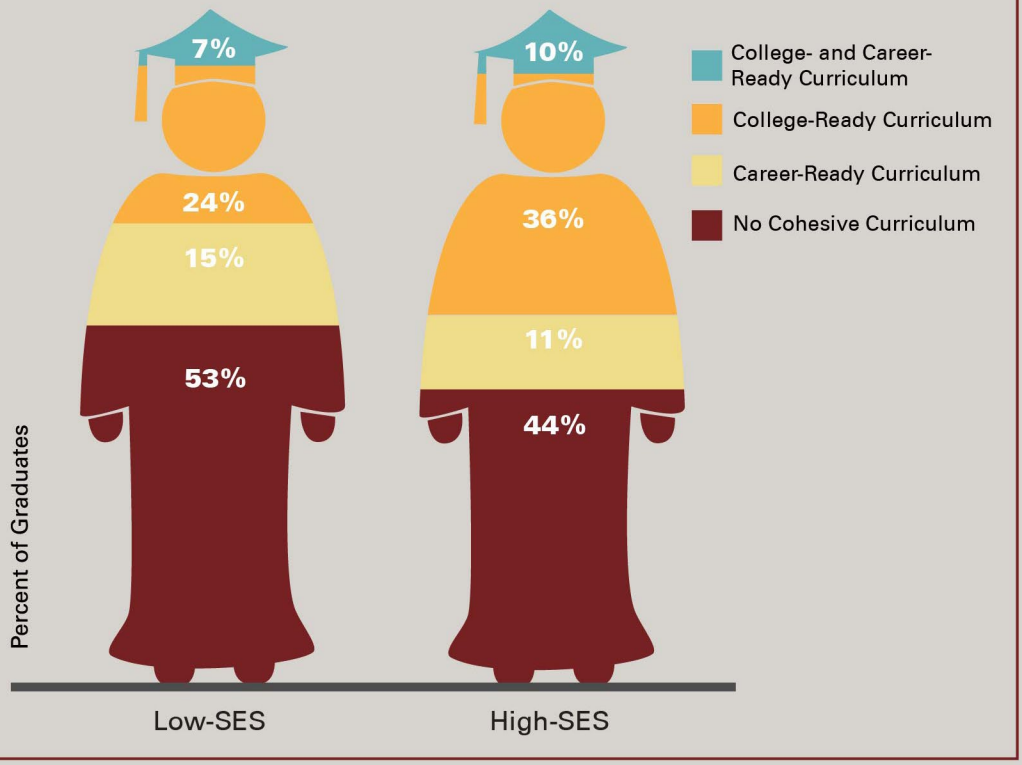


Figure 2b: College- and Career-Ready Course-Taking, by Socioeconomic Status (2013)



Among students who missed only one requirement, math and foreign language were the greatest barriers. About a third of these students missed the math requirement, not because they did not take enough math credits, but because they did not specifically take an algebra II credit.[15] Algebra II is a course that's particularly related to enrollment and success in college.[16] Our data show students often get locked into a math trajectory based on their incoming math placement: Only 41 percent of students who took pre-algebra or lower as ninth-grade students eventually took an algebra II credit.[17] By contrast, 70 percent of students who started out in algebra I and 75 percent of students who started out in geometry eventually reached at least algebra II.

The other major barrier to taking a college-ready curriculum was foreign language: 31 percent of those who missed only one requirement did not take two foreign language credits.[18]

Science was the third most prevalent bottleneck among students who missed only one requirement within the college-ready curriculum. While only 3 percent didn't take three science credits, 16 percent didn't take the combination of biology and chemistry or physics — despite that these are foundational science courses necessary for many postsecondary pathways.

What's more, among students who missed more than one requirement, science was the leading barrier: 81 percent of this group either didn't take enough science credits or didn't take the specific science courses needed to fulfill the college-ready curriculum.

EDUCATOR IMPLICATIONS

Many states don't require students to take the courses that determine eligibility to attend public colleges, which could be contributing to the trends in college-ready course-taking. Foreign language is a good example: It's required by most public colleges, yet most state policies don't require it for graduation.[19] State graduation requirements also vary from two to four science credits, often without specifying content or laboratory status.[20] High school counselors should ensure that students understand the requirements not only for graduation, but also for entry into different postsecondary settings that are aligned with students' goals. Schools can't let students get caught in the gap between qualifying for graduation and falling short of postsecondary preparedness.

Even when coursework is required, the data suggest that many students are not progressing along the math pipeline and don't ultimately reach advanced levels. Attending to the courses students take is important in all subject areas, not just math. For students to master disciplinary content and gain deeper levels of understanding, instruction needs to go deeper, year by year, giving students the opportunity to build on previous knowledge and extend it to new topics, questions, and challenges. And depending on the path after graduation, certain courses may be requirements for entry. For example, students enrolling in a community college nursing program need multiple advanced math and science courses.

SCHOOL-BASED LEVERS FOR CHANGE

- ***Graduation requirements:*** Even if your state or district graduation requirements don't align with those in state colleges, does the school ensure all students take a curriculum that would qualify them for entry?
- ***Postsecondary planning:*** How do counselors and teachers engage students in planning for postsecondary school or training? Do students have plans to help them align their coursework and experiences in school to their future goals?

Just over 1 in 10 graduates complete a career curriculum, but not a college curriculum.

Thirteen percent of graduates completed a three-course career sequence, but not the college-ready course requirements — making this pathway only slightly more common than the college- and career-ready sequence. It is not highly pursued among any group of students, although disadvantaged and white graduates are slightly more likely than advantaged and graduates of color to complete it *(Figures 1, 2a, and 2b)*. Among students who take a career curriculum, the most common career fields are computers and engineering (22 percent) and the trades (21 percent), which include fields like construction, architecture, or manufacturing.

On average, career-but-not-college-ready students took almost seven career technical education (CTE) credits, suggesting they were investing more time than the basic curricular definition. But those courses may have been completed at some expense to academic coursework. While the majority of these students met college-ready requirements in English and social studies, 43 percent missed the math requirement, 54 percent missed the science requirement, and 66 percent fell short in foreign language. Depending on the career path that students are interested in, missing math and science courses could be a serious problem.

One major barrier to achieving career readiness for more students is the number who take disjointed CTE courses. Of students who did not complete a career-ready curriculum, 26 percent completed enough CTE credits to earn a career-ready designation, but those credits were across different career fields.[21] Our definition of career fields is quite broad to begin with, meaning non-completers likely took courses in very unrelated fields.

EDUCATOR IMPLICATIONS

High schools should not curtail career exploration, as it is developmentally appropriate, but staff should think strategically about how to help students link academic and career courses to their postsecondary goals. It is especially important for students to learn about the broad array of careers and not only choose

something that seems interesting, but will foreclose other opportunities later on. Students living in impoverished or rural areas may not know about the variety of careers to choose from and if they do, what is necessary to get there. Many students are also unaware of the academic prerequisites for many postsecondary career pathways. Schools should also be clear about options, choices, and consequences so students don't end up like Tre — thinking they are taking the classes they will need for their postsecondary plans, when, in fact, those classes are not sufficient.

SCHOOL-BASED LEVERS FOR CHANGE

- ***Postsecondary career pathways:*** Has your state or district articulated the requirements for entry into various postsecondary training pathways, and how do your school's offerings and guidance align?
- ***Academic and CTE integration:*** Are CTE teachers expected to integrate academic content, and are academic teachers expected to integrate applied career content? If so, do teachers have the training and capacity to do this well?

Nearly half of graduates do not complete a college- or a career-ready course sequence.

Forty-seven percent of graduates did not complete any cohesive curriculum, making this the most common pathway of all *(Figure 1)*. This pattern is far too common for all groups of students and is particularly problematic among Latino graduates and graduates from disadvantaged families *(Figures 2a and 2b)*. Compared with 45 percent of white and black graduates, 52 percent of Latino graduates didn't take a cohesive curriculum. Similarly, 44 percent of students from more advantaged families didn't take a cohesive curriculum, compared with 53 percent of students from disadvantaged families.

These students are high school *graduates* — meaning they are technically completers, but did not take a cohesive curriculum that culminated in a direction for postsecondary study. On average, they completed 25 credits — fewer credits than graduates in other curriculum groups but still well over the 18 necessary for the college- and career-ready curriculum.

High rates of course failure represent a key contributor to this problem: Overall, the graduating class lost roughly 3.4 million credits to course failures and withdrawals. This represents only those credits lost by those who graduated, not the countless lost among those who dropped out.

But, these lost credits were heavily concentrated among those who did not complete a cohesive curriculum: More than half (54 percent) of these students failed or withdrew from at least one course in high school, compared with only 21 percent of graduates who completed a college- and career-ready curriculum *(Figure 3)*. What's more, nearly 1 in 4 students who did not complete a cohesive curriculum lost *more than* two credits to course failures and withdrawals, compared with just 1 in 50 students who completed a college-and-career-ready curriculum. Students who complete a career-ready course sequence are only slightly less likely to have failed a course as those who did not complete a cohesive curriculum, suggesting this pattern spans a few curricular pathways.

EDUCATOR IMPLICATIONS

Instead of cohesive learning experiences that prepare students for next steps, the data suggest that high schools are prioritizing credit accrual.

Student preparation, interests, and opportunity structures in high schools don't always align naturally, meaning there are no easy solutions. A custom program of study for each student is not realistic (or necessary), nor is training students for a specific job upon graduation. Rather, the challenge is finding ways to provide students with foundational academic content and learning skills while nurturing their interests and more personalized goals.

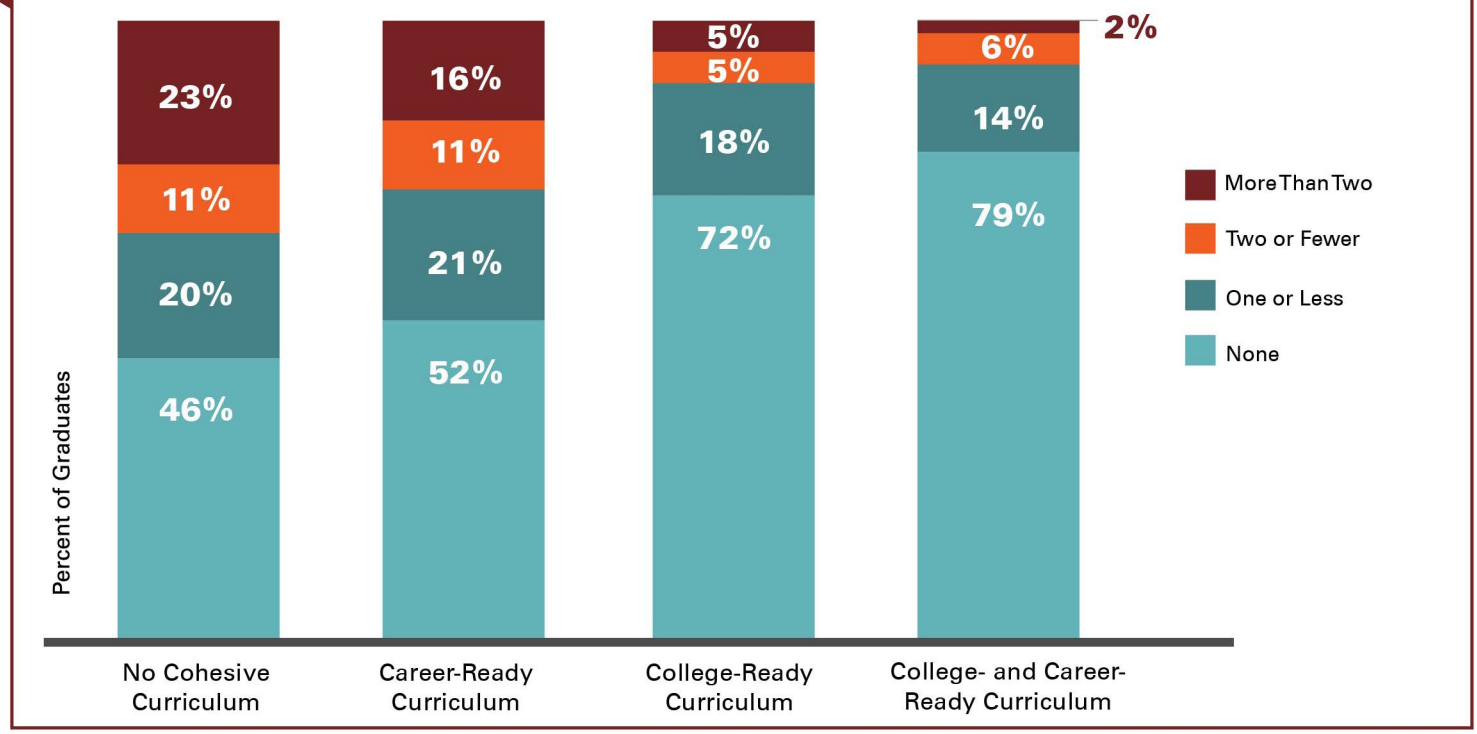
High rates of course failure are a key contributor to this problem. Failure is a well-documented norm in high schools and not only has consequences for course completion and learning, but also student self-perception, efficacy, and motivation.[22] A common response is the development of credit recovery programs, which focus on ensuring students get the credits they need for graduation. But these programs need to be developed in ways that lead to mastery and ensure students have opportunities to reach their learning goals, rather than just accumulate credits.

Alternatively, high schools can develop preventative approaches to course failure by monitoring student performance in real time and providing the instructional and cultural supports that enhance course mastery.[23] Efforts to accelerate learning in middle school and early high school can also help avert some of these patterns. Without these shifts in intervention, schools are likely to see rates of failure increase as schools transition to more rigorous college- and career-ready standards — a level not previously expected of many students.

SCHOOL-BASED LEVERS FOR CHANGE

- ***Course guidance:*** When adults provide guidance to students around course-taking, does it situate credit accrual and graduation as the only goals?
- ***Transcript analysis:*** Are high rates of course failure preventing students from achieving readiness for next steps? If so, are course failures clustered in certain grades, subjects, or courses? And do opportunities to recover credits allow students to progress to more rigorous coursework later on?
- ***Acceleration culture:*** Do students have opportunities early on to accelerate their learning and prevent course-failures from occurring?

Figure 3: Failures and Withdrawals, by Curriculum Type, 2013 Graduates



Note: The graph shows number of lost credits, not lost courses, due to failures. Credits were counted as failures if students' transcripts indicated that they received 0 credits for a course AND received a grade D or lower, not passing, or unsatisfactory.

Mastery gaps are widest among graduates who have completed a college-ready curriculum: 82 percent of white graduates received a 2.5 GPA or higher in their academic courses, compared with 51 percent of black graduates and 63 percent of Latino graduates.

WHO DEMONSTRATES MASTERY?

About 1 in 7 graduates complete a cohesive curriculum but do not demonstrate mastery of that curriculum.

Seat time itself is not sufficient to signify readiness for postsecondary learning opportunities. So to further understand who is college- and/or career-ready, we introduce a minimum GPA of 2.5 (roughly a B- average) in academic and career coursework as an additional indicator of readiness and then reassess how many students are college- and/or career-ready.[24] So, for example, we have considered students to be college-ready if they have completed a college-ready curriculum *and* have a 2.5 GPA or higher in their academic courses, and career-ready if they have completed a career-ready curriculum *and* earned a 2.5 GPA in their career coursework.

When we add this GPA mastery benchmark as an additional requirement, 14 percent of all graduates would no longer be considered college- or career-ready *(Figure 4)* — joining the 47 percent of students who never took the college- or career-ready courses in the first place.

Graduating with demonstrated mastery is considerably less common among students of color and disadvantaged students. For example, among students who completed a career-ready curriculum, 85 percent of white students

earned a 2.5 GPA or higher in their career courses, compared with only 72 percent of black students and 76 percent of Latino students. Similarly, 87 percent of more advantaged students who took a career-ready sequence met this mastery benchmark, compared with 75 percent of students from disadvantaged backgrounds *(Figure 5a)*.

Mastery gaps are widest among graduates who have completed a college-ready curriculum: 82 percent of white graduates received a 2.5 GPA or higher in their academic courses, compared with 51 percent of black graduates and 63 percent of Latino graduates (*Figure 5b*). Among more advantaged graduates who completed a college-ready curriculum, 80 percent received a 2.5 GPA, whereas 64 percent of disadvantaged graduates met this benchmark.

EDUCATOR IMPLICATIONS

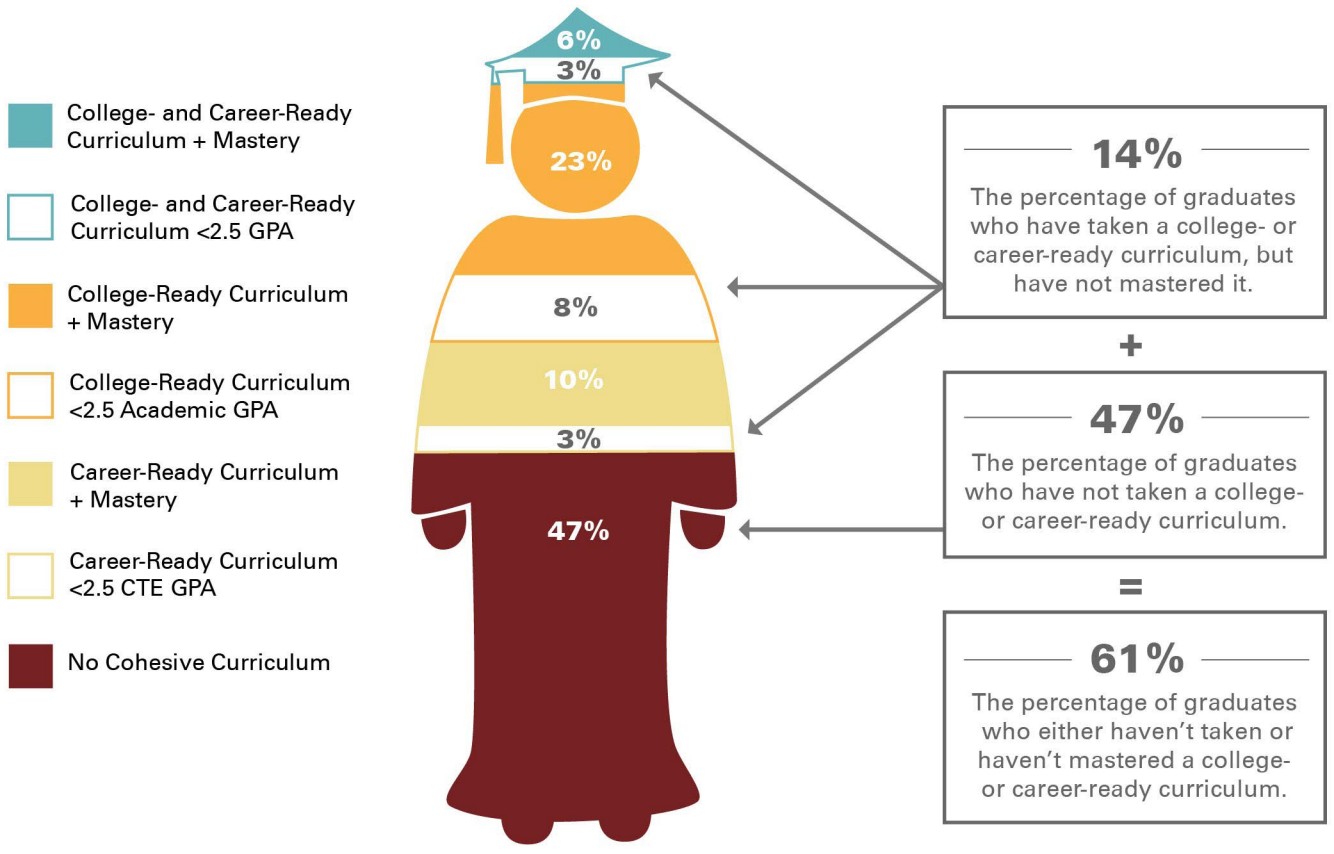
Course grades capture a complex mix of performance metrics and behaviors, many of which are not totally transparent from a GPA alone. Student effort certainly plays a role, as do teacher policies and practices. Ultimately though, grades represent demonstrated mastery, which is determined by how educators instruct, support, and engage their students.

GPA gaps within curriculum categories suggest that students aren't being afforded equitable preparation, instruction, or support to master material in their courses. It seems seat time and scheduling have been the emphasis, rather than quality of coursework, to ensure that instruction and support are leading to content mastery. Yet mastery, not seat time, is what sets graduates up for success in postsecondary settings.

SCHOOL-BASED LEVERS FOR CHANGE

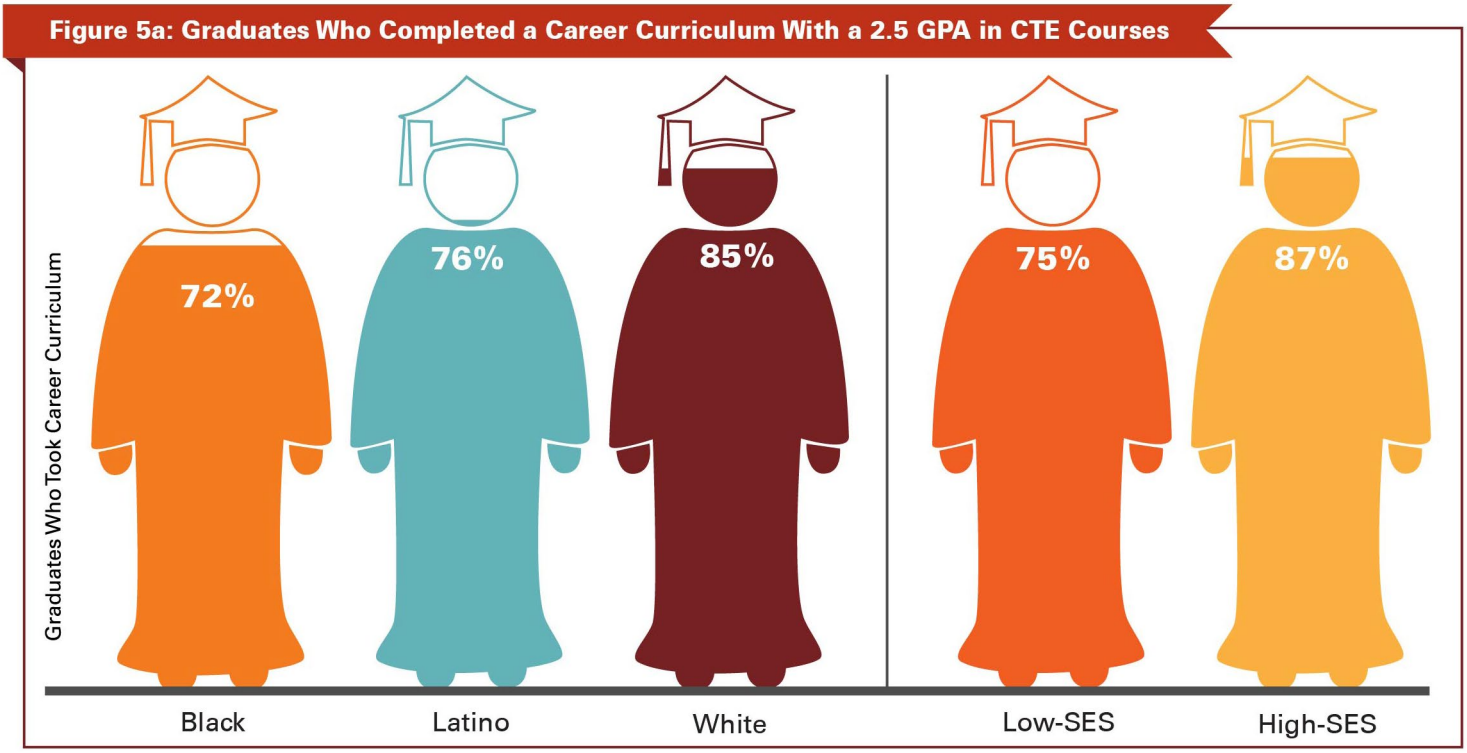
- ***Grading policy:*** Does your school have a uniform grading policy? Is this monitored to assure consistency across teachers and subjects? What is your school's policy on course failure?
- ***Educator development:*** Are teachers supported to provide rigorous and engaging instruction regardless of content area?

Figure 4: Curriculum Type and Mastery, 2013 Graduates



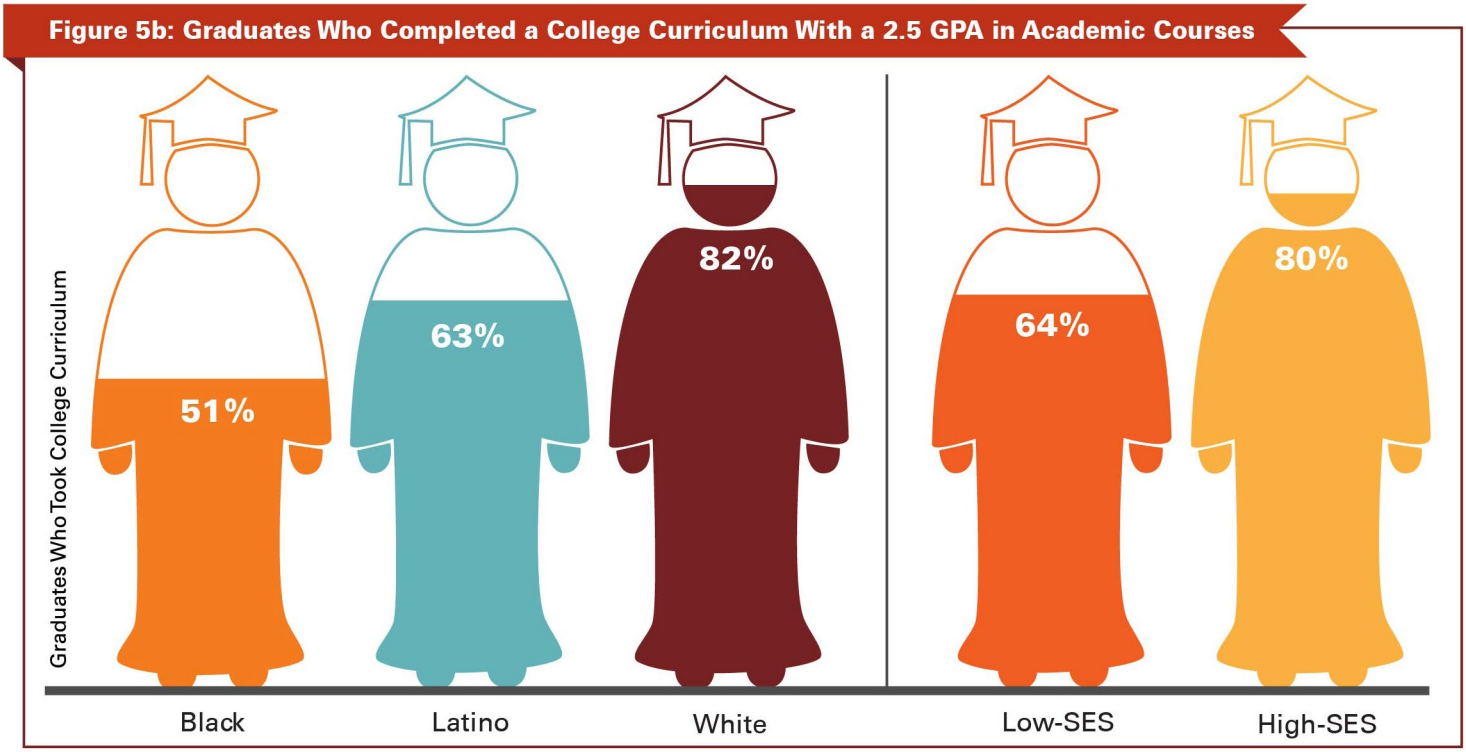
Note: Mastery in the career curriculum is defined here as receiving a 2.5 GPA or higher in all CTE courses. Mastery in the college-ready curriculum is defined here as receiving a 2.5 GPA or higher in all academic courses. Mastery in the college- and career-curriculum is defined here as meeting both GPA benchmarks. The percentages in the college- and career-ready curriculum categories do not sum to the total percent of students completing this curriculum (8 percent) because of rounding.

Figure 5a: Graduates Who Completed a Career Curriculum With a 2.5 GPA in CTE Courses



Note: This graph includes both students who completed only a career-ready curriculum and students who completed a college-and-career curriculum.

Figure 5b: Graduates Who Completed a College Curriculum With a 2.5 GPA in Academic Courses



Note: This graph includes both students who completed only a college-ready curriculum and students who completed a college-and-career curriculum.

WHAT ABOUT STUDENT ASPIRATIONS?

The majority of students aspire to a college degree, despite different curriculum experiences.

The fact that only half of graduates take a cohesive college-or-career curriculum — and fewer still master one — could represent genuine indecisiveness among students around postsecondary planning. But data about students' postsecondary aspirations suggest just the opposite: The vast majority of graduates expect to earn a postsecondary degree. This is true even among students who have not accessed a cohesive high school curriculum.

About 6 in 10 graduates who do not take a cohesive curriculum while in high school expect to at least earn a bachelor's degree, and an additional 2 in 10 expect to pursue either a postsecondary certificate or an associate degree *(Figure 6)*. Together, this is only slightly fewer than the 9 in 10 graduates who take a college-ready curriculum expecting to earn some postsecondary degree. What's more, students report these expectations at the end of their junior year, suggesting that their schools have — either explicitly or indirectly — communicated that their diploma will signify preparation for college enrollment, even if the information on their transcripts suggests otherwise.[25]

On the other hand, course-taking patterns do seem to signal a bit of intentionality, at least for a small group of graduates. For example, graduates who take a career-ready course of study are more likely than graduates in other groups to say they expect to pursue a certificate or an associate degree, suggesting that part of this group may plan to enroll in a program aligned with their prior studies and interests. The question is whether they are prepared with the foundational academic skills that are typically required in such programs.

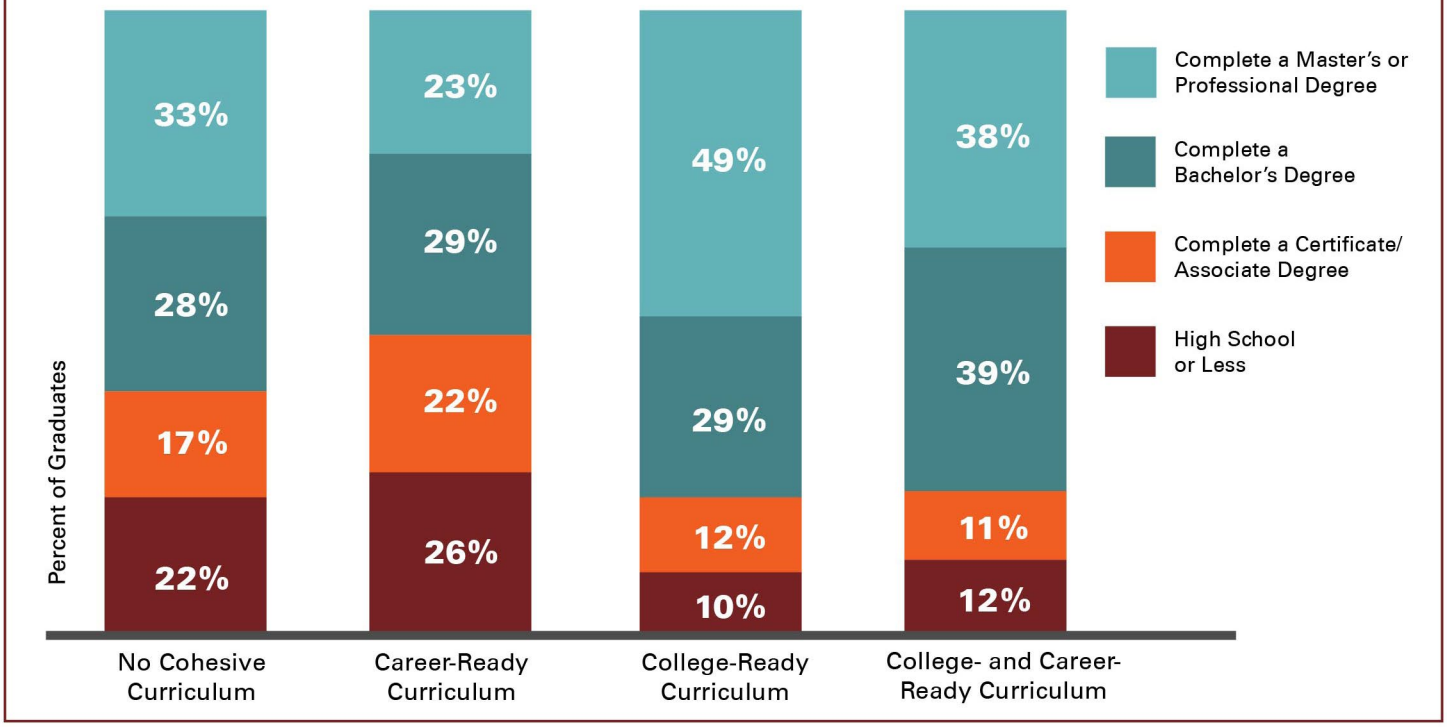
EDUCATOR IMPLICATIONS

High school graduates view postsecondary education as their best option. Helping students to connect their courses and learning with what they want to do after high school is an essential step in achieving true readiness. Students need to know what they must achieve (e.g., grades, courses, experiences) for various options after high school. Educators should support students' aspirations, but they should also be clear with students about the foundational knowledge, skills, and dispositions that are necessary for all postsecondary pathways. When students experience high expectations, receive support to reach their goals, become active partners in decisions, and see their learning as important and applicable, they are apt to be more motivated and engaged.

School-Based Levers for Change

- ***Postsecondary alignment:*** Do guidance counselors know and understand the entry requirements for a diverse set of postsecondary pathways? Do teachers know and understand them for their content areas? Beyond the entrance requirements, do they know what is necessary to be placed into credit-bearing courses?
- ***Graduation expectations:*** Are students encouraged to take a foundational academic curriculum regardless of their postsecondary aspirations? What, if any, parameters exist for students to deviate from a college-ready curriculum?

Figure 6: Educational Expectations, by High School Curriculum



COLLEGE AND CAREER READINESS: STILL MORE RHETORIC THAN REALITY

Over and over again, educators and policymakers alike mouth the mantra: ALL kids ready for college and careers. But there remains a giant gulf between that rhetoric and the reality of today's high school graduates. Among recent graduates, fewer than 1 in 10 have taken a foundational set of courses they'd need to be both college- and career-ready. And almost half completed neither a college-prep nor a career-prep course sequence. Much like descriptions of the "shopping mall high school" back in 1985, our data show that today's students are still meandering through lots of disconnected courses that get them to graduation but nowhere else.[26]

Our data highlight some clear barriers to changing those patterns, including high rates of course failure that can crowd out other options for knowledge and skill development. And far too few students of color or from disadvantaged backgrounds are mastering content within their curricular pathway.

Despite these problems, most students aspire to a college degree. Importantly, most students *need a postsecondary degree or credential*. If they are to realize that goal, however, schools need to do a much better job at helping all of our students understand what is necessary to be fully prepared for credit-bearing coursework in college. For most students, this means an academic foundation *plus* a content focus aligned with their interests. Yet most students are not taking a career sequence in high school that would provide a foundation for further study, suggesting we do not have broad agreement about what career readiness means for high school students and how to accomplish it.

Overall, our findings reflect a focus on credit accumulation, rather than a focus on true readiness for life after graduation. This shortsightedness has long-term repercussions for students like Tre, who flounder in remedial courses once they get to college or struggle to find personally relevant and sustainable work. Since dropping out of college, Tre — once ecstatic to be the first in his family to go to college — now bounces around retail and service jobs, as they go in and out of season.

Still, these findings do not mean that our education system should revert back to tracking students into easy and hard pathways an adult may think are best suited to students' futures. College and career readiness is a new expectation that reflects the reality and demands students will face. It requires significant change to school structures, culture, and instruction to engage students in relevant work that prepares them for postsecondary study aligned with their interests. It's a huge shift for high schools, but a critical one if our education system is to groom students like Tre to pursue their goals and aspirations after graduation. ■

NOTES

1. Out of respect for student privacy, Tre is a pseudonym.

2. Anthony P. Carnevale, Tamara Jayasundera, and Artem Gulish, "Good Jobs Are Back: College Graduates Are First in Line," (Washington, D.C.: Georgetown Center on Education and the Workforce, 2015), https://cew.georgetown.edu/cew-reports/goodjobsareback/.

3. (1) U.S. Department of Education, "U.S. Graduation Rate Hits New Record High," February 12, 2015, http://www.ed.gov/news/press-releases/us-high-school-graduation-rate-hits-new-record-high-0; (2) U.S. Department of Education, *Digest of Education Statistics: 2013*, NCES 2015-011, Chapter 3, (Washington D.C.: National Center for Education Statistics, May 2015), http://nces.ed.gov/programs/digest/d13/ch_3.asp.

4. Xianglei Chen, *et al*, "Academic Preparation for College in the High School Senior Class of 2003-04," NCES 2010-169, (Washington, D.C.: National Center for Education Statistics, January 2010), https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010169.

5. Peter D. Hart Research Associates and Public Opinion Strategies, "Rising to the Challenge: Are High School Graduates Prepared for College and Work? A Study of Recent High School Graduates, College Instructors, and Employers," (Washington, D.C.: Achieve, Inc., February 2005), http://www.achieve.org/files/pollreport_0.pdf.

6. David T. Conley and Charis McGaughy, "College and Career Readiness: Same or Different?" *Educational Leadership* 69, no. 7 (April 2012): 29-34; and David T. Conley, "Defining and Measuring College and Career Readiness," (presentation, Council of Chief State School Officers Annual Policy Forum, Phoenix, November 17-19, 2011), http://programs.ccsso.org/projects/Membership_Meetings/APF/documents/Defining_College_Career_Readiness.pdf.

7. We have limited our sample to students who received a high school diploma from a public school by 2013. Students were removed if they had fewer than three years of transcript data available. Our data are representative of roughly 3.2 million ninth-graders who graduated from public high school by fall 2013.

8. Credits taken prior to ninth grade are not counted toward this definition. Students who took a full credit of integrated math were counted as having taken algebra II. Course credits have been standardized into Carnegie units, such that one Carnegie credit is equivalent to 120 hours of class time.

9. Peter A. Conforti, "What is College and Career Readiness? State Requirements for High School Graduation and State Public University Admissions," *Pearson Bulletin* 23 (May 2013), http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_23CRc_051413.pdf

10. Career categories were based on a course classification system known as SCED (School Courses for the Exchange of Data) and aligned with the 16 Career Clusters designed by the Office of Career, Technical, and Adult Education. Some of the categories have been collapsed in order to maximize alignment, but these broader categories also make it easier to meet the career-ready requirements.

11. Saul Geiser and Maria Veronica Santelices, "Validity of High-School Grades in Predicting Student Success Beyond the Freshman Year: High-School Record Versus Standardized Tests as Indicators of four-Year College Outcomes," (Berkeley, California: Center for Studies in Higher Education, 2007), http://files.eric.ed.gov/fulltext/ED502858.pdf.

12. All results have been weighted (using W3W1STUTR) to make the findings representative of the student population. All reported differences are significant unless otherwise noted, using a p-value of 0.05 to determine significance.

13. Exact percentages are 9 percent for white and black students and 7 percent for Latino students. These differences are not statistically significant.

14. The difference rounds to 14 percentage points.

15. Of students who missed one requirement, 34 percent missed the math requirement. Two percent did not take enough math credits, and 32 percent missed the algebra II requirement. Students who took a full credit of integrated math were counted as having met this requirement.

16. Clifford Adelman, "The Toolbox Revisited: Paths to Degree Completion from High School Through College," (Washington, D.C.: U.S. Department of Education, February 2006), https://www2.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf.

17. For this analysis, we've examined the highest math course the student took in ninth grade.

18. Of students who missed only one requirement, 29 percent took fewer than two foreign language credits, whereas only 2 percent took courses in different foreign languages.

19. Peter A. Conforti, "What is College and Career Readiness? State Requirements for High School Graduation and State Public University Admissions," *Pearson Bulletin* 23 (May 2013), http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_23CRc_051413.pdf

20. "Closing the Expectations Gap: 2014 Annual Report on the Alignment of State K-12 Policies and Practice with the Demands of College and Careers," (Washington, D.C.: Achieve, Inc., January 2015), http://www.achieve.org/publications/closing-expectations-gap-2014. Note that a few local control states technically require no credits, as districts are responsible for making decisions related to graduation requirements.

21. This includes students who took the college-ready curriculum or no cohesive curriculum.

22. Camille A. Farrington, *Failing at School: Lessons for Redesigning Urban High Schools*, (New York, New York City: Teachers College Press, 2014).

23. Melissa Roderick, *et al*, "Preventable Failure: Improvements in Long-Term Outcomes When High Schools Focused on the Ninth Grade Year," (Chicago, University of Chicago Consortium on Chicago School Research, April 2014), https://consortium.uchicago.edu/publications/preventable-failure-improvements-long-term-outcomes-when-high-schools-focused-ninth.

24. For measures of college readiness, we've examined students' core GPAs, which include English, math, social studies, and science courses. This GPA is not perfectly aligned with our college-ready curriculum measure, as it does not include foreign language courses, but it provides a proxy measure of academic course mastery. For measures of career readiness, we've examined students' GPA in CTE coursework. These are the courses that make up all CTE concentrations, so they could include courses that comprise a career-ready sequence as well as other CTE courses that students may have taken. We selected a GPA of 2.5 to measures average performance, but prior research suggests that a 3.0 is even more aligned with college persistence.

25. Aspirations are determined from a survey question asking how far in school students think they'll get. For a small number of students who did not respond to this question in their junior year but responded in their freshman year, their earlier response has been imputed and reported here.

26. Arthur Powell, Eleanor Farrar, and David Cohen, *The Shopping Mall High School: Winners and Losers in the Educational Marketplace*, (Boston, Houghton Mifflin, 1985).

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The Education Trust promotes high academic achievement for all students at all levels, pre-kindergarten through college. We work alongside parents, educators, and community and business leaders across the country in transforming schools and colleges into institutions that serve all students well. Lessons learned in these efforts, together with unflinching data analyses, shape our state and national policy agendas. Our goal is to close the gaps in opportunity and achievement that consign far too many young people — especially those who are black, Latino, American Indian, or from low-income families — to lives on the margins of the American mainstream.

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