STATE EXPECTATIONS FOR GRADUATION MATTER – AND DIFFER – MORE THAN YOU THINK

The national high school graduation rate has been increasing annually since 2011, setting new records each year. However, other measures of high school graduates' academic preparation have not seen corresponding gains; performance on the 12th grade National Assessment of Educational Progress (NAEP) in reading and mathematics has essentially remained flat, and college remediation rates are still high – particularly for Black and Hispanic students.[1]

Additionally, high school graduates, college professors, and employers acknowledge gaps in students' readiness for life after high school. Forty-five percent of recent high school graduates reported that they lack essential academic skills necessary to succeed in their current context.[2] A majority of college instructors reported that fewer than 50 percent of recent high school graduates were adequately prepared in mathematics and writing. And 61 percent of employers reported that they require or request recent high school graduates to obtain additional education or training to make up for gaps in their preparation. These results are consistent with findings from similar surveys Achieve conducted in 2004.

Research suggests that students who take a rigorous course of study in high school are better prepared for postsecondary success.[3] And while participation in rigorous courses has increased over the past several decades, there is plenty of room for improvement. A recent National Center for Education Statistics (NCES) analysis indicates 28 percent of students did not take a mathematics course in twelfth grade and 45 percent of students did not earn credit in science in the twelfth grade.[4] Further, access to advanced mathematics and science courses is unequally distributed. Recent data from the Office of Civil Rights show that high schools with more than 75 percent Black and Latino enrollment are less likely to offer advanced mathematics and calculus courses, as well as chemistry and physics.[5] Many students in these schools are denied an opportunity to be well prepared in mathematics and science.

Amid a number of controversies in which districts awarded diplomas to students who may not have met all of the requirements for one, people are questioning the meaning of the diploma. These widely publicized scandals might lead some to believe that many graduates are poorly prepared because high school graduation standards are not being adequately enforced. This may be true in a small number of cases, but in many states, the expectations for graduation are simply too low. A number states have raised graduation requirements over the past decade, but too few require or even encourage students to take a rigorous core academic curriculum that prepares students for postsecondary education and careers.[6]

In most states, course-taking requirements for high school graduation are a matter of state policy, set by the state board of education or the state legislature. They are not a silver bullet,[7] but they can be a powerful lever for increasing the number and diversity of students who complete a college- and career-ready (CCR) course of study. However, all too often they are not. In this report, Achieve looks at some bright spots where state graduation requirements are established in a manner that helps accomplish this goal.

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[1] Twenty-four percent of first-year college students are placed into remedial mathematics courses, 12 percent in remedial reading courses. In two-year colleges, 61 percent of Black students and 50 percent of Hispanic students take remedial mathematics; 49 percent of Black students and 41 percent of Hispanic students take remedial English. Complete College America, 2018. https://completecollege.org/data-dashboard/

[2] Achieve, 2015. https://www.achieve.org/rising-challenge-survey-1

[3] Students who complete three years of rigorous mathematics are five times as likely to meet ACT's benchmark score for college readiness in mathematics than those who have completed a less demanding course sequence. Students who complete a three-course sequence in science are 2.5 times as likely to meet the ACT science benchmark. ACT, Condition of College & Career Readiness 2017, https://www.act.org/content/act/en/research/condition-of-college-and-career-readiness-2017.html. Achieve's survey of recent high school graduates found that 71 percent of college students who took mathematics beyond algebra II felt extremely or very well prepared, as did the same percentage of graduates who did not attend college. Only about half of those who took less demanding mathematics reported they felt well prepared.

[4] Brown, J., Dalton, B., Laird, J., and Ifill, N. (2018). Paths Through Mathematics and Science: Patterns and Relationships in High School Coursetaking (NCES 2018-118). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, DC.

[5] U.S. Department of Education Office for Civil Rights, 2018. https://www2.ed.gov/about/offices/list/ocr/docs/stem-course-taking.pdf

[6] View each state's graduation options at https://highschool.achieve.org.

[7] At a minimum, they must be accompanied by a rigorous curriculum and high quality, engaging instruction in K-12.

Setting High School Graduation Requirements

Nationally, states offer more than 100 different high school graduation options for students. Although often billed as a single, statewide diploma, many states still have different sets of expectations for students in order to complete high school, depending on the option students choose or on the options made available to them. Half of states offer at least two graduation options for students, with a few offering students five or more options. States may offer discrete diplomas (i.e., the state has multiple high school diplomas), or the state may present its options as endorsements, designations, or different curriculum requirements on top of a single diploma.

States have a variety of purposes in setting high school graduation requirements: to clarify the expectations for students exiting high school, to ensure the high school diploma signals that the student has met those expectations, to reinforce the need for all students to have access to rigorous content, to align the K–12 system with postsecondary education and career expectations, and many others. Recent efforts by states to create multiple pathways to graduation or to allow students to earn endorsements in specific content areas such as Career and Technical Education (CTE) or Arts, among others, recognize that not all students need to pursue the same path and not all end at the same destination. However, these changes have also led to a more complicated, and sometimes messy, high school graduation landscape that is becoming more confusing for students and families to understand and navigate.

Achieve and other organizations have paid significant attention to the alignment of states' diploma options to states' CCR standards and/or to college admissions requirements. Often overlooked in these analyses is the impact of how states structure the fundamental decision students and their families must make regarding the path to graduation they will pursue. These policy design differences in states can have a profound impact on individual students' opportunities for college and career success as well as on the number and diversity of students who take the courses that will prepare them for postsecondary education.

States have adopted diverse policy structures for graduation requirements. Some states have traditional units or courses students must take prior to graduation. Some states have competency-based requirements, basing graduation requirements on student proficiency or mastery of standards rather than on particular courses. Some states have created specific pathways to graduation through a combination of courses, student experiences, and demonstrations of what they know and can do. Some states have a combination of these approaches. And many states are in the process of examining their current graduation requirements and thinking through how they may need to change to better meet student needs and offer more personalized, flexible experiences for students. Achieve has a long history of tracking state graduation requirements and working with states to ensure that states adopt high expectations for all students. In this current environment, we analyzed multiple approaches to state graduation requirements and the implications for students. In this brief, we focused on those states that provide multiple ways to earn a high school diploma.

Three key policy and implementation questions merit examination:

- Has the state, including both the K-12 and postsecondary systems, defined a CCR course of study?
- Is the CCR course of study required for earning a high school diploma? If not, does the state recognize those students who complete it with a special high school diploma or diploma endorsement?
- Do students and their families have information about where the diplomas (or endorsements, pathways, etc.) lead upon completion? Do they have the right information to make decisions on which option to pursue?

The states included in the analysis below, like the vast majority of states, define their high school graduation requirements with respect to seat time and credit units. A growing number of states are exploring competency-based approaches, something Achieve has long encouraged and supported.[8] States that go down this path will need to make the same decisions that states with more conventional approaches to high school graduation requirements must make. They too must: define the knowledge skills and competencies students must demonstrate to be adequately prepared for postsecondary

[8] See https://www.achieve.org/CBP to learn more about Achieve's work to advance and support competency-based pathways to college and career readiness.

success; determine whether all students must demonstrate them in order to earn a diploma, or whether all students will be provided with several academic pathways to graduation; and decide how the choices for students and families will be structured.

State-Defined College- and Career-Ready Graduation Options

Table 1 below classifies the state policy structure for graduation options for the Class of 2017. It is worth noting that in all states, districts may decide to adopt more rigorous graduation course requirements than the state; therefore, some local districts may hold students to a mandatory or default CCR course of study to graduate.[9]

Table 1: State Approaches to Graduation Requirements Policies

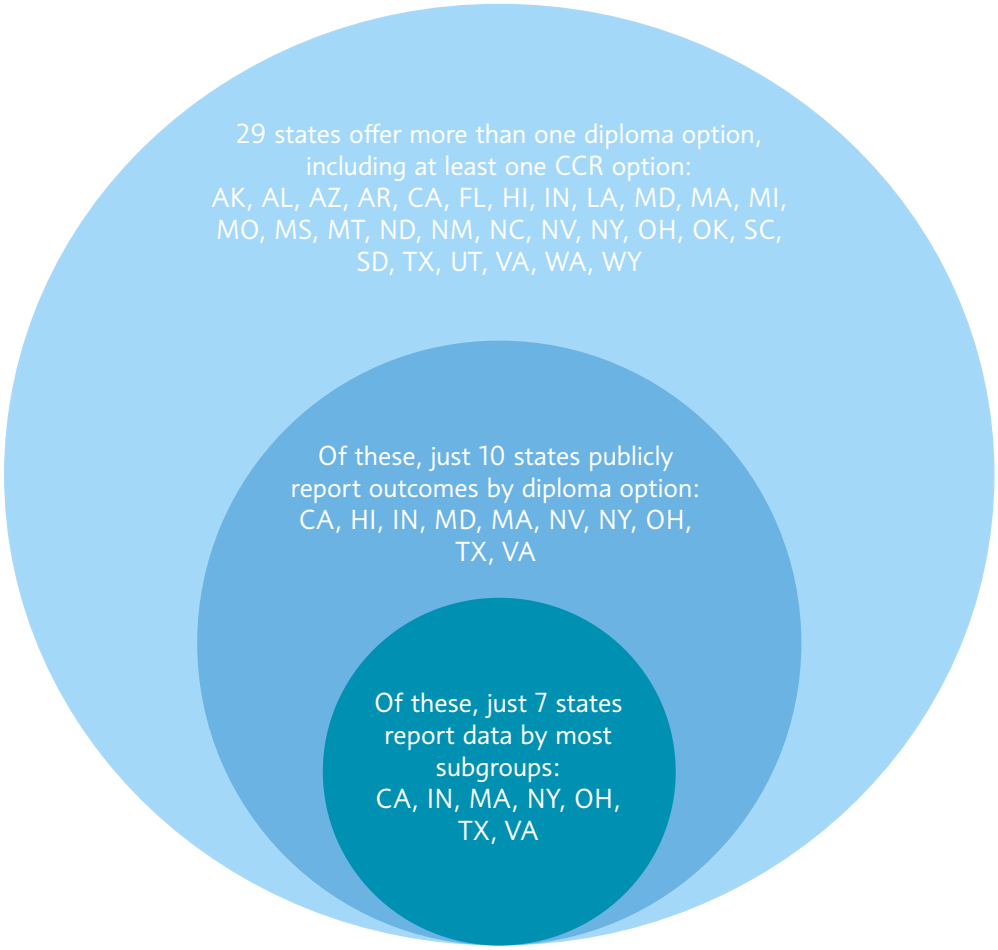
Graduation Requirements Policy Design	Policy Details	How Many States?	Which States?
CCR diploma is the only diploma	By definition, students in these states must complete a CCR course of study in ELA and mathematics in order to graduate. These are the states with "Mandatory" CCR graduation requirements.	7 states and DC	DC, DE, GA, KY, MN, NE, TN, and WV
Multiple diplomas/ endorsements/ pathway options, but at least one requires a CCR course of study	Students are expected to complete CCR course requirements in ELA and mathematics. Students may opt out of course of study or individual course and pursue less demanding coursework. These are the states with "Default" CCR graduation requirements.	14 states	AL, AZ, AR, IN, MI, MS, NM, NC, OH, OK, SD, TX, UT, and WA
	Students must "opt-in" to a CCR course of study. The burden is placed on students and/or districts to ensure access to CCR courses in ELA and mathematics for all students. These are the states with "Opt-In" CCR graduation requirements.	15 states	AK, CA, FL, HI, LA, MD, MA, MO, MT, ND, NV, NY, SC, VA, and WY
No CCR diploma/ endorsement/ pathway available	Students are required to take a state-defined set of requirements that is below the CCR threshold in ELA and mathematics or not specific to which courses students must take to graduate. These are the states with "Minimum" graduation requirements.	14 states	CO, CT, ID, IL, IA, KS, ME, NH, NJ, OR, PA, RI, VT, and WI

[9] All states have adopted college- and career-ready standards in math and ELA, but this does not mean that the states require students to take a CCR course of study that delivers these standards to graduate. States that expect students to complete courses aligned to their CCR standards most typically require three years of rigorous mathematics to learn the content of the standards – whether in traditional mathematics courses (e.g., two years of Algebra and one year of geometry), capstone experiences, or applied/technical courses with rigorous embedded mathematics – and four years of grade-level English.

Accessing Information: Transparency and Public Reporting of Student Graduation Options

Achieve also examined whether critical information about the state's graduation options was clear and transparent. Only 10 of the 29 states with more than one diploma/pathway/endorsement option report student participation rates within each of these state-defined options. Of those 10, only seven disaggregate these data for key subgroups of students—and should be commended for reporting more than just an overall "graduation rate" when multiple graduation options are offered. With so many alternatives and graduation options for students in these states (in the form of modifications, opt-outs, endorsements, pathways), very little is known about which students graduate having taken courses that deliver the CCR standards – and whether disparities exist across racial and ethnic lines – unless states report which students are completing which set of requirements.

Figure 1: Most States Do Not Report Which Students Pursue Which Diploma Option



From Policy Design to Implementation: A Look at Student Graduation Rates by Policy Type

Achieve looked at state approaches to designing high school graduation requirements, particularly those states that offer multiple diploma options, endorsements, or pathways. In states where multiple graduation options were offered, we also looked at any publicly reported data on the representation of subgroups of students within each option. Specifically, we analyzed the number and diversity of graduates who completed a state-defined CCR graduation option wherever data were available. Among the states with multiple graduation options, seven states (California, Indiana, Massachusetts, New York, Ohio, Texas, and Virginia) should be recognized for providing transparency about the number of students and subgroups of students completing a diploma that requires a CCR course of study; they are few and far between. For the Class of 2017, these states' approaches to diploma offerings and the resulting student outcomes can be found in Table 2 on the following page. An additional seven states — Delaware, Georgia, Kentucky, Minnesota, Nebraska, Tennessee, and West Virginia — and the District of Columbia have mandatory CCR graduation requirements for all students. These states' graduation rates should be equivalent to the numbers of students graduating having completed a CCR course of study. See Appendix A for graduation rate outcomes in these states.

Table 2: 2017 College- and Career-Ready Graduation Rates by Policy Type*

Diploma/Course of Study Name	Percent of Graduates Completing CCR Diploma/Endorsement/Pathway/Courses of Study										
	All Students	Am. In./AK Native	Asian	Black	Hispanic	NH/PI**	White	Two or More Races	Low Income	English Learners	SWD
(A) CCR Default States *(All students expected to complete CCR course requirements in ELA and mathematics, though students may have ability to opt out and pursue a less demanding set of requirements.)*											
Indiana Core 40 and Core 40 with Honors Diploma	89%	86%	96%	86%	88%	91%	89%	87%	83%	NR	NR
Texas Distinguished Achievement and Recommended High School Program[10]	87%	82%	96%	82%	88%	85%	88%	88%	84%	82%	27%
(B-1) CCR Opt-in States *(Burden placed on students to choose and/or districts to ensure access to CCR courses in ELA and mathematics for all students.)*											
California Readiness Curriculum a-g	47%	29%	74%	36%	39%	38%	52%	50%	39%	10%	NR
Hawaii HS Diploma with any Honors	25%	Not reported									
University of Maryland Course Requirements	52%	Not reported							41%	27%	23%
MassCore	81%	76%	77%	64%	71%	90%	86%	81%	71%	56%	72%
Nevada Advanced Diploma	29%	Not reported									
(B-2) CCR Opt-in States with Assessment Requirements *(Burden placed on students to choose and/or districts to ensure access to CCR courses in ELA and mathematics for all students. Students must also achieve certain benchmarks on state or national assessments.)*											
New York Regents Diploma with Advanced Designation	41%	28%	61%	17%	23%	***	52%	36%	26%	4%	6%
Ohio Honors Diploma[11]	19%	8%	47%	5%	11%	***	21%	14%	7%	2%	1%
Virginia Advanced Studies Diploma	59%	49%	80%	43%	49%	50%	65%	62%	38%	32%	14%

Table Notes: Values have been rounded to the nearest whole number. The denominator is graduates, except in Hawaii and Nevada where the denominator is completers. New York, Ohio, and Virginia denominators were adjusted from the 9th grade cohort to graduates for consistency with the other states.
*Class of 2017 data is presented where available. In the case of Ohio and Texas, the most recent data are for the Class of 2016.
**Native Hawaiian/Other Pacific Islander
***New York and Ohio include Native Hawaiian/Other Pacific Islander students as part of Asian subgroup reporting.

[10] In 2013, the Texas Legislature passed HB 5, which replaced the CCR-level Recommended High School Program with the Foundation High School Program as the default course of study, which is not at the CCR level. Beginning in 2014–15, students entering grade 9 were defaulted into the courses to complete the curriculum requirements for the Foundation High School Program and at least one "endorsement." The Class of 2017 was given the option of continuing with one of the current graduation programs, so for this analysis Texas is considered a "CCR default" graduation requirements state.
[11] For the Class of 2017, Ohio defaulted students into a CCR course of study with a personal modification opt-out for Algebra II but does not report student outcomes data for this graduation option. Ohio offers a more rigorous Honors Diploma; data for the students earning this diploma are included.

The Structure of Graduation Requirements Policies Matter

States' reporting of student graduation outcomes suggests that when states offer both CCR and non-CCR diploma options, the policy design of how students choose among those options matters. Based on the limited number of states reporting graduation outcomes for students and subgroups, states that have a default CCR diploma (Group A) typically see a larger share of graduates completing the CCR option (88 percent) than Opt-in states (Group B-1, 47 percent). These findings are unsurprising, as the CCR graduation option in the Opt-in states is voluntary and a more rigorous option than the minimum graduation requirements in the state. It is the student's responsibility to elect to pursue the CCR option, which adds an extra barrier to completion of the CCR course of study that is not present in states with a default CCR diploma.

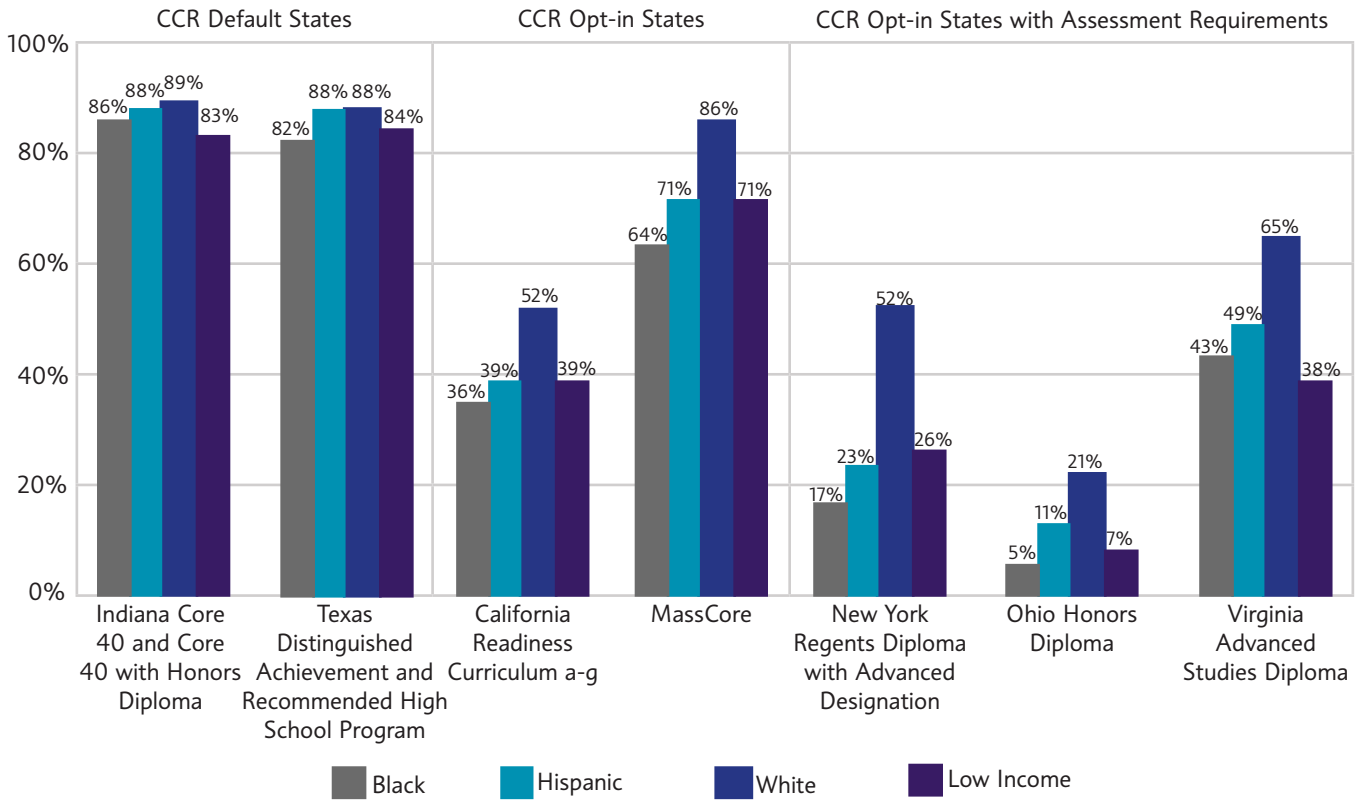
Further, completion of a CCR option is lower in states with an Opt-in policy and additional testing requirements (Group B-2, 40 percent), expecting students to achieve certain benchmarks on state or national assessments. In CCR Opt-in states with assessment requirements, the difference in the rigor of the CCR option compared to non-CCR options may be exacerbated, lowering CCR diploma completion rates.

Table 3: Average Rate of CCR Course of Study Completion by Policy Design

Graduation Requirements Policy Design	Average Rate of CCR Completion
(A) CCR Default States	88%
(B-1) CCR Opt-in States	47%
(B-2) CCR Opt-in States with Assessment Requirements	40%

In addition, states that place students into a CCR diploma option by default, as opposed to an Opt-in CCR option, see a larger share of Black and Hispanic students earning the CCR diploma, and smaller (or nonexistent) gaps in the rate of CCR diploma completion by race, ethnicity, and income (see Figure 2 below). For example, in Default states, the gap between Black students and White students completing CCR diploma requirements is three percentage points in Indiana and six percentage points in Texas. The gap between Hispanic students and White students is one percentage point in Indiana. And in Texas, there is no gap. In contrast, in Opt-in states, the gaps between Black students and White students are 16 (California) and 22 (Massachusetts) percentage points, respectively. These gaps are as large, or even more pronounced, in CCR Opt-in states with additional assessment requirements. There is a 35 percentage-point gap between Black students and White students earning the New York Regents Diploma with Advanced Designation, a 16 percentage-point gap between Black students and White students earning the Ohio Honors Diploma, and a 22 percentage-point gap between Black students and White students earning the Virginia Advanced Studies Diploma.

Figure 2: Rates of CCR Course of Study Completion by Policy Design



Indiana's public reporting of student postsecondary outcomes by high school diploma type provides a helpful and more robust look at the impact of the policy design of state graduation requirements and suggests that graduation requirements from high school matter for postsecondary readiness. Remediation rates of graduates who earned Core 40 diploma (the state's Default CCR option) are 30 percentage points lower than the rates among students who earned the state's General Diploma (a non-CCR option).[12] Remediation rates for all students, regardless of race/ethnicity, are also lower among students who earned Core 40 than the General Diploma. Just three percent of students who earn an Honors Diploma, the most rigorous option in the state, require remedial coursework. Preparation matters, and rigorous high school pathways aligned to CCR better prepare students for college level coursework. No other state with both CCR and non-CCR high school diploma options reports postsecondary remediation rates by the type of diploma or course of study a student takes in high school. That said, Indiana's data suggest that states with multiple graduation options should look for ways to encourage greater numbers of students to participate in a diploma option aligned to college and career readiness, as it could improve overall rates of postsecondary readiness.

[12] https://www.in.gov/che/files/2017%20Readiness%20Report%20-%20Data%20At%20A%20Glance.pdf

Next Steps

In states that have not already done so, *the K-12, postsecondary systems, and business community should work together to (re)define the pathways through high school, each of which should lead to and prepare students for success in a valued destination,* whether a four-year college, two-year program, military, or other high-quality postsecondary training programs for careers that pay well and have advancement potential. These pathways and other forms of "personalization" should both allow and encourage students to pursue their interests or aspirations while also maintaining high expectations that prepare students for success in college or career.

At a minimum, states should make a CCR graduation option the "default" option for students entering 9th grade. States need not default all students into the exact same pathway to graduation, but if multiple graduation options exist, each pathway option should be aligned to the college- and career-ready expectations defined by the state. If a student does not want to pursue a CCR option, the state should require permission from a parent or guardian who must acknowledge that future opportunities may be limited. This is also one key policy lever for states to make sure that all students, in every high school, have access to the courses and experiences necessary to graduate prepared for their next steps. The Office for Civil Rights data show that high schools with high Black and Hispanic student enrollments are less likely to offer advanced mathematics and science courses, including Algebra II, Calculus, Chemistry, and Physics. Reducing gaps in college and career readiness, and increasing the diversity of the STEM pipeline, will not happen unless all students have equal access to the courses and experiences they need.

Finally, all states should report disaggregated data annually on the percentage of students successfully completing a CCR diploma based on their high school course of study. Because the majority of states provide several options for students to adjust graduation requirements (modifications, personal opt-outs, etc.), very little can be known about which students graduate having taken courses that deliver the CCR standards unless states report which students are completing which graduation options. Even less is known about how students do after high school. Students and their families need information about where each pathway offered by the state leads upon completion. As states continually add flexibility to personalize the pathway through high school, state, district, and school leaders need to understand whether students are graduating college and career ready — and to use that data to examine trends and whether state and local decisions are producing the desired results for students.

Many states already provide different options and pathways for students. States should distinguish between those pathways that provide a passport to success, and those that are essentially dead ends, and give students a strong nudge toward the passport. States should make it difficult to get a ticket to nowhere.

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Appendix A: 2017 College- and Career-Ready Graduation Rates in States with Mandatory CCR Diplomas

Diploma/Course of Study Name	Percent of Graduates Completing CCR Diploma/Endorsement/Pathway/Courses of Study										
	All Students	Am. In./AK Native	Asian	Black	Hispanic	NH/PI**	White	Two or More Races	Low Income	English Learners	SWD
CCR Mandatory *(Students must complete a CCR course of study in ELA and mathematics in order to graduate.)*											
Delaware High School Diploma	86%	76%	95%	82%	81%	NR	89%	90%	77%	68%	68%
District of Columbia High School Diploma	72%	NR	80%	73%	72%	NR	86%	93%	73%	63%	54%
Georgia High School Diploma	81%	79%	91%	78%	74%	**	84%	82%	76%	59%	59%
Kentucky High School Diploma	90%	77%	93%	82%	84%	76%	91%	87%	87%	67%	74%
Minnesota High School Diploma	83%	51%	86%	65%	66%	63%	88%	71%	69%	65%	61%
Nebraska High School Diploma	89%	70%	82%	81%	82%	85%	92%	86%	82%	50%	71%
Tennessee High School Diploma	89%	88%	94%	83%	83%	92%	92%	NR	84%	73%	71%
West Virginia High School Diploma	89%	91%	95%	87%	92%	90%	90%	83%	87%	100%	76%

**Georgia includes Native Hawiian/Other Pacific Islander students as part of Asian subgroup reporting.

State Data Sources

- California: https://data1.cde.ca.gov/dataquest/stgradnum.asp?cChoice=StGrdEth&cYear=2016-17&ProgramName=All&cTopic=Graduates&cLevel=State&myTimeFrame=S
- Delaware: https://www.doe.k12.de.us/Page/1523
- District of Columbia: https://osse.dc.gov/service/high-school-graduation-rates-0
- Georgia: http://www.gadoe.org/CCRPI/Pages/default.aspx
- Hawaii: http://hawaiidxp.org/research/ccri_reports
- Indiana: https://compass.doe.in.gov/dashboard/graduates.aspx?type=state
- Kentucky: https://applications.education.ky.gov/src/DataSets.aspx
- Maryland: http://reportcard.msde.maryland.gov/HighSchoolCompletionOther.aspx?PV=38:12:99:AAAA:3:N:0:13:1:2:1:1:1:2:3
- Massachusetts: http://profiles.doe.mass.edu/statereport/masscore.aspx
- Minnesota: http://rc.education.state.mn.us/#
- Nebraska: http://nep.education.ne.gov/State?DataYears=20162017
- Nevada: http://nevadareportcard.com/di/report/reportcard_1?report=reportcard_1&scope=e20.y14.y15&organization=c2269&fields=309%2C310%2C311%2C313%2C318%2C320&hiddenfieldsid=309%2C310%2C311%2C313%2C318%2C320&scores=917%2C918%2C919%2C920%2C1007%2C1015%2C1018%2C1023&num=160&page=1&pagesize=20&domain=cohort&
- New York: https://data.nysed.gov/
- Ohio: http://reportcard.education.ohio.gov/Pages/Download-Data.aspx
- Tennessee: https://www.tn.gov/education/news/2017/9/14/tennessee-high-school-graduation-rate-reaches-highest-rate-on-record.html
- Texas: https://tea.texas.gov/acctres/dropcomp/years.html
- Virginia: http://www.doe.virginia.gov/statistics_reports/graduation_completion/cohort_reports/index.shtml
- West Virginia: https://wvde.state.wv.us/zoomwv/