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The Relevance, Effects, and Potential Unintended Consequences of High-Stakes Assessments

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Historically, the United States has placed a significant reliance on high-stakes assessments as a proxy for postsecondary readiness and scholarly aptitude. Several states have utilized these assessments as high school graduation requirements and college admissions requirements for decades. These assessments—such as high school exit exams, end-of-course assessments tied to high school graduation, and college admissions tests—have evolved through the years and notably have shifted in popularity. Research exists, however, that demonstrates these exams have fallen short on being adequate and consistent predictors of secondary and postsecondary success and have had a disproportionately negative impact on historically underserved students—namely students of color and low-income students.

This paper will examine the relevance of high-stakes assessments in preparing students to graduate from high school, succeed in postsecondary education, and contribute meaningfully to the rapidly changing economy. More specifically, it will examine the impact of high-stakes exams as both a high school graduation requirement and a college admissions requirement and how state policy impacts these critical decision points.

Background

America's public school students are becoming more racially and ethnically diverse. Of the nearly 51 million public school students in kindergarten through twelfth grade expected to start school in the fall of 2019, the majority (more than 26 million) were nonwhite. This nonwhite majority trend, which began in 2014, is projected to continue at least through 2028.[1] The new majority will be responsible for contributing to and upholding the American economy over the next several decades and beyond. Many of these same students, however, are less likely to earn benchmark scores on high-stakes assessments, graduate from high school, have access to and succeed in higher education, be employed, and have well-paying jobs.

Over the past decade, there has been a profusion of discussion, research, advocacy, and policy making at the state and federal level focused on promoting the ideal that all

The content of this paper, including the recommendations put forward, do not reflect the views of the Alliance for Excellent Education.

students should graduate from high school "college and career ready." In part, this is due to employers and college instructors bemoaning the lack of preparation of high school students and the dearth of skills they arrive with.[2] More, ample analyses point to the lack of alignment between annual student achievement data based on assessments and high school graduation rates, leading many to question the rigor and validity of the high school diploma.[3] Finally, there have been several national and federal policy shifts that have contributed to states rethinking what it means to prepare students for the twenty-first-century economy—from the adoption of the Common Core State Standards in 2010 to the reauthorization of the federal laws that govern secondary and postsecondary education to the mounting evidence that reveals the dire need for a more educated and skilled workforce.[4]

As a result, states continue to grapple with what they should require of students in order to demonstrate they are ready for the next step after high school. Fundamentally, the role of states—namely policy makers, including governors, the state legislature, state boards of education, and state departments of education—is to set policies that prepare and educate the populace to be successful contributors to the states' economies and ultimately the nation's economy. But with a populace that is becoming progressively more diverse, state leaders must also confront whether their policies are achieving equitable outcomes for *all* of their citizens or whether their policies create unintended consequences—perhaps based on long-standing, antithetical norms or systems—that disproportionately affect certain populations. This is the case with high school graduation requirements, where many states are grappling with how to increase academic rigor and equitable outcomes simultaneously and struggling to reconcile policy goals that often appear in tension. How can states better prepare students for rigorous postsecondary educational experiences and bolster postsecondary degree attainment without depressing high school graduation rates or cutting off access to higher education for students who have been historically underserved?

High-Stakes Assessments as a Popular Policy Priority

Historically, states have focused on the accumulation of Carnegie units (aka credit hours) as a requirement for graduation—ensuring students satisfy specific seat-time requirements in core subjects that indicate their readiness for higher learning. Over time and as a result of various external pressures, states began to adopt additional criteria for high school graduation, including several based on assessments—such as passing a civics test or high school exit exams in key subjects like reading and math or meeting benchmark scores on end-of-course assessments or college admissions exams.

Many states have implemented these assessment-based graduation requirements as a precautionary measure to ensure students are able to demonstrate a reasonable degree of postsecondary preparedness before they leave high school. Critics of these exams argue that some of these assessments, such as high school exit exams, are not adequate measures of postsecondary readiness since many exclusively cover ninth- and tenth-grade academic content.

College admissions exams have long been popular and continue to proliferate in the secondary education landscape. Once primarily used by higher education institutions to determine a student's readiness for college, these exams have become preferred by states for state and federal accountability and as college- and career-ready graduation options among a handful of states.

In whatever form they come, questions have been raised about the degree to which these high-stakes exams put at risk the opportunity of advancement for students from marginalized communities and other historically underserved students who disproportionately perform poorly on the exams and about whether there are alternatives to these exams that are as equal a predictor or a better predictor of postsecondary success and result in less adverse consequences for these students.

Based on the evidence and existing state policies on high-stakes exams, state leaders in a position to set high school graduation policies and make decisions that determine critical transition points for a diverse range of students should first consider the following questions:

1. What do high-stakes assessments measure and is it relevant for student success?

2. Are there clear winners and losers from high-stakes assessments?

3. What are the impacts of high-stakes assessments on high school graduation rates, college-going rates, and the economy?

High-Stakes Assessments Defined

For the purpose of this document, a high-stakes assessment or a high-stakes exam (used interchangeably) is defined as an assessment or exam used within the K–12 or postsecondary education system that places the onus on the student to meet a certain benchmark or score on content-specific exams, leading to promotion, delayed promotion, or exclusion to the next level of a student's educational journey.

These exams generally take the form of

- high school admissions tests
- high school exit exams
- end-of-course assessments tied to high school graduation
- college admissions tests
- college placement tests

Not included in this definition are annual state assessments required for state and federal accountability that are not tied to graduation requirements for students within a state. For example, in the spring of 2019 Washington, DC, administered the Partnership for Assessment of Readiness for College and Career (PARCC) exam to students in the appropriate grades, as required under federal law. There is no requirement for high school students in the nation's capital to earn a passing score on the PARCC in order to receive a high school diploma. Conversely, Maryland required students in the graduating Class of 2019 to earn a passing score on the PARCC in English 10 and in Algebra I in order to earn a high school diploma—making PARCC a high-stakes assessment for Maryland students.[5]

This paper will primarily focus on two types of high-stakes exams: high school exit exams and college admissions tests.

A Disputed History of High-Stakes Assessments

Where do high-stakes assessments originate? This, like many American norms, has a disputed and complicated history that will only be summarized here. For example, in the early twentieth century, standardized tests were used to permit or preclude immigrants entry to the United States.[6] At the turn of the twentieth century, the purpose of high-stakes assessments used for college admissions was to "make the college admissions process more transparent and fair."[7] This notion of "fairness," one might argue, was only applicable to the typical white, Anglo-Saxon Protestants (WASPs) who were the beneficiaries of research by renowned psychologists and scientists who attempted to argue through empirical data informed by testing results that certain races, nationalities, and ethnic groups were intellectually inferior to WASPs.[8] Though this research has largely been debunked, residual effects that show up in the form of unconscious bias toward certain nationalities and communities of color remain.

College admissions tests, which originated in the early 1900s with the Scholastic Aptitude Test (now known as the SAT), were birthed out of a military readiness IQ test that eventually led to colleges adopting a similar exam to determine student's readiness for college. The ACT (originally an acronym for American College Testing) and the SAT now proliferate and, some might argue, dominate the college preparation and admissions process.

An emphasis on standardized assessments in K–12 classrooms became popular in the 1980s, largely out of concern that Americans were being left behind by their global competitors. According to the National Commission on Excellence in Education in its landmark report, *A Nation at Risk,* the state of American education—and therefore the state of our global prowess—was at risk: "We live among determined, well-educated, and strongly motivated competitors . . . America's position in the world may once have been reasonably secure with only a few exceptionally well-trained men and women. It is no longer."[9] The commission, organized under the Reagan administration, called for more rigorous and measurable standards, which arguably reached its apex with the passage of No Child Left

Behind (NCLB) in 2001 and its system of rewards and consequences for schools based on proficiency on annual standardized assessments in reading and math.

High school exit exams existed before *A Nation at Risk*'s warning of academic mediocrity and NCLB's reliance on student proficiency for school accountability, but these policy trends arguably increased interest in high school exit exam policies across states and led to the adoption of more rigorous assessments. Exit exams were intended to convey a clear benchmark for high school learning and convey to employers and colleges that graduates possessed the skills and knowledge necessary for employment and higher education.[10]

Today there are both proponents and opponents of standardized assessments and high-stakes exams, along with a growing body of research and subsequent movements that have brought into question the validity and popularity of these exams.[11]

Peter Sacks, author of *Standardized Minds: The High Price of America's Testing Culture and What We Can Do to Change It,* provides a critical view against standardized testing of all kinds, including high-stakes exams, and argues these tests serve two primary beneficiaries: "The testing game has largely served the interests of America's elites, further stratifying the society by race and socioeconomic class; second, the companies that produce, administer, score, and coach for standardized tests of all types have gotten rich off the nation's testing habit."[12]

Test-makers such as the ACT purport they exist to "level the playing field for everyone, regardless of needs, backgrounds, or resources."[13] Historically, testing proponents have long believed high-stakes exams were created to do just that—level the playing field.

Testing proponents typically cite some of the following reasons for high-stakes testing:

- High-stakes exams are an unbiased way to measure student learning and "level the playing field" for all students.

- High-stakes exams such as the SAT and the ACT are ideal for accountability purposes for high school students since these students will need these tests anyway for college admissions.

- High-stakes exams such as the SAT and the ACT are better and consistent predictors of college readiness than high school grade-point average (GPA), which raises concerns about grade inflation.

- The best way to predict a college applicant's success is by looking at a combination of test scores and his or her high school GPA.

- Students will work harder to master their academic content if they know there are stakes (rewards or punishments) tied to their performance.

- High-stakes assessments are needed to determine if students are ready for the next level of academic content.

Testing opponents typically argue the following in support of reducing the reliance on and impact of high-stakes exams on student advancement or in support of eliminating them altogether:

- High-stakes exams are biased against people of color, women, and those who are from low-income households.[14]

- An individual student's educational advancement (or lack thereof) should not be determined solely by that student's performance on an exam when additional factors (i.e., a student's home environment, early exposure to extracurricular activities and cultural practices, parent's level of education, supports provided at school, etc.) impact how a student might perform on an exam.

What does the research say? Are these tests helping or hurting our country's aim of maintaining its global dominance given the complex and diverse set of challenges, dynamics, and characteristics that make up our increasingly diverse populace?

Research Question One: What Do High-Stakes Assessments Measure and Is It Relevant for Student Success?

High-stakes assessments are widely used in the United States. Their reach is significant:

- For the class of 2020, eleven states will require public school students to pass an assessment as a requirement for graduation.[15] The K–12 enrollment in these eleven states accounts for 35 percent of all public school students.[16]

- Twenty-four states and Washington, DC, require students to take the SAT or the ACT.[17]

- For the Class of 2018, 1.9 million (55 percent of students) took the ACT and 2.1 million (62 percent of students) took the SAT.[18]

Given the popularity and the vast reach of these assessments, they clearly serve as important and relevant tools for adults making critical decisions about the ability, potential, and promise of learners navigating their way through the educational system. Questions, however, have been raised about whether what these assessments are measuring really matters in the long run—particularly in the form of acquiring a postsecondary credential.

High-Stakes Assessments as a Measurement of College Readiness

As mentioned before, most policy making pertaining to K–12 education at the state and federal level has centered around the broad goal of "college and career readiness." Defining what college and career readiness looks like for students and providing equitable and accessible pathways for all students to meet that aim is where the real work in states takes shape. Many states have adopted definitions for college and career readiness and aligned state academic standards and corresponding assessments.

When the Common Core State Standards (CCSS) were released by the National Governor's Association and the Council of Chief State School Officers in 2010 and eventually implemented by nearly every state, most states initially adopted the aligned assessments by two consortia of states—either the Smarter Balanced assessment or the Partnership for Assessment of Readiness for College and Career (PARCC) assessment. These assessments were intended to measure and track the progress of student's readiness for postsecondary learning.

Over time, facing political backlash, states began to relinquish their memberships in the two consortia. As the number of states using Smarter Balanced and PARCC began to decrease, more states began to adopt the ACT or the SAT as their high school assessment used to meet federal requirements under NCLB and, subsequently, the Every Student Succeeds Act (ESSA). States gave several reasons for this change: (1) it would ensure students took the tests seriously given that the stakes for the SAT and ACT have consequences beyond high school that traditional annual state assessments did not have; (2) it would preclude students from being "double-tested" by both the state assessment and a college admissions exam; and (3) it was a way to encourage more college-going among historically underserved students.

College Admissions Tests Today, nearly half of all states are using high school student performance on the SAT or the ACT in various ways within the state's accountability system.[19] Twenty-four states will use these exams during the 2019–20 school year as *the* statewide summative assessment for high schools.[20]

Achieve (an independent education reform organization) recently summarized three alignment studies that sought to determine the degree to which the SAT and the ACT are aligned with the Common Core State Standards in math and in English language arts (ELA). Each of the studies showed neither the SAT nor the ACT was fully aligned with the CCSS. Achieve cautioned states against using the exams as statewide accountability measures for math and English language arts, with the authors stating, "States should not use the ACT or SAT as the statewide accountability measures for ELA and mathematics."[21]

According to the College Board (which administers the SAT), this lack of alignment did not convince states to end their partnerships. In response to the alignment studies that have

been conducted over the past few years, the College Board recently responded, "No test can cover all the standards, especially a three-hour test. Interestingly, our states are OK with that. They know it's not perfect but they don't have an opt-out problem anymore."[22]

The ACT and the College Board have long touted the validity of their assessments as measurements of college readiness because they are predictive of how students will perform in credit-bearing, first-year college courses. The ACT College Readiness Benchmarks, which have been empirically derived, show that specific scores on ACT subject area tests indicate that students will have a 50 percent chance of obtaining a B or higher or about a 75 percent chance of earning a C or higher in a corresponding credit-bearing college course.[23] Although recent research does not discredit these claims, it does show a more holistic picture of other indicators that might better predict both college readiness and college success.

One study examined whether ACT scores provide a stronger or more consistent prediction of college readiness than high school GPA by looking at the records of nearly eighteen thousand Chicago Public School graduates. Researchers found that high school GPA performed "in a strong and consistent way across high schools as measures of college readiness, while ACT scores do not."[24] The report's authors caution states to rely "less heavily on standardized test scores in their accountability systems as indicators of college readiness, given that the relationship is not strong and not consistent across schools."[25]

Researchers in California investigated how well the SAT, high school GPA, and the test California uses as its annual state assessment—the Smarter Balanced assessment—predict first-year GPA and second-year persistence for students enrolled in the California State University (CSU) and the University of California (UC) systems. Researchers found high school GPA to be a stronger predictor of first-year GPA and second-year persistence than the SAT or the Smarter Balanced assessment for students enrolled in CSU; the Smarter Balanced does as well as the SAT in predicting college outcomes; and using high school GPA as a predictor of college success results in a higher representation of low-income and historically underserved students in the top of the UC applicant pool.[26]

In light of the predictive power of high school GPA (HSGPA), the College Board makes the case for the importance of using both college admissions scores and high school GPA as predictors of college readiness and future college performance. In a recent validity study published by the College Board that examined SAT test score data from more than two hundred thousand students and their performance on the redesigned SAT, researchers examined the outcomes of first-year GPA (FYGPA) and retention to the second year to determine college readiness and potential college success. Findings reveal large correlations between HSGPA and FYGPA (.53) and between SAT and FYGPA (.51).[27] The authors found an even larger correlation when HSGPA and SAT were combined and correlated with FYGPA (.61), arguing for the importance of colleges using both indicators "to more accurately predict differences in the future academic performances of students with similar HSGPAs." Although

HSGPA had a larger correlation when looking at individual indicators, combining a student's grades with test score data, according to the authors, yields a more accurate result.

Other research has questioned whether SAT data are providing any additional information about students' preparedness for college. For example, researchers at the University of California, Berkeley found that "HSGPA accounts for the largest share of the predicted variation in freshman grades."[28] Further, more recent research has concluded information gathered by the SAT, in concert with HSGPA, is "largely duplicative."[29]

High School Exit Exams High school exit exams, like college admissions tests, have also been utilized as measures of college readiness. These tests vary in rigor and have morphed through the years.[30] Initially intended to be measures of competency of basic skills below the high school level, they are now primarily tests aligned with academic standards at the ninth-, tenth-, or eleventh-grade levels (see table 1).

What used to be an increasingly popular phenomenon has now died down in implementation in the wake of the Common Core State Standards and ESSA. In 2002, twenty-four states required an exit exam. Today, that number has dropped to eleven—still significant, given that more than one-third of public school students will one day take an exit exam. Notably, states with exit exams often offer students the opportunity to satisfy the exit exam requirement in various ways if the student attempts the exam and fails one or more times. Some states offer waivers entirely for certain groups of students, such as students with special needs. This alternative option or waiver process brings into question whether the intended purpose of exit exams is actually being fulfilled for all students. Unfortunately, most states do not collect data that track students who graduate under these exit exam alternatives, so the impact is unknown.

A 2010 study analyzed the content of sixty math and English high school assessments from twenty states to determine the degree to which content found in high school assessments aligned with the content found in entry-level college courses. This study revealed that high school assessments in these states were moderately aligned. Researchers found that English exams were somewhat more aligned than math exams but they aligned poorly or not at all in areas requiring higher order thinking. There was some alignment in math across specific standards.[31]

Other evidence offers an alternative view of the value of exit exams. In 2015, when Massachusetts (a lead member of the PARCC consortia) was considering whether to replace the state's Massachusetts Comprehensive Assessment System (MCAS) with the PARCC, it commissioned a study to inform its decision. State policy makers wanted to know if the PARCC exam was a better predictor of college readiness, as the MCAS was not originally created with that aim. Researchers from Mathematica conducted a predictive validity study to determine whether MCAS and PARCC scores are accurate assessments of college readiness.

Table 1. States with High School Exit Exams for the Class of 2020

State	*Assessment*	*Stakes*	*Target Grade Level*
Florida	Florida Standards Assessment (FSA): English 10 Writing	Must pass to graduate; factored into course grade	10th
	FSA: English 10 Reading	Must pass to graduate; factored into course grade	10th
	FSA: Algebra I	Must pass to graduate; factored into course grade	10th
Louisiana*	LEAP 2025: English I	Passing score required to graduate	Varies
	LEAP 2025: English II	Passing score required to graduate	Varies
	LEAP 2025: Algebra I	Passing score required to graduate	Varies
	LEAP 2025: Geometry	Passing score required to graduate	Varies
	LEAP 2025: U.S. History	Passing score required to graduate	Varies
	LEAP 2025: Biology	Passing score required to graduate	Varies
Maryland	PARCC: English 10	Passing score required to graduate	10th
	PARCC: Algebra I	Passing score required to graduate	Varies
Massachusetts	Massachusetts Comprehensive Assessment System (MCAS): Math	Passing score required to graduate	10th
	MCAS: ELA	Passing score required to graduate	10th
	MCAS: STEM Test	Passing score required to graduate	Varies
Mississippi	Mississippi Academic Assessment Program (MAAP): Algebra I	Passing score is one of the options for graduation, but test carries weight.	Varies
	MAAP: English II	Passing score is one of the options for graduation, but test carries weight.	Varies
	MAAP: Biology	Passing score is one of the options for graduation, but test carries weight.	Varies
	MAAP: US History	Passing score is one of the options for graduation, but test carries weight.	Varies
New Jersey	New Jersey Student Learning Assessment (NJSLA): Algebra I	Passing score is the main requirement for graduation	Varies
	NJSLA: ELA 10	Passing score is the main requirement for graduation	Varies
New Mexico†	Transition Math (Algebra II, Geometry, or Integrated Math II)	Passing score required to graduate	Varies
	Transition English Language Arts Grade 11	Passing score required to graduate	Varies
	Transition English Language Arts Grade 11 Writing	Passing score required to graduate	Varies
	SBA Science Grade 11	Passing score required to graduate	Varies
	Social Studies EOC	Passing score required to graduate	Varies
New York	Regents Exam: Math	Passing score required to graduate	Varies
	Regents Exam: ELA	Passing score required to graduate	Varies
	Regents Exam: Science	Passing score required to graduate	Varies
	Regents Exam: Social Studies	Passing score required to graduate	Varies
	Regents Exam: Pathway Assessment **or** Career Development and Occupational Studies Credential (CDOS)	Varies	Varies

Table 1 (*continued*)

State	*Assessment*	*Stakes*	*Target Grade Level*
Ohio‡	**3 Options:**	Passing score required to graduate	Varies
	Option 1: Earn passing score on 7 end-of-course exams		
	Option 2: Earn passing score on WorkKeys		
	Option 3: Earn remediation-free score in math and ELA on the ACT or SAT		
Texas	State of Texas Assessments of Academic Readiness (STAAR): English I	Passing score required to graduate	Varies
	STAAR: English II	Passing score required to graduate	Varies
	STAAR: Algebra I	Passing score required to graduate	Varies
	STAAR: Biology	Passing score required to graduate	Varies
	STAAR: U.S. History	Passing score required to graduate	Varies
Virginia	Standard of Learning (SOL): English	Passing score required to graduate	Varies
	SOL: Math	Passing score required to graduate	Varies
	SOL: Laboratory Science	Passing score required to graduate	Varies
	SOL: History & Social Sciences	Passing score required to graduate	Varies

* *Students who enter the ninth grade in or after 2017–18 are required to take six LEAP 2025 high school five-level assessments if they are required to take the corresponding course to meet graduation requirements. Students not in LEAP Connect must take an ELA and math assessment. Learn more here: https://www.louisianabelieves.com/measuringresults/assessments-for-high-schools.*

† *Revised requirements for the Class of 2020 exclude PARCC assessments and cut scores. New Mexico's Revised Assessment Requirements for High School graduation can be found here: https://webnew.ped.state.nm.us/bureaus/college-career-readiness/graduation.*

‡ *This reflects assessment criteria for the Class of 2020. Students who graduate with the Class of 2021 can either meet these same criteria or they can demonstrate competency through non-assessment options. See more here: http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements/Earning-an-Ohio-High-School-Diploma-for-the-Cl-2.*

Source: Table adapted from Achieve's Statewide High School Assessments Data Explorer: https://highschool.achieve.org/statewide-assessments-high-school-data-explorer.

Their findings revealed that both the MCAS and the PARCC predict college readiness and that scores on both tests provide similarly strong predictions about which students required college remediation. The PARCC did rise above the MCAS on a few fronts. In math, the PARCC college-readiness standard predicted a higher level of college performance than the MCAS. Also in math, students who achieve the PARCC college-readiness standard are less likely to need remediation than students who achieve the MCAS standard.[32]

High-Stakes Assessments as a Measurement of College Success

The most logical way to predict college success is to answer the question, *What indicators are most likely to predict college graduation?* Researchers have looked at this question by using four-year college graduation rates and cumulative GPAs as metrics for success, with findings consistently demonstrating that high school GPA has stronger predictive validity than college admissions tests.

In an oft-cited study that tracked four-year outcomes of nearly eighty thousand students attending the University of California looking at four-year graduation rates and cumulative GPA, researchers found that HSGPA was consistently the strongest predictor of four-year college outcomes across all academic disciplines, UC campuses, and freshman cohorts, as opposed to performance on the SAT.[33]

Similarly, researchers from the University of Chicago conducted a series of simulations estimating the probability of college graduation for more than one hundred thousand Chicago Public School students and found that "increases in high school GPA have greater effects for college completion than would comparable increases in these same students' ACT scores" among students with varied academic qualifications.[34]

Another recent study examining a national sample of nearly fifty thousand students who applied to college for the 2009–10 academic year that compared the predictive validities of high school grades and SAT and ACT scores found that "the incremental predictive validity of HSGPA for college graduation was stronger than the incremental predictive validity of SAT/ACT score."[35]

Another study sought to validate a core set of high school indicators that would predict college readiness and bachelor's degree attainment. Using data from Boston Public School's Classes of 2010 and 2012, researchers found three core indicators to be effective measures: consistent high school attendance of 94 percent or higher, a high school GPA of 2.7 or higher, and completion of the MassCore curriculum and enrollment in an AP (advanced placement) course. Researchers also noted PSAT (Preliminary SAT) and SAT scores by themselves were predictive of post-secondary success—although they did not equate these outcomes with degree attainment. According to the authors, the higher one's test score the more predictive it was, but also the more likely students had one or more of the other non-test-related predictive indicators, "making the information provided by the SAT redundant."[36]

Finally, researchers from the Center on Education and the Workforce at Georgetown University examined SAT and ACT data from students in the Class of 2013 who enrolled at the most selective colleges and universities in the country. They found that students with SAT scores between 1000 and 1099 had a 79 percent chance of graduating from college, which was not significantly dissimilar to students with an SAT score above 1200 who had an 85 percent chance of graduating, noting "standardized tests are not a good enough predictor of college success to justify their use as a key determinant of college admissions."[37]

In sum, most of these studies reveal HSGPA to be a better predictor of college success than high-stakes assessments such as the ACT and the SAT. Due to a dearth in research, high school exit exams were not evaluated here as measures of college success.

Research Question Two: Are There Clear Winners and Losers from High-Stakes Assessments?

Educators, researchers, policy makers, policy wonks, and the like are keenly familiar with the general landscape of academic performance in America. Achievement gaps have persisted for decades. Those gaps overwhelmingly point to the underachievement of historically underserved and marginalized students. The 2015 twelfth-grade NAEP data show that a thirty-point achievement gap in mathematics between white and African American students has not closed in ten years, while in reading the gap has widened.[38] Although the NAEP is not a high-stakes assessment, it is widely known as the gold-standard measurement for the academic performance of the nation's students—presumably unearthing its "winners" and "losers."

The achievement gap has perplexed us all. Why does it exist *and* persist even as achievement levels increase, in some cases, for all students? One theoretical approach that has provided some basis of evidence to this question is the *stereotype threat* construct first introduced by Claude Steele and Joshua Aronson in their research that included four experimental studies that tested white and black college students and evaluated their test performance against this theory.[39] According to the authors, "Stereotype threat is being at risk of confirming, as self-characteristic, a negative stereotype about one's group."[40] One finding from their research revealed that black test-takers who were told the test was indicative of their intellectual ability performed more poorly on the test than black test-takers who were told the test was simply a lab experiment not indicative of ability—confirming the negative stereotype. Another finding showed that African American students underperformed white students under the first condition but had similar performance under the second condition.

Several studies have supported this theory. One study that included two meta-analyses suggests that standard measures of academic performance—both test scores and classroom grades—are biased against "non-Asian ethnic minorities and against women in quantitative fields"—underestimating their true intellectual ability.[41] The authors purport, however, that the bias is not a result of the test's content, but from psychological threats that depress the performance of people whose intellectual ability is negatively stereotyped. The analyses specifically look at test performance on the SAT and show that the level of bias is large enough to account for meaningful difference between students on high-stakes tests. Their findings suggest that SAT math and reading tests underestimated the intellectual ability of African American and Latino students by a total of thirty-nine to forty-one points for each group.

Georgetown University's Center on Education and the Workforce recently released "Born to Win, Schooled to Lose." In this report the authors "test the idea that demonstrated achievement is a perfect reflection of innate ability by tracing children's journeys through and beyond the educational system, from their academic performance in childhood to

their early career outcomes as young adults," analyzing various national longitudinal assessments.[42] Researchers find that among children with similarly high academic potential, the test scores of low-income students are most likely to see a decrease and remain low as they navigate their schooling experience.

Other findings reveal:

- Children from poor families who start out with high test scores have a relatively slim chance of keeping those scores high.
- Children from affluent families with math scores above the mean tend to maintain those scores and they have a safety net that keeps them from falling to the bottom if they struggle.
- Racial and ethnic gaps in test scores that show up in kindergarten persist as students move through high school.
- African American students who have above-median math scores in kindergarten are far less likely to have above-median math scores in the eighth grade than other racial and ethnic groups.

In summary, researchers find that "the likelihood of success is too often determined not by a child's innate talent, but by his or her life circumstances—including factors that determine access to opportunity based on class, race, and ethnicity." These factors taken together—coupled with the stereotype threat effect—can be disadvantageous to historically underserved students, while on the other hand they have a corresponding positive effect on their peers.

College Admissions Tests Research reveals that students from higher-income households are at a greater advantage to perform well on college admissions exams.[43] Raw data from the SAT indicate the higher one's income, the higher one's SAT score.[44] Scores also increase by parent education level. The 2018 data show that for students whose parents never graduated from high school, only 22 percent of them met both SAT benchmarks, while 72 percent of students whose parents earned a graduate degree met both benchmarks.[45]

ACT results from the graduating Class of 2018 indicate that nearly two-thirds of test takers (62 percent) failed to meet three or more of the subject-specific benchmarks in reading, English, math, or science—while the results were far more dismal for historically undeserved students. Only 24 percent, 22 percent, 14 percent, and 11 percent respectively of Latino, Pacific Islander, Native American, and African American students from the Class of 2018 met three or more benchmarks on the ACT. More, students who are identified with more than one at-risk characteristic are more likely to meet zero ACT

benchmarks. For example, among students who reflect all three of ACT's "underserved criteria"—a first generation college student, a low-income student, and an underserved student of color—81 percent meet either zero or one ACT benchmark.[46]

In a study that employed multilevel modeling, researchers from UC Berkeley found high school GPA to be less strongly correlated with a student's family income, parent education level, and neighborhood school ranking than SAT scores. SAT scores, on the other hand, showed a strong correlation with measures of socioeconomic status, which leads to a more adverse effect on applicants who are students of color and low-income.[47]

Finally, in an aforementioned study conducted by Georgetown University using SAT data, researchers found a privilege disparity among students gaining access to the most elite institutions. Their findings revealed that low-scoring affluent students are disproportionately taking seats that could have gone to students with higher test scores but lower financial means. For example, among incoming students with SAT scores below 1250, students from families in the top income quartile have more seats at selective colleges and universities than students in the bottom three quartiles combined. The authors noted the negative impact this has on marginalized student groups, stating "since Black and Latino students have lower median SAT scores than Whites, an overreliance on the SAT puts Black and Latino students at a disadvantage in admissions, even though the test results mean little about whether they will actually succeed in college."[48]

The College Board itself agrees that certain students are at a disadvantage in the college admissions process. The College Board's "Environmental Context Dashboard," or ECD, which has been in development over the past few years, was created to provide additional context for college admissions officers making decisions about applicants alongside their SAT scores and to shine a light "on students who have demonstrated resourcefulness to overcome challenges and achieve more with less."[49] Now referred to as "Landscape," this new tool will enable college admissions offices participating in a pilot project to consider six factors about each applicant's neighborhood and high school—crime, education levels, housing stability, household structure, college attendance rates, and median family income.[50]

High School Exit Exams Research has demonstrated disparate impacts on historically underserved students as a result of high school exit exam policies. In a 2006 study, researchers looked at the impact of high school exit exams and course graduation requirements using data from the 2000 Census Public Use Microdata Sample and found that high school exit exams led to large decreases in graduation rates for African American students on a national level. When researchers analyzed the National Center for Education Statistics (NCES) Common Core of Data for the state of Minnesota, findings revealed that Minnesota's newly instituted exit exam requirement increased dropout rates in school districts with relatively large concentrations of students of color and in high-poverty and urban school districts, while it reduced dropout rates in suburban and low-poverty districts.[51]

Another report examined the effects of the California High School Exit Exam (CAHSEE) on student achievement, persistence in high school, and high school graduation rates looking at three cohorts across four large California school districts. It found that the CAHSEE had no positive effect on student achievement, small negative or zero effects on persistence in high school, and large negative effects on graduation rates.[52] Specifically, the negative effects were largely found among low-achieving students, students of color, and female students: "Graduation rates declined by 15 to 19 percentage points for low achieving black, Hispanic, and Asian students when the exit exam was implemented, and declined only one percentage point (not statistically significant) for similar white students." More, researchers attributed these variances between students of color and white students with similar score patterns to a "stereotype-threat induced failure" that is likely responsible for the gaps in performance.

Additional research out of Massachusetts also shows negative effects of high school exit exams on historically undeserved students. In examining the records of more than sixty thousand students from the Class of 2006, researchers analyzed the effects of failing the tenth-grade MCAS (Massachusetts Comprehensive Assessment System) exam—which became a requirement for high school graduation with the Class of 2003. Findings reveal that the probability of on-time graduation for low-income urban students who were on the margin of passing the MCAS and failed the mathematics portion of the exam was reduced by 8 percentage points. In contrast, researchers found no effects of failing for wealthier urban students or suburban students who were on the margin of passing.[53]

High School Admissions Exams When looking at the impact of high-stakes assessments on certain student groups at the local level, the impact of New York City's Specialized High School Admissions Test (SHSAT) reveals how a high school admissions policy can have a disproportionately negative impact on access and opportunity for historically underserved students. Primarily given to middle school students seeking a seat at one of New York City's eight specialized high schools, the test historically has significantly limited admissions to the largest racial and ethnic groups enrolled in New York City's public schools—African American and Latino students. Although African American and Latino students comprise 66.5 percent of all NYC public school students, less than 5 percent of African American and Latino students were offered a seat in one of the eight schools for the 2019–20 school year as these students are less likely to earn passing scores on the exam.[54]

The specialized high school admission policy, which dates back to 1971, requires admissions be based solely on the results of an exam.[55] In a study that examined the use of the SHSAT as the sole criterion for admission to NYC's specialized high schools, the author points to the lack of evidence that statistically distinguishes the scores of students who are admitted from those who are rejected and notes the lack of a formal predictive validity study that would predict high school performance as a result of the exam. In a later study commissioned by NYC that sought to determine the relationship between the SHSAT and performance during the first two years of high school, authors found a "strong predictive

relationship between the SHSAT and high school achievement."[56] However, this study did not examine alternative admissions criteria to see if other methods (e.g., multiple measures: middle school grade point average, performance in rigorous coursework, scores on state assessments, etc.) would yield better or similar results as the SHSAT and have a less adverse impact on applicants of color.

In summary, the aforementioned evidence reveals historically underserved students are not being served well from the routine implementation of high-stakes assessments. These students—who disproportionately have low exam scores, are more likely to experience a psychological threat to their testing experience, see their test performance decline over time, and have multiple "at-risk" factors seemingly working against them—are less likely to graduate from high school and gain admittance to elite institutions.

Research Question Three: What Is the Impact of High-Stakes Assessments on High School Graduation Rates, College-Going Rates, and the Economy?

Because high-stakes exams are so prevalent in our nation, it is important to explore the degree to which the implementation of these exams is actually leading to postsecondary and economic success. Offered here is a glimpse into these domains, although additional research, including comprehensive longitudinal data analyses, is needed to fully explore this question.

High School Exit Exams Along with research presented in the prior section about the impact high school exit exams have had on increased drop-out rates for students of color and low-income students, a literature analysis conducted by the National Research Council looking at the foremost studies on exit exams revealed that states adopting more difficult exit exams showed a statistically significant decrease in high school graduation rates overall.[57]

Other researchers explored Current Population Surveys and Census data to analyze effects of high school exit exams across three areas: high school graduation, institutionalization, and wage distribution. Findings reveal that standards-aligned high school exit exams not only reduce graduation rates but also have a disproportionate negative impact on incarceration. Researchers did not find consistent evidence of any effect on wages or non-employment.[58] However, economic impact data reveal that with an overall increase of the nation's graduation rate, there is a corresponding positive impact on the national economy. For example, if the United States increased its graduation rate to 90 percent (up from 83.2 percent for the Class of 2015), this would translate to more than fourteen thousand new jobs, $3.1 billion in earnings, and $159 million in state and local tax revenue.[59]

Interestingly, an aforementioned study—that revealed that high school exit exams did not result in positive short-term outcomes such as on-time high school graduation—did show that exit exams improved longer-term outcomes such as college matriculation and

labor-market outcomes for African American and Latino students—possibly signaling incentive effects of exit exams.[60]

College Admissions Exams In attempts to increase college-going among students, Colorado and Illinois were the first states to require all high school juniors to take the ACT in 2001. Today, twenty-four states and Washington, DC, require all students to take the ACT or the SAT. Research reveals college-going rates have increased in states as a result of these mandatory test-taking policies.

One study using a quasi-experimental approach found mandatory ACT-testing resulted in greater overall college enrollment in Illinois.[61] A subsequent study found a 2- to 3-percentage point gain in four-year college enrollment among high school seniors in Maine as a result of its mandatory SAT policy.[62]

In a series of reforms adopted to improve K–12 outcomes beginning in 2012, Louisiana focused many of its efforts on improving the college- and career-readiness of its diverse student population. To increase college enrollment for all Louisiana students who might not otherwise have attended college, state leaders required all students to take the ACT beginning with the Class of 2013. As a result of this new policy, the number of students of color and low-income students who scored in the top quartile of ACT scores and subsequently enrolled in college nearly doubled between 2011 and 2016.[63]

Like ACT, the College Board has made attempts to improve access to higher education by forming a partnership with Khan Academy in 2015 to provide free online preparation for the SAT. Recent data from the partnership revealed that studying for the SAT for twenty hours via Khan Academy is associated with an average score gain of 115 points between the PSAT and the SAT. A consistent scoring improvement was seen across racial and ethnic groups, income levels, gender, parent education level, and high school GPA.[64]

In summary, high school exit exams are delaying graduation for students and in some cases altogether preventing students from earning a high school diploma—impacting their future earning potential and ability to contribute meaningfully to the economy. Because many state policies that include earning a benchmark score on a college admissions exam for graduation are nascent, research does not yet exist that shows whether these exams have a negative impact on high school graduation. Finally, due to efforts from states to increase access to college admissions exams, college enrollment has the potential to increase for students in states with these mandatory policies.

A Current Look at States' High School Exit Exam and Graduation Pathways Policies

Eleven states currently require students to pass an exit exam for high school graduation. These states are Florida, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey,

New Mexico, New York, Ohio, Texas, and Virginia. (See table 1 for a full list of states and their accompanying exams.) In spite of requiring students to earn a certain score on required exams in order to obtain a high school diploma, adjusted cohort graduation rate (ACGR) data for the Class of 2017 may indicate the current assessment requirements in states may not be having an adverse effect on graduation rates as in years past.

For example, for the Class of 2017, California (a state with no exit exam requirement) had a lower graduation rate (82.7 percent) than Ohio (84.2 percent)—a state with an exit exam requirement. Looking at subgroup data, Latino students in Nevada (a state with no exit exam requirement) had a lower graduation rate (79.7 percent) than Latino students in New Jersey (84.3 percent)—a state with an exit exam requirement.

On the surface these data could contradict prior research (conducted during an earlier time period) illustrating the negative impact of exit exams on high school graduation rates, but a deeper, more robust analysis for present times would need to be conducted to control for other variables that affect graduation rates.

Another question to consider is whether the performance standards states use on exit exams correspond with postsecondary preparation. States may have set cut scores so low the exams themselves might have become antithetical to the state's intentions to create high school exit exams that are intended to measure a student's college and career readiness. For example, Louisiana recently transitioned from four end-of-course exams to five "five-level high school assessments" in subjects that are typically taught during the ninth- and tenth-grade years. The five levels that correspond with various tiers of achievement are: *Advanced, Mastery, Basic, Approaching Basic,* and *Unsatisfactory.* The achievement level needed for students to meet the state's graduation requirement is the *"Approaching Basic"* level—the second lowest level. According to the state, "Students performing at this level have partially met college and career readiness expectations, and will need much support to be prepared for the next level of studies in this content area."[65] Essentially, Louisiana students who meet this threshold are not college- and career- ready, and yet are granted passage by the state.

Not only can states set low cut scores, but states typically offer alternatives to exit exams and will allow students to meet other demonstrations of competency if they are unsuccessful at passing the exams. For example, in 2007 Maryland established the Bridge Plan for Academic Validation, "a process that ensures all students have a fair opportunity to demonstrate their knowledge and skills if the student has proven unsuccessful on traditional high-stakes assessments."[66] The Bridge Plan allows students—in particular students with disabilities, English learners, students who experience text anxiety or students who do not perform well on traditional assessments—to demonstrate knowledge of academic standards through a project-based learning experience. According to news reports, 37 percent of the Baltimore City Schools graduating class of 2015 graduated under the Bridge Plan.[67] Although Maryland requires a high-stakes assessment for graduation, the Bridge Plan appears to be

preventing the high-stakes assessment from significantly depressing graduation rates as research has previously demonstrated.

The state of Ohio has gone back and forth on its own exit exam policy. Originally the state was requiring students, starting with the Class of 2018, to score eighteen of thirty-six possible points on seven end-of-course exams or earn remediation-free scores on a college entrance exam to graduate. When lawmakers discovered that nearly 20 percent of the graduating class was not on track to meet these requirements (only 38 percent of eleventh graders were on track to meet the requirements in Columbus City Schools), they voted to relax these criteria for students and have since created other non-test-related alternatives for demonstrating postsecondary readiness.[68]

Shifting from high school exit exams, several states have recently adopted a graduation pathways model that includes more high-stakes assessments among a suite of options for students to meet for graduation, in addition to passing the required Carnegie units that students would traditionally satisfy to earn a diploma. Some states require students to earn a certain score on these assessments (if a student chooses the assessment option), while others simply require students to take and complete the assessment.

Colorado is one of these states. The state adopted new graduation requirements for the Class of 2021 that include a menu of eleven options school districts can choose from.[69] Students must demonstrate college *or* career readiness in both math and English among these eleven options—seven of which are assessments with a cut score set by the state that can be raised by school districts. Most of these assessments are high-stakes exams such as the SAT, the ACT, the Armed Services Vocational Aptitude Battery (ASVAB), and the ACCUPLACER. If school districts choose only to adopt one or more high-stakes assessments as the graduation option for their district, this could potentially lead to an adverse impact on graduation rates in those districts. Districts, though, may not have the capacity to provide for non-testing options like concurrent enrollment—which requires intentional partnerships with local colleges—or a district capstone which requires the time and capacity of teachers to assess projects and portfolios.

Indiana adopted Graduation Pathways that expanded requirements for students in the Hoosier State for the Class of 2023 to satisfy course requirements for graduation and take an end-of-course assessment. Students must now demonstrate both college readiness *and* career readiness by satisfying requirements specific to each domain.[70] The career-ready domain places an emphasis on employability skills demonstrated through a project-based learning experience, a service-based learning experience, or a work-based learning experience. The college-ready domain, similar to Colorado's, requires students to earn benchmark scores among a list of high-stakes assessments and also provides for other options such as concentrating in career and technical education (CTE) or participating in a locally created pathway.

State policies on graduation pathways are nascent and it is not yet known which pathways, among the list of options afforded to students, are most likely to prepare them to succeed in the postsecondary pathway of their choice.

What Is at Stake?

The future success of the nation is at stake and much of that responsibility lies in the hands of state policy makers with the power to influence what takes place inside of America's classrooms. This paper sought to answer three questions to determine whether the popular practice of tying high-stakes assessments to outcomes for students is the best and most relevant policy for ensuring America's increasingly diverse student body is prepared for success after high school.

In answering, *What do high-stakes assessments measure and is it relevant for student success,* the research reveals that college admissions exams, such as the SAT and the ACT, are validated indicators of college readiness—indicative of how students will perform their first year in college. However, high school GPA might be the stronger and more consistent predictor. As indicators of college success, college admissions exams fail to provide as strong a prediction as high school GPA. Given this knowledge, the question for decision makers is: What relevant and additionally useful information do these exams provide for high schools and institutions of higher education that they are not already getting from high school GPA and other indicators? As it concerns *winners and losers,* policy makers must not only ask themselves if these exams are relevant measures of student success, but given the strong likelihood these exams are unnecessarily limiting opportunity for historically underserved students, are there other indicators that equally measure or are a better measure (such as high school GPA) of student success and have a less adverse impact on students of color and low-income students.

More research is needed to determine if high school exit exams are true measures of college readiness in both math and English language arts as this appears inconclusive with current research. As it pertains to the *impact on the graduation rate* and *winners and losers,* prior research does indicate that high school exit exams significantly decrease graduation rates for all students, but particularly for historically underserved students of color and students from low-income families. More, although they are waning in popularity, high school exit exams continue to impact more than one-third of the nation's public school students. New evidence is needed to determine if this impact holds under recent policy changes across states—namely the many waiver and alternative options for demonstrating competency now offered by states. Research out of Massachusetts reveals two things: first, performance on the MCAS is predictive of performance in college; and second, the probability of on-time graduation for low-income urban students passing the MCAS decreases if they are on the margin of passing. Although the MCAS is a valid predictor of college readiness, if performance on the MCAS has a disproportionate negative effect on graduation rates for low-income students of color, should Massachusetts consider other measures of readiness

that are as predictive and do not have a disproportionate negative impact on these students, such as high school GPA aligned with the MassCore curriculum?[71]

When looking to *the impact of high-stakes assessments on college-going rates and the economy,* research reveals that states that have implemented mandatory college admissions exam policies have seen increases in college enrollment. In fact, Louisiana's mandatory ACT testing nearly doubled college enrollment for high-performing students of color and low-income students. One of the notable limitations of this study, however, is that the data do not illuminate the degree to which college enrollment also increased among students who *did not* score in the top quartile of ACT scores or students with low prior achievement on other performance measures. This research confirms that high-achieving low-income students and students of color are often underrepresented among college applicants with similar achievement levels and that a mandatory ACT policy opens the door for qualified students who otherwise would not have taken the exam.[72] These effects have the potential to positively improve postsecondary outcomes for students. However, states should use caution when examining the overall impact of mandatory college admissions testing policies that might primarily benefit high-performing students. Can a mandatory college admissions exam policy increase enrollment for both high- and low-performing students?

When considering the impact of high-stakes assessments on the economy, high school exit exams that suppress graduation rates have a direct negative impact on the economy—translating to fewer jobs and significant losses in earnings and state and local revenue.

There is a fourth and critical question state policy makers should consider given the evidence: What considerations should be given to graduation requirements that are as equal a predictor or a better predictor of the desired secondary and postsecondary outcomes for students as high-stakes assessments and that result in fewer adverse consequences for historically underserved students? The research presented here illustrated that high school GPA consistently is a better predictor of bachelor's degree attainment than college admissions exams and that high school GPA is less strongly correlated with socioeconomic factors, resulting in a less adverse impact on historically underserved students. How might policy makers adopt and incentivize the inclusion of high school GPA among preferred indicators of postsecondary readiness and postsecondary success?

Recommendations for State Policy Makers

The following recommendations, in addition to the research featured throughout, are meant to empower policy makers—making critical decisions for students' future prospects—to implement and uphold an education system that is equitable and accessible for all students and to rethink both the purpose and the function of high-stakes assessments.

Recommendation One: Strongly Reconsider the Relevance of High School Exit Exams and Their Use

Prior research reveals inconsistent evidence of high school exit exams either increasing or decreasing student achievement. In fact, research points to non-effects on math and reading achievement across race and ethnicity and socioeconomic status.[73] Consequently, state policy makers should ask themselves if high school exit exams are truly relevant and beneficial if there is no apparent impact on student achievement and consider the degree to which exit exams are helping the state achieve its intended goals of college and career readiness. If these exams are not predictive of college and career readiness or postsecondary outcomes such as college completion, state leaders should question whether they should continue enforcing their passage as a graduation requirement—particularly if they are not being used for the purposes of state and federal accountability. If they are being used for state and federal accountability, should they too be used for student accountability given the disparate impact on historically underserved students as evidenced through prior research?

Recommendation Two: Give Greater Utility to High School GPA

In spite of concerns over grade inflation, research has demonstrated no overall pattern of grade inflation at the national level. When it is discovered locally it is more likely to be found in schools with more affluent students than in schools with large proportions of low-income students and students of color.[74] This should assuage concerns about the value of the GPA in high schools predominantly serving students from low-income households. Given the evidence provided about the predictive power of high school GPA (over and above college admissions exams), states should consider using GPA tied to college preparatory coursework as a potential indicator for state and federal accountability and as a measurement of college readiness at the student level. High school GPA should also be prioritized for college admissions given the adverse negative impact scores from college admissions exams have on historically undeserved students and their lower level of predictive validity in comparison with high school GPA.

States with graduation pathways models that include a requirement for students to meet a benchmark score on the SAT or the ACT should rethink this policy, given the greater power associated with the GPA and the far greater likelihood that historically underserved students will not meet college admissions exams or college readiness benchmarks, which could lead to students not graduating on time or dropping out altogether.

Recommendation Three: Consider Other Means for Assessing College and Career Readiness

High-stakes assessments reflect student performance in a single moment in time. They often do not take into account several variables that, ironically, are often controlled for in

statistical analyses—such as parent education level, income level, and race and ethnicity. If researchers control for these variables on the back end, should state education leaders be controlling for them on the front end when deciding how student knowledge should be assessed? As education leaders continue shifting to personalized-learning approaches across schools, districts, and states, finding a comparable, comprehensive, and robust way of assessing knowledge—one that is personalized to each individual student—has been slow to develop. State policy makers who adopt policies in support of personalized-learning approaches must agree with the belief that students are individual learners—with unique characteristics, backgrounds, and needs. Therefore, any form of comparable assessment should reflect this philosophy.

Many education leaders have considered the use of competency-based assessments. Although nascent in their form and utilization, competency-based exams such as those being implemented in New Hampshire and California might be the best known approach to solving this challenge.[75]

Recommendation Four: Align High School Graduation Requirements with College Admissions Requirements

Although many states are utilizing high-stakes exams as part of their high school graduation requirements in one form or another, very few states actually align their high school graduation requirements with their state university systems' college admissions requirements. States with a mission of college and career readiness for all students might choose this as their first policy challenge to tackle. Nearly every state has improved its academic standards, largely due to the adoption of the Common Core State Standards, but most states do not require students to meet the full breadth and depth of the standards, resulting in earned high school diplomas that lack the coursework required for admission to a state's university system. Recent research from the Center for American Progress shows that only six states have full alignment between the courses required for high school graduation and college admissions.[76] Although school districts often are given the latitude to have more rigorous course requirements for graduation than might be established at the state level, states set the expectations for what all students within a state should know and be able to do upon graduating from high school. States should align their high school graduation requirements with the admissions requirements for their main four-year university system(s) to better facilitate access and opportunity for all students.

Recommendation Five: Adopt Graduation Pathways with Intentionality

As states explore a shift to a graduation pathways model as found in Colorado, Indiana, Ohio, and other states, they must ensure the necessary resources, student supports, and faculty training be in place, implemented at scale and over a significant period of time before any real change in student outcomes should be expected. More, education leaders should solicit stakeholder engagement from a range of actors—including students, parents, teachers,

principals, superintendents, employers, representatives of higher education, the workforce development board, community-based organizations, civil rights organizations, etc.

Increasing access to more rigorous college and career pathways for all students requires a shift in practice at the local level, so states should phase in this policy across several years. Allowing graduation pathways to be phased in over a period of time will enable school districts and individual high schools to better comply with the requirements and ideally will provide equitable access for all students to participate in a pathway of his or her choice. Allotting more time for full implementation encourages quality, transparency, and fidelity of implementation.

Conclusion

It is unlikely that high-stakes assessments will ever face extinction in America. However, with the magnitude of research that questions their relevance (not exhausted in this paper), coupled with the disproportionate negative impact they have on communities of color and students from low-income families, it is time for states to reconsider the value tied to them.

Outliers, particularly among what makes a prospective college student most likely to succeed in college graduation, are strong. Geiser and Santelices note that high school GPA, test scores, and other factors that *are* known during the college admissions process together only account for 30 percent of the total variance in college grades—a whopping 70 percent is indiscernible.[77] Do state leaders want to continue to put so much of their stakes in what is minimally discerned?

More important, if there are graduation requirements that are *as equal a predictor* of the desired secondary and postsecondary outcomes *or a better predictor,* and result in less adverse consequences for historically underserved students, there is clearly an incentive for states to consider their adoption. The question then becomes: What considerations need to be made to implement these policies at scale?

Given these revelations, it may be time for states that prioritize high-stakes assessments among various decision points along a student's educational journey to consider whether their current value proposition, of preparing *all* students for college and career readiness, still holds true.

NOTES

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