

Closing the Rigorous Coursework Gap:

Supporting College & Career Readiness for Minnesota's Students of Color

November 2020



Closing the Rigorous Coursework Gap: Supporting College & Career Readiness for Minnesota's Students of Color

Contents

2	Introduction							
3	Aspirations vs. Reality							
5	Rigorous Coursework: Building Foundations & Tapping Potential							
7	Who Has Access to Rigorous Coursework?							
	8	Gifted & Talented						
	9	8th-Grade Algebra						
	9	Advanced Placement						
	11	International Baccalaureate						
	12 Earning College Credit While in High School							
		12 Concurrent Enrollment						
		13 Postsecondary Enrollment Options (PSEO)						
15	Recommendations for Increasing Access & Success							
22	A Call to Action							
23	Methodology, Definitions, & Data Sources							

24 Endnotes





Introduction

A high school credential is a major milestone, marking the end of years of learning and development. But even more important, it's supposed to signify a learner's readiness for the future. Each young person leaving our K-12 education system should have the knowledge and skills to succeed in college and forge the path to a rewarding career. Unfortunately, in Minnesota, we aren't living up to this ideal. For too many students—particularly those from historically underserved backgrounds we are falling short.

This report examines opportunities to advance college and career readiness for Minnesota students, with a specific focus on students of color and Native American students. We do this by looking at a key indicator of postsecondary success: who enrolls, advances, and has success in rigorous coursework. We start by looking at early gifted and talented programming and 8th-grade algebra, and going up through Advanced Placement (AP), International Baccalaureate (IB), Postsecondary Enrollment Options (PSEO), and concurrent enrollment. Future reports will explore the rigorous coursework landscape for students from low-income families, students with special needs, and English Learners.

We share our findings, grounded in insights from dozens of stakeholders at state agencies, nonprofits, service cooperatives, districts, schools, and community organizations, along with research and best practices from around the country. Most importantly, we share a series of policy recommendations that school leaders and policymakers can implement to better support students of color and Native American students on the path to success in college and career.

Q WHAT IS RIGOROUS COURSEWORK?

In this report, we explore pathways that provide advanced academic preparation and are meant to prepare students for success in postsecondary education and careers. We specifically look at:

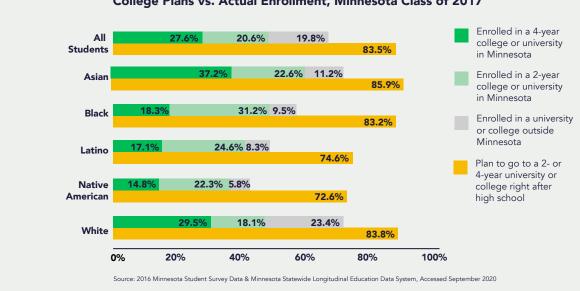
- Gifted and Talented Programming
- 8th-Grade Algebra 1
- Advanced Placement
- International Baccalaureate Diploma Programme
- Postsecondary Enrollment Options
- Concurrent Enrollment





Aspirations vs. Reality

Nearly 90% of parents want their children to attend college.¹ And it's not just parents. In Minnesota, the vast majority of high school students plan to attend college right after high school. But there's a major gap between aspiration and reality, even with graduation rates on the rise.

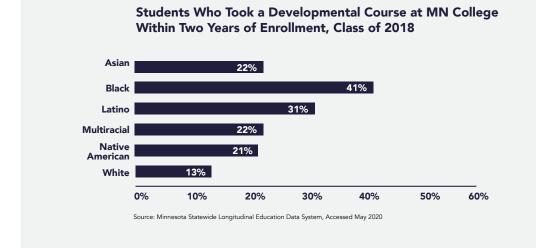


College Plans vs. Actual Enrollment, Minnesota Class of 2017

In recent years, high school graduation rates have risen for all student groups, and particularly for Black and Latino students.² However, outcomes beyond high school still lag behind where they should be.

Even though 84% of students from the class of 2017 planned on going to college, only 68% did. And when the data is disaggregated by race, we find the gap is even larger for students of color. Outcomes are not where they should be for college enrollment or for developmental education remedial credits that students must take based on college entrance or placement exam scores.





The differences in developmental education rates are particularly troubling. Students must pay for these courses, but they do not count toward credit requirements for degrees, diplomas, or certificates.³ Essentially, students are paying, and oftentimes accumulating debt, for classes that do not count towards graduation. Evidence also shows that developmental coursework doesn't help students advance toward success in postsecondary education. In fact, it's just the opposite: students who take developmental courses are significantly less likely to complete college.⁴

All of this translates into lower postsecondary graduation rates for students of color, and particularly for Native American, Black, Latino, and multiracial students. Taken as a whole, the data not only demonstrates that Minnesota's education system is not preparing all students equitably, but also calls into question whether we are graduating students who are equipped with the knowledge and skills to be truly prepared for college and career.

Why Postsecondary Access & Success Matters

Almost two-thirds of the fastest-growing occupations require some type of postsecondary education—whether it be a certificate, associate's degree, or bachelor's degree.⁵ These jobs are expected to grow at least twice as fast as jobs that only require a high school credential.⁶ Given this information, it is imperative that students are prepared with the skills and knowledge to succeed in postsecondary programming.

The benefits grow the further students travel through the postsecondary pipeline. Obtaining a bachelor's degree has a huge impact on health,⁷ retirement,⁸ employment,⁹ overall well being,¹⁰ and lifetime earnings.¹¹ Individuals with a bachelor's degree earn 74% more than those with a high school diploma and 31% more than those with an associate's degree. Furthermore, earning a bachelor's degree opens up possibilities for going on to earn graduate degrees, which further amplifies an individual's lifetime earnings.¹²

It is imperative we prepare all Minnesota students to have a legitimate opportunity to successfully enroll in and complete college. The bottom line is that all students should be set up to succeed in any path they choose to pursue. But right now, the reality is that for too many of Minnesota's students of color their aspirations are out of reach.





Rigorous Coursework: Building Foundations & Tapping Potential

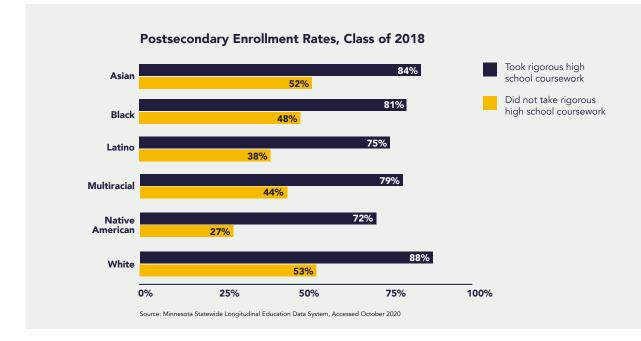
Early in the K-12 system, students enter tracks that can significantly increase their likelihood to succeed in college. However, decisions about which students have access are often based on teacher recommendations or aptitude tests, despite research showing that students who exhibit curiosity and motivation—even when they don't score as high on assessments—outperform their peers on a variety of educational outcomes when given the access to advanced courses.¹³ Research has also found that teachers, and particularly white teachers, are more likely to have pre-determined negative implicit biases towards students of color, which could lead to lower rates of referral for rigorous courses.¹⁴

This has long-term implications. Students who take rigorous courses outperform their peers across a variety of academic measures, including academic achievement, college entrance exams, high school graduation, college completion,¹⁵ and advanced degree attainment.¹⁶ Rigorous coursework also gives students the opportunity to earn college credit while they are still in high school, which can help them save time and money in college. Based on what we know about the subjective, biased nature of who is left out, it stands to reason that we could see similar outcomes for many more students if they are given the chance.

We looked at the longer-term data for Minnesota students who took rigorous courses in high school and found dramatically higher rates of college enrollment and graduation, along with much lower rates of enrollment in developmental education. In fact, students with rigorous course experience were nearly two times more likely to enroll in a college than those who didn't. This holds true across lines of race and ethnicity: 80% of students of color who took a rigorous course in high school enrolled in a postsecondary institution, as compared to 46% of students of color who didn't.

Moreover, only 16% of students of color who took a rigorous course in high school needed developmental education, as compared to 43% of students of color who didn't. This is important because, over the past decade, significant policy effort has gone toward reforming and reducing the need for developmental education.¹⁷ Much of this effort has focused on policy and program levers at the postsecondary level. While these efforts have resulted in some improvements, reducing developmental education rates at Minnesota colleges from 45% in 2011 to 32% in 2018, the stark remaining gap indicates that we must also look at levers much earlier in the K-12 experience.¹⁸





All of this translates into higher college completion rates—as well as higher rates of obtaining a bachelor's degree—for students who took rigorous coursework in high school.

Students Who Took a Developmental Course at MN College Within Two Years of Enrollment, Class of 2018 12% Took rigorous high Asian 39% school coursework 24% Did not take rigorous Black 53% high school coursework 20% Latino 41% 11% Multiracial 30% 17% Native American **6**% White 24% 0% 20% 80% **40**% 60% Source: Minnesota Statewide Longitudinal Education Data System, Accessed October 2020





Who Has Access to Rigorous Coursework?

While many students benefit from rigorous coursework, Minnesota students aren't on a level playing field when it comes to accessing these programs or receiving the support they need to succeed. For reasons we further explore in this section, Black, Latino, and Native American students, in particular, remain underrepresented. These gaps translate into real impact for thousands of Minnesota students of color.

If students of color were fairly represented across rigorous courses, this could equate to thousands more students enrolled in these opportunities each year, including:

- 5,667 more students identified for gifted and talented;
- 259 more enrolled in 8th-grade algebra;
- 4,937 more taking AP courses, and 1,934 more passing AP exams;
- 765 more passing IB exams;
- 6,079 more taking part in Concurrent Enrollment; and
- 537 more enrolling in PSEO.¹⁹

These estimates give a sense of the scope of the inequity in rigorous coursework problem in Minnesota. In this section, we further explore the barriers for each type of rigorous course, as well as the policy solutions to help expand access and success.

Q A NOTE ON THE DATA

Unfortunately, the data we present doesn't tell the full story of Minnesota students' experience because there is a lot of diversity within each racial and ethnic category. For Asian students in particular, this can skew the findings and mask nuances.

In 2016, the Minnesota Legislature passed the All Kids Count Act to better disaggregate student achievement data. We hope state leaders will continue to implement and build on this effort to provide more detailed and comprehensive data on how different student groups, from Hmong to Somali, are doing in our schools.



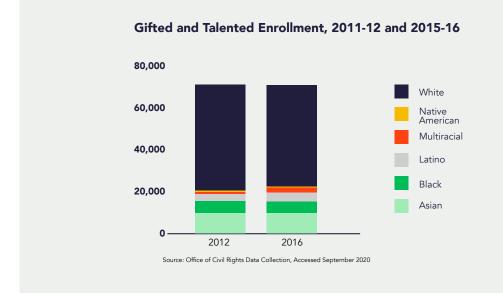
An Early Boost Through Gifted and Talented Programs

In elementary school, gifted and talented programs are one of the first opportunities for students to participate in accelerated or more rigorous programming, laying the foundation for success in future advanced coursework. These programs create more opportunities to ensure students are appropriately challenged and engaged, and support long-term outcomes like higher rates of college enrollment, graduation, and advanced degrees.²⁰

Unfortunately, for too many students of color, their talents are too often not identified through subjective referral systems. Black, Latino, Native American, and multiracial students remain underrepresented in gifted and talented programs. While enrollment has increased for multiracial and Latino students, participation has actually declined in recent years for Black and Native American students. And the impact compounds over time. In addition to missing out on more rigorous academics, research has also found that educator perceptions of Black children change when they participate in gifted and talented programs. In particular, educators are more likely to view them as capable or advanced,²¹ which can have implications for rigorous coursework access—as well as other measures related to teacher implicit biases like discipline and expectation—later on in their education.

Gifted and Talented Demographics, 2015-16										
Category	Asian	Black	Latino	Multiracial	Native American	White				
% of Gifted and Talented Enrollment	13.6%	8.2%	6.3%	3.4%	0.6%	67.8%				
% of Student Enrollment	6.5%	10.5%	9.4%	4.8%	1.6%	67.1%				

Source: Office of Civil Rights Data Collection and Minnesota Department of Education Enrollment Data, Accessed June 2020





8th-Grade Algebra: A Key Gateway to Advanced Math

Taking algebra I in 8th grade is an important milestone. Students who take it—regardless of prior preparation—are more likely to have higher academic achievement, graduate from high school, and go to college.²² Moreover, it better prepares them to make it through a full sequence of rigorous high school math.

And even though Minnesota statute requires that all students take an "algebra 1 credit by the end of 8th grade,"²³ there is still a long way to go to make this a reality. According to federal data, only about half of the state's students took an 8th grade algebra-one course, with lingering gaps across lines of race and ethnicity. However, gaps are smaller than other areas of rigorous coursework. District must continue to work to move the needle and ensure that all 8th grade students have access to algebra-one courses.

It's important to note that while there are some disparities in passage rates—something we must address to ensure students of color have the elementary foundations and educational supports to succeed—the vast majority of students who enroll ultimately pass. This provides a clear caution against tracking students into lower-level academics.

8th Grade Math Access & Success in Minnesota, 2015-16										
Category	Asian	Black	Latino	Multiracial	Native American	White				
% Enrolled	45.2%	49.8%	51.9%	49.5%	58.5%	56.6%				
% Passed	88.8%	79.3%	82.9%	81.2%	67.2%	92.9%				

Source: Office of Civil Rights Data Collection and Minnesota Department of Education Enrollment Data, Accessed November 2020

The Benefits of Advanced Placement

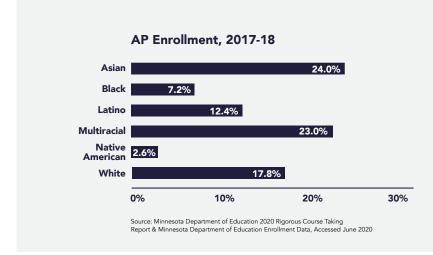
The Advanced Placement (AP) program offers college-level courses directly to high school students in subjects like English, math, history, and science. At the end of the year, students can take a formal exam, and if they receive a 3 or higher (out of 5), they may be eligible for college credit and course exemptions.

There is ample research illustrating the benefits of taking AP courses and exams. Students who participate in AP courses outperform their non-AP peers across a variety of academic measures, including academic achievement,²⁴ college entrance exams,²⁵ high school and college graduation rates,²⁶ and advanced degree attainment.²⁷

In Minnesota, AP courses are offered at about half of all high schools, and in 2018, more than 45,000 Minnesota students took at least one AP course.²⁸ While many still lack access to the program, AP enrollment has been on the rise over the past decade, with participation increasing by 51% since 2009. Participation for students of color has tripled during that same period, with enrollment for Black and Latino students growing the most.

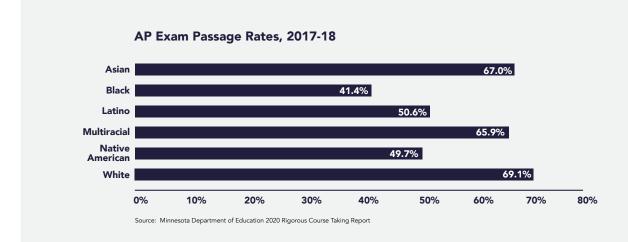
Despite this growth, Black, Latino, and Native American students are still underrepresented in AP courses. While about 17% of all students took an AP course in 2018, this rate drops to just 12% of Latino students, 7% of Black students, and less than 3% of Native American students.





While students benefit from simply taking more rigorous AP courses, the opportunity to have this translate into college credit is important. More Minnesota students are taking AP exams, with exam participation increasing by 52% since 2009. And for students of color, it has almost doubled. However, when we further disaggregate AP exam passage rates inequities emerge. While the average pass rate for all students was 66%, this ranges from 41% for Black students to 69% for white students. These differences in AP exam pass rates are significant because of the implications for college credit. If a student doesn't pass the exam, and in some cases if they don't receive a 4 or 5, then they will not receive college credit.

There are a myriad of potential reasons for the disparities in passage rates—instruction and preparedness, implicit biases, and more. However, given that AP is the largest and fastest-growing rigorous coursework program in Minnesota, districts and charter schools must work to raise their AP exam passage rates for students of color.



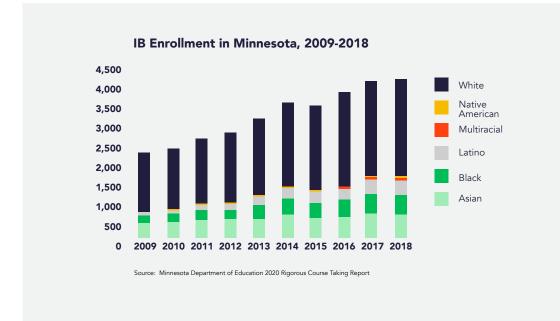


Disparities in International Baccalaureate Outcomes

The International Baccalaureate (IB) is a nonprofit, educational foundation that provides several programs, including a Diploma Programme (DP) for high school students. Schools can choose whether to offer IB, but they must make a significant commitment to support and staff the program, offering a comprehensive two-year pre-college curriculum with six subject groups and an IB core. Students earn an IB diploma if they earn a 4 or higher on the IB assessment, which can also translate into college credit.

Research has found that low-income students and students of color who participate in the DP have higher rates of high school graduation and college enrollment.²⁹ Overall, they also have higher GPAs, academic achievement, college graduation, and social and emotional engagement. While there are fewer disparities in IB enrollment than the other rigorous coursework options in Minnesota, there is still work to be done to ensure students don't miss out on the rigor, engagement, and support IB provides.

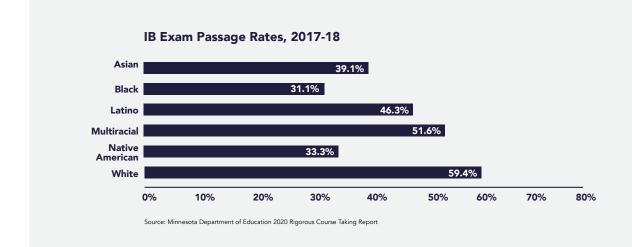
In Minnesota, 19 high schools offer the IB Diploma, serving just over 4,000 students. Participation among students of color in IB more than doubled in the past decade, from 645 students in 2009 to 1,563 in 2018. The student groups with the largest growth have been Black and Latino students. As a result, while students of color make up about 31% of the state's 9-12 enrollment, they make up nearly 39% of IB enrollment. This is driven primarily by program design: many of the high schools that offer IB are larger, more racially diverse schools. In fact, 53% of students at Minnesota's IB high schools are students of color.³⁰



While it's a positive that the IB program serves more diverse school communities, a closer look reveals underlying disparities that must be addressed. We continue to see gaps with IB passage rates, showing that there is much work to do when it comes to equitable program implementation and support. Overall, in 2018, 51% of students received a passing score on the IB exam, but only about one-third of Native American and Black students passed. Moreover, for almost all student groups, passage rates have been dropping over time, raising questions about program implementation, quality, and impact. Given that only 19 high schools have IB programs, and that IB demographics



are more diverse than any other program, districts and schools should analyze how program design is supporting or creating barriers to success in the program. This is critical because if a student doesn't pass the IB exams, then they do not receive the diploma and cannot receive college credit.



Earning College Credit While in High School

Minnesota has two types of dual enrollment programs where students can earn college credits while they are in high school: concurrent enrollment and postsecondary enrollment options (PSEO). There is a large body of research showing that students who participate in dual enrollment programs have higher academic achievement, perform better on state assessments, are more likely to graduate from high school, enroll in, and graduate from college, and are less likely to take developmental courses.³¹

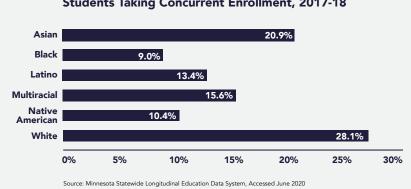
Given the benefits of dual enrollment, it should be a top priority to address the fact that students of color—particularly Black, Latino, and Native American students—are significantly underrepresented in these programs.

Increasing Access to Concurrent Enrollment

In 2018, more than 30,000 Minnesota students took part in concurrent enrollment—also known as "College in the Schools." The program allows high school students to take college courses during the regular school day. The courses are offered at the high school and can be taught by either qualified high school teachers or college faculty. Students earn both high school and college credit directly upon successful completion of the course, instead of through a high-stakes assessment like in AP or IB. Across the state, more than 320 districts and charter schools take part in the program, with 32,608 students earning 261,829 college credits in 2018.³²

While enrollment rates have risen over the past decade, Black, Latino, multiracial, and Native American students still take concurrent enrollment at about half the rate of white students. Overall, white students make up 83% of concurrent enrollment seats.³³ The prerequisites to participate in concurrent enrollment are set by the district and universities and may include things like placement test scores, GPA, or class rank. Disparities in concurrent enrollment rates are a sign that schools and districts must do more to make programming available and ensure more students are on track earlier in their education experience, so they are prepared to take advantage of these courses in high school.





Students Taking Concurrent Enrollment, 2017-18

Q WHO CAN TEACH CONCURRENT ENROLLMENT?

In 2015, the Higher Learning Commission (HLC), a national group that accredits postsecondary educational institutions in a 19-state region of the United States, clarified the rules around who is eligible to teach concurrent enrollment courses.³⁴ Specifically, high school teachers who teach concurrent enrollment must meet the same minimum qualifications as college faculty, meaning that they must have a Master's degree or higher in the discipline that they teach. If the high school teacher holds a Master's degree in another discipline, then they must have completed 18 graduate credits in the discipline in which they teach.

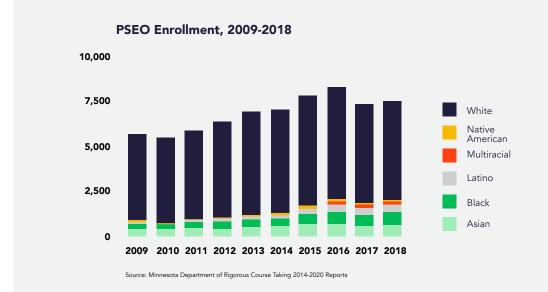
This change was controversial because it meant that many high school teachers could no longer lead instruction: 76% of high school staff teaching concurrent enrollment in Minnesota will be disqualified without further graduate education.³⁵ Despite significant pushback, HLC does not plan to amend the rule. Instructors have until 2022 to obtain a graduate degree or additional credits, and the Minnesota Legislature should provide funding to help them do so. Without support, schools will face major staffing shortages for concurrent enrollment, and Minnesota students will lose access to these courses.

A Jumpstart on College through PSEO

In 1985, Minnesota became the first state in the country to allow high school juniors and seniors to take courses at their local college. Through the Postsecondary Enrollment Options (PSEO) program, students enroll in courses taught by college instructors on college campuses and earn college credit at no cost. This allows students to enter college with some course requirements already met and with college credits, which can shorten time to completion for a degree and lessen the debt burden, while also allowing students to build college-level study and academic skills.

In 2018, 10,353 Minnesota students received an average of 15.6 college credits through PSEO.³⁶ While there are ongoing disparities in PSEO access, rates of enrollment have grown significantly over the past decade among Asian, Black, and Latino students. This is a trend Minnesota should support and accelerate, particularly given the benefits like shorter time-to-completion in college.³⁷ Unfortunately, Minnesota's current school funding model disincentivizes schools from promoting PSEO for fear of losing per-pupil funding. This doesn't support the best interest of students and should be revised.

Similar to concurrent enrollment, eligibility requirements are another key barrier. Minnesota State, for example, relies on class rank and ACT scores,³⁸ and the University of Minnesota sets a minimum GPA.³⁹ These requirements should be explored and amended to ensure students do not face artificial barriers to participation. Factoring in additional measures may provide access to more students who would benefit from more rigorous coursework.







Recommendations for Increasing Access & Success

The disparities in rigorous coursework participation—particularly for Black, Native American, and Latino students—are not a given. By changing policy and practice, we can better support students' access to these programs and set them up for success. There are several things that state and local leaders can do to address the inequities, in many cases building off of promising practices already driving change in other states.

RECOMMENDATION 1 Increase Access through Automatic Enrollment

Recent research analyzed outcomes for students at over 500 California middle schools that use 7th-grade achievement to place students in 8th-grade algebra.⁴⁰ They found that enrolling students in 8th-grade algebra boosts their chances of taking advanced math courses by 30 percentage points in 9th grade and 16 percentage points in 11th grade. Importantly, women, students of color, and English learners disproportionately benefited from access to the accelerated coursework.

Today, however, there is bias in who gets access to advanced coursework in Minnesota. Students generally opt-in due to personal interest, teacher recommendation, or parent encouragement. Unfortunately, this means that some qualified students miss out on opportunities to engage in the rigorous coursework that will set them up for future success. Some states are starting to flip this by making rigorous course enrollment the default for students who passed and/or demonstrated proficiency in the prerequisite courses, ensuring that students who might otherwise be overlooked through traditional means have the opportunity to participate.

Across the country, four states—Colorado, Nevada, North Carolina, and Washington—have passed bipartisan automatic enrollment policies. As a result, more students are getting access to rigorous academics. And, the change is helping reduce disparities in access to advanced coursework for traditionally underserved students.



While state-level action can drive change for students in all corners of the state, this is something schools and districts can also take action on independently. Superintendents and school boards can adopt policies that reduce bias in identifying students for advanced coursework, including adopting an automatic enrollment policy, even without statewide action.

Q SAMPLE STATE AUTOMATIC ENROLLMENT POLICIES

Statewide Automatic Enrollment in Washington: Building off a 2013 pilot program, in 2019, Washington required all districts to adopt an automatic enrollment policy for any student who meets or exceeds the state standard for language arts, science, or mathematics after 8th grade. Since 2013, enrollment in advanced classes for the Tacoma Public Schools—the state's fourth-largest school district—has more than doubled from 28% to 71% of students.⁴¹ The change has helped students from all demographic groups, with advanced course enrollment tripling for students of color, from 20% to 60%.

Math Acceleration in North Carolina: In 2018, North Carolina passed legislation requiring all students who score the highest level on their end-of-grade tests be automatically placed in an advanced math class the following year. In just one year, the Department of Public Instruction estimates that as many as 10,000 students were given access to advanced math courses that they would otherwise not have had.

Funding in Colorado: In 2019, Colorado created a grant program to incentivize automatic enrollment policies. Local education agencies can apply for supplemental funding for programs that enroll students who are proficient in mathematics, English, science, and social studies into the most advanced course for their grade and subject.

Local Planning in Nevada: In 2019, Nevada passed a bill that will require schools to build a plan to automatically enroll students in grades 3-12 in more rigorous mathematics, English, and social studies courses if they are proficient on the state's standards-aligned assessments.

RECOMMENDATION 2 Implement Universal Gifted & Talented Screening

Research suggests that universal screening is more effective in identifying students for gifted and talented programs than teacher recommendations.⁴² In 2014, Colorado passed a bill that allowed districts to apply for funds to help offset the costs for universal screening. Denver Public Schools used the funds and switched to universal screening, which resulted in twice the proportion of Latino students being identified for gifted and talented programming.⁴³ Minnesota should both require universal screening and support districts with the funding to make it possible.

RECOMMENDATION 3

Support Concurrent Enrollment Teacher Credentialing

In 2016, the Minnesota Legislature allocated \$3 million on a one-time basis for the Northwest Regional Partnership—a voluntary association of Lakes Country Service Cooperative, Northwest Service Cooperative, and Minnesota Statute University-Moorhead—to develop and provide high-quality opportunities for concurrent enrollment teachers to earn additional graduate-level



credentials in their subject area.⁴⁴ Through this partnership, 605 teachers from 196 districts across Minnesota have enrolled in the program.⁴⁵

Given the benefits of concurrent enrollment, the Minnesota Legislature should reinvest in this program and expand the model to other universities and service cooperatives that can help teachers meet the minimum faculty qualifications.

RECOMMENDATION 4

Adopt Multiple Measures for Dual Enrollment Eligibility

Despite the benefits of dual enrollment, many students miss out because of performance-based requirements. For PSEO, Minnesota State sets eligibility criteria based on class rank and ACT scores,⁴⁶ and the University of Minnesota sets a minimum GPA.⁴⁷ For concurrent enrollment, at Central High School, students must be in the top 20% of of their class⁴⁸ and North Hennepin Community College sets a minimum GPA.⁴⁹

This leaves out many students who may thrive in college-level coursework. Not only can middleachieving students succeed in college-level work with the right support, but they can sometimes derive even more benefit from the experience than students who were already likely to attend college.⁵⁰ This can even be the case for some students who historically struggled with high school.

Some states are moving to more holistic, multiple-measure approaches to ensure that qualified, prepared students aren't overlooked. Alternative criteria that can be used to predict a student's success in dual enrollment include:

- Regular high school attendance;
- Projects, portfolios, and performance assessments;
- Interviews and personal statements;
- Student self-recommendation;
- Comprehensive review of a student's academic record;
- GPA performance over time (demonstrating improvement); and
- Teacher nomination.⁵¹

Absent a state mandate, similar action can still be taken at the college level. Postsecondary institutions and districts should audit their dual enrollment requirements to ensure they are not creating arbitrary barriers for students.

Q SAMPLE POLICIES TO REMOVE ELIGIBILITY BARRIERS

Delaware: Students can qualify for dual enrollment based on multiple indicators of readiness. Schools must look at a combination of measures like test scores, grades, teacher recommendations, and portfolios.

Illinois: State law doesn't lay out specific measures, but instead requires the Illinois Community College Board and the Board of Higher Education to develop policies that consider multiple, differentiated measures for eligibility.

Nebraska: While schools look first at a GPA or assessment metric, students may also demonstrate their capacity for success through an alternative means—like portfolios, letters of recommendation, or talent exhibitions.



RECOMMENDATION 5

Make Smart Investments to Expand Access

Minnesota invests about \$40 million each year so students can have access to rigorous coursework, including paying for exam fees, teacher professional development, and more.⁵² As state leaders make budget cuts due to COVID-19, these are investments they should seek to protect. Cuts would have a disproportionate impact on students from low-income families and in high-poverty districts.

In the long-term, Minnesota should explore how current funding streams could be improved or supplemented to increase access for traditionally underserved students. For example, the state could provide additional dedicated funding to districts and schools that serve primarily low-income students to increase the number of rigorous courses, purchasing the necessary materials, providing transportation to students in isolated or underserved areas, and/or supporting teacher training.

We also heard from stakeholders that the Legislature should consider amending the PSEO funding formula so that districts and charter schools are incentivized to promote and expand the program to more students who would benefit from it. Under the current K-12 funding formula, high schools do not receive full per-pupil funding when a student is in PSEO, which leads to districts preferencing rigorous coursework programs and results in too many students missing out on the opportunity to participate in PSEO.

Q MINNESOTA'S CURRENT INVESTMENTS IN RIGOROUS COURSEWORK

Minnesota statute requires that the state pay for all or part of AP and IB exam fees.⁵³ The state also covers the cost of teacher training for AP and IB instructors. Since 2006, the Legislature has appropriated \$4,500,000 per year for these costs.

The PSEO program is also state-funded, with no cost for students to participate. PSEO funding pays for tuition, fees, and required textbooks at the postsecondary institution. Funds are also available to help pay transportation expenses for PSEO students whose families are at or below the poverty level. In 2018, students saved \$32,762,430 in tuition thanks to PSEO alone, and likely far more after accounting for AP, IB, and concurrent enrollment credits.

RECOMMENDATION 6

Improve Data & Transparency to Measure Progress

All school districts in Minnesota are required to report to the Minnesota Department of Education (MDE) on the courses they offer, who enrolls, and other basic details through the Minnesota Common Course Catalogue (MCCC).⁵⁴ It's important to have a comprehensive understanding of which rigorous courses schools are offering and which students are taking and passing them to determine if there is equitable access. Unfortunately, in 2018 only 42% of districts reported to the MCCC. This means that, while we have broad state-level metrics, we cannot accurately gauge if there are discrepancies by school, district, and subject.

Minnesota needs to start enforcing the requirement to report MCCC data. This would make information about the types and number of courses in each school, as well as the number and racial composition of students—among other student descriptors—available to the public. Having a better handle on course offerings across schools and districts would not only help identify inequities in advanced core coursework; it would also help measure access to electives like art and music.



MDE should make this a priority, and elected leaders should hold them accountable to doing so. With a functional MCCC, Minnesota can set clear, measurable goals for advancing access to and success in rigorous coursework and use data to identify barriers that prevent students of color from participating.

RECOMMENDATION 7 Empower Students to Know their Options

There are many options for coursework that can accelerate learning and sometimes earn college credit. But often, students and families don't have good information on everything that's available, and the pros and cons of each option. Despite language requiring schools and districts to post information about academic options that can lead to college credit, local advocates have found that this too often isn't happening in a way that's accessible to all students and families.⁵⁵

Currently, Minnesota statute requires districts to have current PSEO information, including enrollment requirements, on the district's website by March 1 of every year.⁵⁶ The Legislature should both enforce and expand this policy, requiring that districts provide accurate, actionable information about all rigorous coursework opportunities—including eligibility, what is offered locally and what is not, benefits of taking courses, potential financial benefits, and responsibilities for participants. This information should go proactively to all students and families and be made available in the family's primary language.

The Minnesota Legislature should also permanently remove the "PSEO gag rule"—a provision in state law that prohibits colleges from advertising the program's financial benefits to high school students.⁵⁷ Revoking this prohibition would increase transparency and ensure that students and families have the most comprehensive information possible about which rigorous coursework program is best for them.

Q STATEWIDE FAMILY NOTIFICATION POLICY

Empowering Families and Students in Tennessee: In 2019, Tennessee passed a law that requires districts to notify parents and students enrolled in grades 9-12 of all early college and career experiences offered for each upcoming school year.

RECOMMENDATION 8 Remove Programmatic and Logistical Barriers to Rigorous Coursework Access

Even with a strong academic preparation, many students still face barriers to rigorous coursework that policymakers too often take for granted. For students who want to participate in PSEO, lack of access to transportation or subsidized meals that are standard in the K-12 setting could exclude them from participating.⁵⁸ While low-income families are eligible for some transportation reimbursement under current law, it doesn't fully meet the needs of all students. Policymakers can continue to remove these barriers through targeted investments and support, either directly to students and families or to schools that help coordinate additional services.



Access to strong, personalized counseling can also ensure students access the most rigorous programming possible. The recommended student-to-counselor ratio is one counselor for every 250 students.⁵⁹ However, in Minnesota there is only one counselor for every 654 students.⁶⁰ Particularly for aspiring first generation college students, lack of access to a strong counselor can lead to major missed opportunities, from critical coursework to key paperwork like the FAFSA, ultimately exacerbating generational inequities. There are a number of policy solutions the Legislature could consider to address this issue, from requiring every school to have a counselor to strengthening the counselor pipeline through district-college partnerships.

RECOMMENDATION 9 Expand College and Career Readiness Measures in World's Best Workforce

In 2013, the Legislature passed the World's Best Workforce law, setting a strategic framework for improving student success in Minnesota. And while one of the goals is to ensure that all Minnesota students are prepared and ready for success in college and career, there are currently no measures of access to rigorous coursework. Given the positive benefits of rigorous coursework, the Legislature should amend the statute to include specific measures of this key lever:

- Student enrollment in rigorous coursework;
- Rates of students taking exams; and
- Exam passage rates.

To better identify districts and schools where there are disparities—as well as to elevate where there are successes—reporting on all of the measures must also be disaggregated by race, income, and whether the student receives special education services or is an English Learner.

RECOMMENDATION 10 Add Measures of College and Career Readiness to ESSA Plan

In addition to World's Best Workforce, which tracks progress toward key state-level measures and holds districts accountable to them, Minnesota also measures outcomes at the school level through the federal Every Student Succeeds Act (ESSA). While this is a federal law, it is up to each state to determine which measures should be included to measure school performance. Currently Minnesota only looks at proficiency and growth in reading and math, English Learner proficiency, graduation rates, and attendance.

Minnesota should follow suit of 36 states and add a measure of college and career readiness.⁶¹ With better MCCC data, as described in recommendation 6, this measure could address access, participation, and success in advanced coursework, broken down across race and ethnicity, socioeconomic status, English Learners, students with special needs, and homeless.



RECOMMENDATION 11 Take State-Level Action to Audit and Improve Rigorous Coursework

First, the Office of the Legislative Auditor (OLA) should audit the impact of rigorous coursework programs in Minnesota to determine what changes should be made to increase access, participation, and success.

Then, given the high stakes and many levers needed to improve access and success in rigorous coursework, a state-level task force with representation from multiple agencies and perspectives could help elevate the conversation and drive change. This group could build off the work of the existing Minnesota P-20 Education Partnership, while bringing additional community partners to the table—including parents and students—in addition to legislators who are committed to making rigorous coursework more accessible.

RECOMMENDATION 12 Promote District Action to Lead the Way

Statewide policy is a critical lever to ensuring broad, system-wide change. But that doesn't prevent districts from going farther and faster to play a leadership role on these issues. In addition to acting on the recommendations outlined above, there are other changes that can increase access to rigorous coursework at the local level.

First, schools and districts should audit their rigorous coursework programming to see if they have fair representation in their enrollment, exam taking, and passage rates. If they find discrepancies, then they should create a plan in collaboration with families, students, and educators, and set measurable goals to rectify the gaps.

Second, they can help move the needle with targeted professional development to support strong teaching in advanced courses that can help teachers be more familiar with the content and expectations, the types of support that help students thrive, as well as regular training in implicit biases. The latter is important: All teachers bring implicit bias to the classroom, but the impact can be mitigated when educators work to identify, unpack, and address their biases. When that doesn't happen, it drives racial discipline disparities⁶² and impacts student achievement⁶³ and engagement.⁶⁴ A recent analysis found that, relative to their Black colleagues, white teachers were less likely to expect a Black student to earn a college degree.⁶⁵ In a state where 96% of the teaching force is white, this puts Black students at a significant disadvantage.

Moreover, only 41% of Minnesota teachers (vs. 53% nationally) said their preparation programs effectively prepared them to teach students who have a different identity or background, making it necessary for districts to provide additional professional development.⁶⁶

Finally, districts must ensure that their curriculum and course sequencing pathways prepare all students to enroll and succeed in rigorous coursework.





A Call to Action

In today's world, a high school credential is an important first step—but for many professions, it is no longer enough. Families and students know this, and no matter what their aspirations are for the future, most students hope to attain some additional education after high school.

We can only consider our education system a success if we're truly preparing each and every student to have that option. We hope educators and policymakers will consider the recommendations laid out in this report and bring them back to their networks to spark conversations and collaborative action leading to more students—particularly Native American students and students of color—prepared for college and career. Our students don't have time to wait.





Methodology, Definitions, and Data Sources

In this report, we use data from the following resources:

- Gifted and Talented Participation: 2015-16 Civil Rights Data Collection
- 8th-Grade Algebra 1 Participation and Passing Rates: 2015-16 Civil Rights Data Collection
- Advanced Placement, International Baccalaureate, Postsecondary Enrollment Options, and Concurrent Enrollment: Minnesota Department of Education Rigorous Course Taking Reports from 2013-2020
- International Baccalaureate Exam Participation and Passage Rates: Minnesota Department of Education Rigorous Coursework Reports from 2013-2020
- Advanced Placement Exam Participation and Passage Rates: College Board's Archive Data
- Student Enrollment: Minnesota Department of Education Data Reports
- Postsecondary Enrollment, Developmental, and Graduation Data: Statewide Longitudinal Education Data System

Fair Representation Calculations

On page 7, we estimate how many more students would be served if students of color were fairly represented across rigorous courses. Ideally, we would expect their share of enrollment overall to be similar to their share of enrollment in the advanced course. To start, we narrowed enrollment to only look at the grades where that student would've been eligible to take the course:

- For AP and IB Enrollment, we used student enrollment data for grades 9-12; and
- For PSEO and Concurrent Enrollment, we used student enrollment data for grades 11 and 12.

If a student group was not fairly represented, we worked to estimate the gap between actual and expected enrollment.

How did we do this? Let's use Advanced Placement enrollment as an example. White students were most heavily represented in Advanced Placement. We used this as the benchmark for "full"



enrollment. We used this to create an estimate of how many students would be enrolled across the entire program if all were represented at this same rate: a total of 48,063. We then broke this number down based on the percentage of students enrolled from each racial group. This gave us an estimate of expected enrollment for each demographic group. Then, we subtracted the actual enrollment from the expected enrollment: The difference is how many more students should be enrolled to get fair representation.

We used a similar method for AP and IB exam passage. If all groups passed at the same rate as the group with the highest passage rate (white students), how many more would pass exams? While these calculations are imperfect, they help quantify the actual impact of inequitable access and supports for Minnesota students of color.

Endnotes

1 Education Next. (2017). *The 2017 EdNext Poll on School Reform*. https://www.educationnext.org/2017-ednext-poll-school-reform-public-opinion-school-choice-common-core-higher-ed/#_highereducation

2 Minnesota Report Card, Accessed June 2020.

3 Minnesota State. (2018). Developmental Education Plan Report to the Legislature. https://www.minnstate.edu/system/asa/ docs/Minnesota%20State%20-%20Developmental%20Education%20Plan%20Report%20to%20the%20Legislature%20-%20 2.15.18.pdf

4 Minnesota Office of Higher Education. (2018). Getting Prepared 2018: Developmental Education Course-Taking of High School Graduates, Classes 2009-2017. http://www.ohe.state.mn.us/pdf/Getting_Prepared_2018_Final.pdf

5 Khine, K. (2019). A Greater Number of Jobs Require More Education, Leaving Middle-Skill Workers with Fewer Opportunities. The University of Virginia. http://statchatva.

org/2019/05/10/a-greater-number-of-jobs-require-more-education-leaving-middle-skill-workers-with-fewer-opportunities/

6 Rolen, E. (2019). Occupational Employment Projections Through the Perspective of Education and Training. U.S. Bureau of Labor Statistics. https://www.bls.gov/spotlight/2019/education-projections/pdf/education-projections.pdf

7 Woolf, S., Aron, L., Dubay, L., Simon, S., Zimmerman, E. Luk, K. (2015). *How are Income and Wealth Linked to Health and Longevity? The Urban Institute*. https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf

8 Tamborini, C., Kim, C., & Sakamoto, A. (2015). Education and Lifetime Earnings in the United States. Demography 52: 1383-1407.

9 OECD. (2012). Education at a Glance 2014: Highlights. OECD Publishing. https://www.oecd-ilibrary.org/docserver/eag_ highlights-2014-en.pdf?expires=1601828942&id=id&accname=guest&checksum=E8225E587DC58A28A923AD3DAC7073AF

10 Economic and Social Research Council. (2014). The wellbeing effect of education. https://esrc.ukri.org/files/news-events-and-publications/evidence-briefings/the-wellbeing-effect-of-education/

11 Carnevale, A., Rose, S., & Cheah, B. (2011). The College Payoff: Education, Occupations, Lifetime Earnings. Georgetown University Center on Education and the Workforce. https://www2.ed.gov/policy/highered/reg/hearulemaking/2011/ collegepayoff.pdf

12 Ibid.

13 Kaufman, S. (2017, July 24). Schools Are Missing What Matters About Learning. The Atlantic. https://www.theatlantic.com/education/archive/2017/07/the-underrated-gift-of-curiosity/534573/

14 Gershenson, S., Holt, S., Papageorge, N., (July 2015). Who Believes in Me? The Effect of Student-Teacher Demographic Match on Expectations. Upjohn Institute for Employment Research. https://doi.org/10.17848/wp15-231; Center for Great Public Schools. (2018). Confronting Implicit Biases Through Exemplary Educator Preparation. National Education Association.



15 Ackerman, P., Kanfer, R., and Calderwood, C. (2013). *High School Advanced Placement and Student Performance in College:* STEM Majors, Non-STEM Majors, and Gender Differences. Teachers College Record; Hughes, K., Rodriguez, O., Edwards, L. & Belfield, C. (2012). *Broadening the Benefits of Dual Enrollment*. Community College Research Center; International Baccalaureate. (2011). *Key findings from research on the impact of IB programmes*. https://www.ibo.org/globalassets/publications/become-an-ibschool/research-dp-findings-en.pdf.

16 Bleske-Rechek, A., Lubinksi, D., & Benbow, C.P. (2004). Meeting the educational needs of special populations: Advanced placement's role in developing exceptional human capital. Psychological Science. https://psycnet.apa.org/record/2004-12664-001

17 Minnesota State. (2018). Developmental Education Strategic Roadmap: Minnesota State's Strategic Plan for Developmental Education Redesign. https://www.minnstate.edu/system/asa/studentaffairs/academicreadiness/docs/Developmental-Education-Strategic-Roadmap.pdf

18 Minnesota Statewide Longitudinal Education Data System, Accessed June 2020.

19 Go to page 23: Methodology, Definitions, and Data Sources

20 Lubinski, D., Webb, R. M., Morelock, M. J., & Benbow, C. P. (2001). Top 1 in 10,000: A 10 year follow-up of the profoundly gifted. Journal of Applied Psychology.

21 Patrick, K., Socol, A., & Morgan, I. (2020). Inequities in Advanced Coursework: What's Driving Them and What Leaders Can Do. The Education Trust.

22 Walters, K., Cade, W., de la Torre, M., Rickles, J., & Eisner, R., (2018). *Expanding Access to 8th Grade Algebra: Does Readiness Matter?* American Institutes for Research. https://appam.confex.com/appam/2018/webprogram/Paper27790.html

23 Minnesota Statute 120B.024.

24 Ackerman, P., Kanfer, R., & Calderwood, C. (2013) High School Advanced Placement and Student Performance in College: STEM Majors, Non-STEM Majors, and Gender Differences. Teachers College Record; Mo, L., Yang, F., Hu, X., & Calaway, F. (2011). ACT Test Performance by Advanced Placement Students in Memphis City Schools. The Journal of Educational Research; Flowers, L., (2008). Racial differences in the impact of participating in Advanced Placement programs on educational and labor market outcomes. Educational Foundations.

25 Ibid.

26 Ibid.

27 Flowers, L., (2008). Racial differences in the impact of participating in Advanced Placement programs on educational and labor market outcomes. Educational Foundations; Bleske-Rechek, A., Lubinski, D., & Benbow, C. P. (2004). Meeting the educational needs of special populations: Advanced Placement's role in developing exceptional human capital. Psychological Science.

28 Minnesota Office of Higher Education Advanced Placement website. Accessed June 2020. http://www.ohe.state.mn.us/dPg. cfm?pageID=1068

29 International Baccalaureate. (2011). Key findings from research on the impact of IB programmes. https://www.ibo.org/globalassets/publications/become-an-ib-school/research-dp-findings-en.pdf

30 Minnesota Department of Education 2020 Rigorous Course Taking Report and Minnesota Department of Education Report Card, Accessed August 2020.

31 Zeiser, K. (2020). Evidence of Effectiveness for Early College High Schools. American Institutes for Research. https://www.air.org/ resource/evidence-effectiveness-early-college-high-schools

32 Minnesota Department of Education. (2020). Rigorous Course Taking: Advanced Placement, International Baccalaureate, Concurrent Enrollment and Postsecondary Enrollment Options Programs.

33 Ibid.

34 Higher Learning Commission Board of Trustees. (October 2015). Determining Qualified Faculty through HLC's Criteria for Accreditation and Assumed Practices. Higher Learning Commission."

35 Education Minnesota, the Minnesota State College Faculty, the Inter-Organization Faculty, and Minnesota State. (2016). White Paper: Concurrent Enrollment Comprehensive Plan for Program Sustainability and for Instructors Meeting Minimum Faculty Qualifications.

36 Minnesota Department of Education. (2020). Rigorous Course Taking: Advanced Placement, International Baccalaureate, Concurrent Enrollment and Postsecondary Enrollment Options Programs.

37 Geise, M.J., Knight, W. (2011). A Longitudinal Analysis of Outcomes Associated with Ohio's Postsecondary Enrollment Options Program. Association for Institutional Research.

38 Minnesota State's Post-Secondary Enrollment Options website. Accessed September 2020. https://www.minnstate.edu/admissions/pseo/index.html

39 University of Minnesota Post-Secondary Enrollment Options website. Accessed September 2020. https://ccaps.umn.edu/ post-secondary-enrollment-options-pseo



40 McEachin, A., Domina, T., & Penner, A. (2019). One course, many outcomes: A multi-site regression discontinuity analysis of early Algebra across California middle schools. Annenberg Institute at Brown University. https://www.edworkingpapers.com/sites/default/files/ai19-153.pdf

41 Stand for Children Press Release. (2019). First-in-Nation Law to Reduce Barriers to Advanced Classes for All Students Adopted in Washington State.

42 Card, D., & Giuliano, L., (2015). Can Universal Screening Increase The Representation of Low Income and Minority Students in Gifted Education. National Bureau of Economic Research. https://www.nber.org/papers/w21519.pdf.

43 Schmike, A. (2017). Denver Public Schools is identifying more students of color as highly gifted, but big disparities remain. Chalkbeat-Colorado.

44 Strom, T. (2019). Concurrent Enrollment Teacher Training Programs. Minnesota House Research. https://www.house.leg.state. mn.us/hrd/bs/91/hf1907.pdf

45 Kovash, J. (2020). Regional Partnership: Concurrent Enrollment Teacher Training Program Report to the Legislature. Lakes Country Service Cooperative. https://www.leg.mn.gov/docs/2019/mandated/190105.pdf

46 Minnesota State's Post-Secondary Enrollment Options website. Accessed September 2020. https://www.minnstate.edu/admissions/pseo/index.html

47 University of Minnesota Post-Secondary Enrollment Options website. Accessed September 2020. https://ccaps.umn.edu/ post-secondary-enrollment-options-pseo

48 Central High School College in the Schools website. Accessed September 2020. https://www.spps.org/domain/1711

49 North Hennepin Community College Concurrent Enrollment website. Accessed September 2020. https://www.nhcc.edu/academic-programs/college-credit-in-high-school/concurrent-enrollment

50 College in High School Alliance. (2020). Policy Snapshot: Improving Eligibility Requirements for Dual Enrollment Programs. https://static1.squarespace.com/static/589d0f90ff7c507ac483988e/t/5f6a0b0f52113c07279c0418/1600785167436/ POLICY+SNAPSHOT+-+DUAL+ENROLLMENT+ELIGIBILITY.pdf

51 Ibid.

52 Minnesota Department of Education. (2020). Rigorous Course Taking: Advanced Placement, International Baccalaureate, Concurrent Enrollment and Postsecondary Enrollment Options Programs.

53 Minnesota Statute 120B.128

54 Minnesota Department of Education (n.d). *Minnesota Common Course Catalogue*. https://education.mn.gov/MDE/dse/datasub/MCCC/

55 Center for School Change. (2020). Dual Credit Opportunity & Equity Indeed. https://centerforschoolchange.org/wp-content/uploads/2020/01/FINAL-Dual-Credit-Opportunity-and-Equity-Indeed.pdf

56 Minnesota Statute 124D.09

57 Ibid.

58 Hodge, A., LaFloe, B., & Jackson, Z. (2020, February 20). Dual Credit is a way to close opportunity gaps. MinnPost.

59 American School Counselor Association. (2019). ASCA Position Statements. https://www.schoolcounselor.org/asca/media/asca/PositionStatements/PositionStatements.pdf

60 Common Core of Data. (2019). State Nonfiscal Elementary/Secondary Education Survey. U.S. Department of Education National Center for Education Statistics.

61 Graziano, L. & Aldeman, C. (2020). College and Career Readiness, or a New Form of Tracking? Bellwether Education Partners."

62 Gilliam, W., Maupin, A., Reyes, C., Accavitti, M., & Shic, F. (2016). Do early educators' implicit biases regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions? Yale University Child Study Center.

63 Moeny, J. (2014). Study: 'Pygmalion Effect' Links Teacher Expectations to Student Success. Education Week.

64 Bonesrønning, H. (2008). The Effect of Grading Practices on Gender Differences in Academic Performance. Bulletin of Economic Research, pages 245–64.

65 Gershenson, S. & Papageorge, N. (2018). The Power of Teacher Expectations. Education Next.

66 Educators For Excellence. (2020). Voices from the Classroom: A Survey of America's Educators. Educators For Excellence.





Our Mission

EdAllies partners with schools, families, and communities to ensure that every young Minnesotan has access to a rigorous and engaging education. We advance policies that put underserved students first, remove barriers facing successful schools and programs, and foster an inclusive conversation about what's possible for students.

edalliesmn.org



This report was made possible with generous support from the Joyce Foundation.