COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
George Mason University

Research Evidence to Inform Practice

Opening the Door Is Not Enough:

Advanced Coursework, Equitable Access, and the Enrollment Gap

A Research Brief on Promoting Equitable Participation in Advanced K–12 Coursework

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Advanced coursework, such as honors, gifted, and accelerated classes, play a well-documented role in improving student achievement and opening pathways to future academic opportunities.[i] A growing body of rigorous research shows that students who participate in these programs tend to experience greater academic engagement and stronger long-term outcomes, including increased college readiness.[ii]

Recognizing these benefits, many school districts have moved to broaden access by adopting open-enrollment, opt-in policies that allow any student to enroll in advanced courses. These efforts represent an important step toward equity. However, **opening the door does not guarantee that all students walk through it.**

This brief draws on two sources of evidence. First, we synthesize peer-reviewed research on the effects of advanced coursework on student outcomes and on the well-documented disparities in participation. Second, we present findings from a rigorous empirical analysis conducted in partnership with a medium-sized public school district that recently introduced open-enrollment advanced English Language Arts (ELA) courses at the middle school level.

The district analysis found that intensified ELA coursework is associated with modest positive achievement effects, and these findings held across multiple robust analytical approaches. Critically, it also revealed that **academically prepared Black, Hispanic, and low-income students enroll at substantially lower rates than observably similar peers, even in a fully open-enrollment setting.**

The broader research literature helps explain why these gaps likely persist and points toward evidence-informed strategies that districts in similar situations might consider. For the partnering district, these findings provide a diagnostic that no general literature review could offer: a precise identification of which students appear well-positioned to benefit from advanced coursework but are not enrolling. Research on evidence use in education suggests that locally generated, context-specific analysis is more likely to inform practice than findings produced externally alone.[iii]

This brief contributes in three ways:

(1) it synthesizes rigorous research on advanced coursework and access

(2) it presents district-specific diagnostic findings to inform practice and policy

(3) it identifies evidence-informed strategies for closing participation gaps

Synthesizing Prior Work

Effects on Student Outcomes

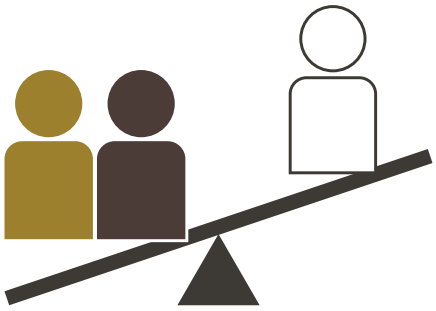
A substantial body of research documents the positive effects of advanced coursework on student achievement. A comprehensive synthesis of approximately 100 years of research on ability grouping and acceleration found that students consistently benefited from various forms of academic grouping and acceleration, with meaningful positive effects on achievement across multiple program configurations. Research on Advanced Placement (AP) programs specifically has found associations with stronger college preparation, higher exam performance, and increased college enrollment. Early access to advanced coursework can open pathways to AP and International Baccalaureate (IB) programs, which are associated with college readiness and admissions advantages.[iv]

At the same time, research highlights a dual challenge: expanding access to advanced coursework while maintaining its effectiveness. A major review of the AP program characterized this as the central tension facing advanced coursework policy: ensuring that broadened participation does not come at the cost of program quality, while also ensuring that quality is not preserved by restricting access to already-privileged students.[v]

Persistent Equity Gaps in Access

Despite decades of effort, significant disparities in access to advanced coursework persist along racial, ethnic, and socioeconomic lines. National data show that Black and Hispanic students are substantially underrepresented in AP, honors, and gifted programs relative to their share of the student population.[vi] Research mapping enrollment gaps across thousands of school districts has documented widespread White–Black and White–Hispanic participation gaps in both AP and dual enrollment programs.[vii]

These gaps are not fully explained by differences in prior achievement. Studies show that even among academically qualified students, underrepresented minority and low-income students participate in advanced programs at lower rates than their peers.[viii] A landmark study found that shifting from teacher-referral to universal screening substantially increased the representation of low-income and minority students in gifted education, suggesting that identification and enrollment mechanisms themselves contribute to inequitable access.



Black and Hispanic students
are
underrepresented in advanced coursework
at
2-3x
their expected rates
in many districts nationwide

Findings from a District Partnership

In partnership with a medium-sized public school district, our research team analyzed the effects of a recently introduced open-enrollment, opt-in, intensified ELA course at the middle school level. Prior to the policy change, no advanced coursework options existed in ELA; all students were served in general education classrooms. **The new policy made intensified ELA available to every student, with enrollment driven entirely by student and family choice rather than test score cutoffs or teacher recommendations.**

This setting is analytically valuable because it allows comparison of students with similar academic backgrounds who face the same opportunity but make different enrollment decisions. We analyzed enrollment choices alongside rich information on students' prior academic histories, demographic characteristics, and subsequent achievement outcomes.

Robust, Positive Achievement Estimates

Using multiple analytical approaches, we found that enrollment in intensified ELA coursework is associated with a modest, positive increase in end-of-year ELA achievement equivalent to approximately 2–3 months of additional learning (0.06–0.08 standard deviations). This finding was consistent across model specifications. The most powerful identification strategy in our analysis controls for contemporaneous math achievement, which serves as a proxy for general within-year academic ability. Because enrollment in intensified ELA does not directly affect math outcomes, this approach helps isolate the association with intensified ELA instruction from broader differences in student ability. Estimates of this magnitude are comparable to those reported for many scalable instructional interventions in education and are widely viewed as educationally meaningful when implemented at scale.[ix]

Key Finding

Enrollment in intensified ELA coursework is associated with a positive estimated effect of approximately 2–3 months of additional learning (0.06–0.08 standard deviations) in end-of-year achievement. This finding was robust across multiple analytical specifications and is comparable in magnitude to many effective school-level interventions.[x]

2-3 additional months of learning

Benefits Vary Across Students

Our analysis also found that the estimated effects of intensified ELA coursework vary meaningfully across students. **Students with very low prior achievement scores showed relatively modest estimated changes, while students with moderate to strong prior performance showed larger positive associations. Interestingly, estimated effects were highest among students with prior achievement near or slightly above average, suggesting that these students may be particularly well-positioned to benefit from the more demanding material.** At the very top of the prior achievement distribution, estimated effects tend to flatten or decline modestly, which may partly reflect ceiling effects in the standardized assessment: students who enter with prior scores near the upper limit of the scale have less room to demonstrate improvement.

Conditional Average Treatment Effects Prior ELA Achievement

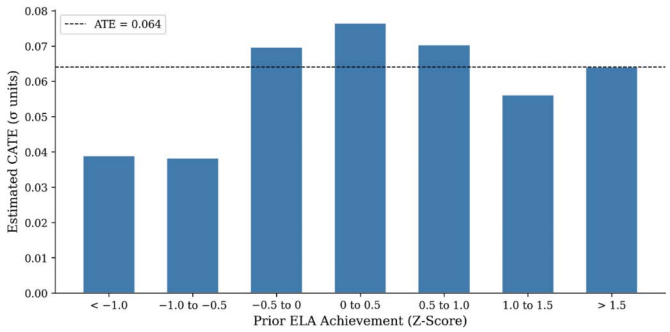


Figure 1: Estimated treatment effects by prior-year ELA achievement. Bars represent mean effects within achievement bins. The dashed line denotes the overall average effect.

Across demographic subgroups, estimated estimated point estimates were systematically smaller in magnitude for students from historically underrepresented groups, including those eligible for free or reduced-price lunch, English learners, and students with disabilities. At the same time, estimated effects were larger for students identified as gifted and talented.

Conditional Average Treatment Effects by Demographic Subgroup

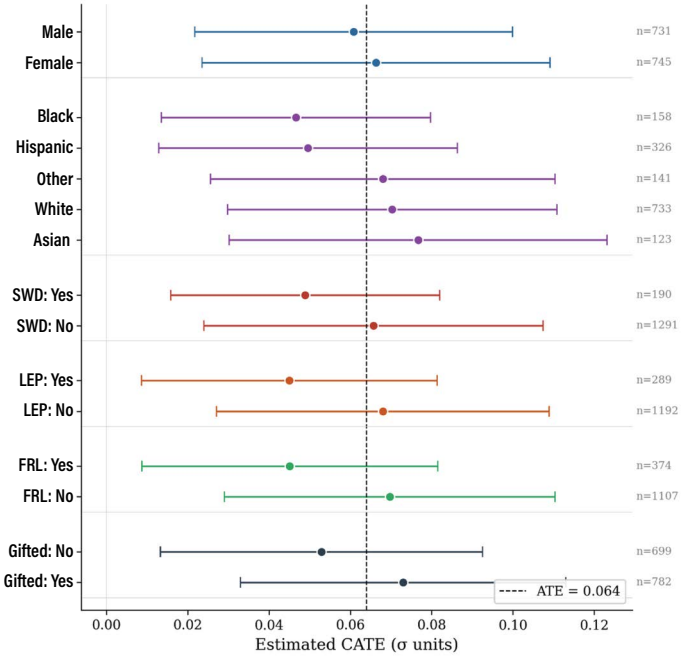


Figure 2: Estimated conditional average treatment effects by demographic and program indicators. These estimates summarize within-group variation in predicted treatment effects and are not intended as formal tests of statistical differences across groups. Points denote subgroup mean CATEs; horizontal bars reflect within-group standard deviation. The dashed vertical line indicates the overall average treatment effect.

The Enrollment Gap: Who Benefits vs. Who Enrolls

Perhaps the most important finding from the district analysis is the **misalignment between predicted academic benefit and observed enrollment behavior**. Enrollment rates increase sharply with prior achievement scores for all students, indicating that prior achievement plays an important role in opt-in decisions. However, at nearly every achievement level, students from higher-socioeconomic backgrounds are more likely to enroll than their lower-socioeconomic peers. This gap is modest among lower-achieving students but widens substantially at higher achievement levels.

Enrollment Rate by Score Band and SES

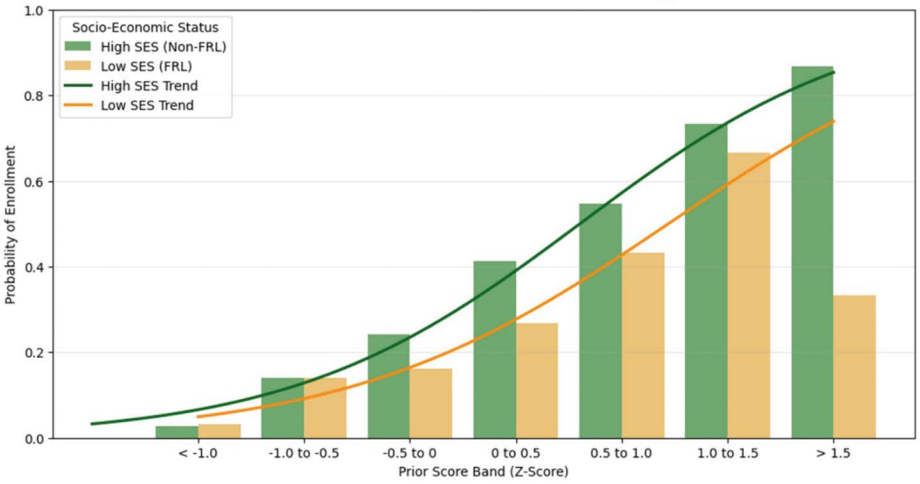


Figure 3: Enrollment rates in intensified ELA coursework by prior achievement band and socioeconomic status.

Among students with high prior ELA achievement (one standard deviation above average), enrollment rates are high overall for White and Asian students from higher-socioeconomic backgrounds. In contrast, Black and Hispanic students with similarly high prior achievement, especially those from lower-socioeconomic backgrounds, enroll at substantially lower rates. Among students with above-average prior achievement, disparities are even more pronounced: Black and Hispanic students from lower socioeconomic backgrounds have the lowest enrollment rates despite having prior achievement levels associated with positive estimated effects.[xi]

The Diagnostic Gap

Many students who appear well-positioned to benefit from intensified ELA coursework do not enroll. **Under-enrollment is concentrated among historically underserved groups, particularly Black and Hispanic students from lower-socioeconomic backgrounds.** This pattern persists even among academically prepared students, suggesting that open-enrollment policies alone are insufficient to ensure equitable participation.

Enrollment of "High Ability Students (Z > 1.0)

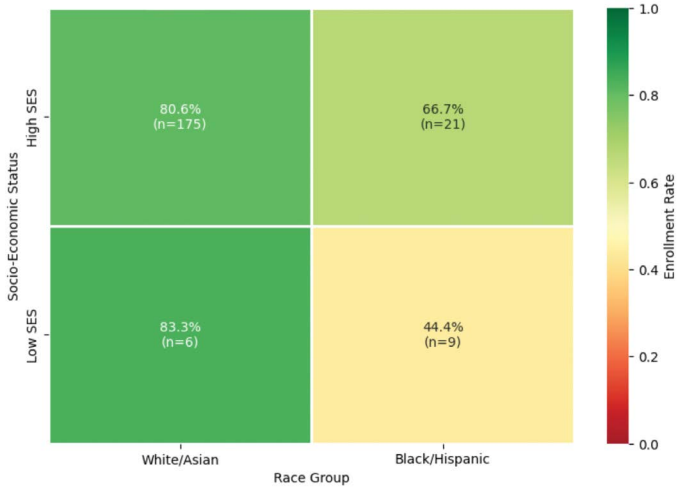


Figure 4: Enrollment rates among students with high prior ELA achievement by race/ethnicity and socioeconomic status.

Enrollment of "Medium Ability Students (0 < Z < 1.0)

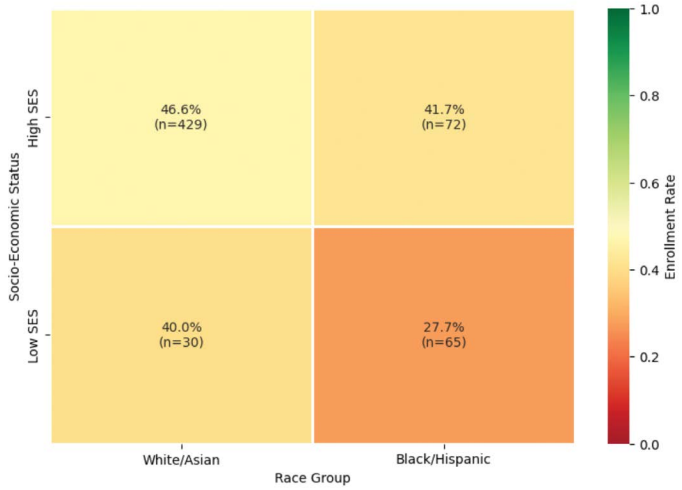
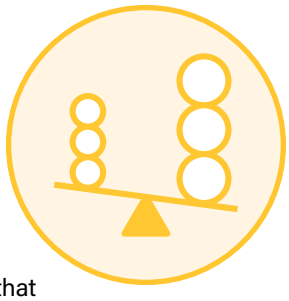


Figure 5: Enrollment rates among students with above average prior ELA achievement by race/ethnicity and socioeconomic status.

Why the Gap? What Research Suggests

The district analysis reveals *that* an enrollment gap exists among academically prepared students, but it does not tell us *why*. Prior research identifies several mechanisms that may help explain patterns like those observed in the district analysis. We highlight four that are well-supported in the literature.

Information Asymmetries



Families may not know about the advanced coursework option, may not understand its potential benefits, or may underestimate their child's readiness. Research on educational decision-making consistently finds that low-income and minority families have less access to the institutional information needed to navigate opt-in systems.[xii] This parallels findings from the chronic absenteeism literature, where families frequently underestimate their child's absences and misunderstand the consequences—and where simple informational interventions have been shown to meaningfully change behavior.[xiii]

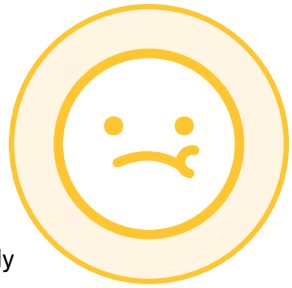
Informal Gatekeeping

Even in nominally open-enrollment settings, informal signals from counselors, teachers, and peers can differentially steer students toward or away from advanced coursework. Research on AP enrollment criteria has documented how formal and informal institutional practices combine to produce racial disparities in course placement.[xvi] Counselor recommendations, peer norms, and the signaling embedded in how advanced courses are described and promoted can all shape who feels invited to enroll.[xvii]

Social and Cultural Capital

Navigating opt-in enrollment systems requires knowledge of institutional processes that are unevenly distributed by race, ethnicity, and socioeconomic status. Research on educational choice shows that even when formal barriers are removed, families with greater social and cultural capital are better positioned to identify, evaluate, and act on educational opportunities.[xiv] A study of Chicago's universal high school application system found that even after the system was redesigned to be more equitable, Black students and students from low-socioeconomic neighborhoods remained underrepresented in high-performance schools.[xv]

Belonging Uncertainty



Students from underrepresented groups may question whether they belong in advanced academic settings, particularly when those settings have historically been composed of more privileged peers. Research on stereotype threat and belonging interventions has shown that even brief psychological interventions—such as values affirmation exercises—can improve minority students' academic trajectories.[xviii] Separately, evidence shows that the availability of same-race teachers in advanced course sections increases Black students' enrollment in and performance in those courses.[xix]

Important Note

These barriers are theorized from the broader research literature, not identified directly in the district analysis. However, the patterns observed in the district, where academically prepared students from underrepresented groups under-enroll despite open access, are consistent with the mechanisms described above and suggest that multiple barriers may be operating simultaneously.

Evidence-Informed Strategies for Closing Participation Gaps

Drawing on the theorized barriers and the broader research base, we identify several strategies with empirical support for increasing equitable participation in advanced coursework. These strategies are organized by the type of barrier they address.

Addressing Information Barriers

Targeted Outreach to Families

If families of academically prepared students are unaware of the advanced coursework option or its potential benefits, targeted communication may help close the information gap. Research from the attendance domain demonstrates that simple, low-cost informational mailers that provide families with accurate data about their child's record can meaningfully change behavior.[xx] The same behavioral logic applies to enrollment decisions: providing families of eligible students with clear, personalized information about the advanced coursework option, their child's readiness, and the potential benefits of enrollment may increase take-up among under-enrolled groups.

Next Steps

Districts with open-enrollment advanced coursework policies might consider sending targeted communications to families of students whose prior achievement suggests they are well-positioned to benefit. These communications could include the student's achievement data, a description of the intensified course, and information about the enrollment process. Research suggests that framing matters: messages should emphasize the student's readiness and the opportunity, rather than focusing on deficits.

Restructuring Defaults

From Opt-In to Opt-Out

One of the strongest findings in the literature is that enrollment mechanisms themselves shape who participates. A landmark study showed that shifting from teacher-referral to universal screening for gifted programs substantially increased the representation of low-income and minority students.[xxi] More recently, research on an opt-out academic acceleration policy, in which students meeting readiness criteria were automatically enrolled unless families actively declined, found significant increases in advanced course-taking among underrepresented groups.[xxii] These findings suggest that restructuring the default from opt-in to opt-out may be one of the most effective strategies for closing participation gaps.

Next Steps

Districts might consider identifying students who meet readiness criteria based on prior achievement and automatically enrolling them in intensified coursework, with an option for families to decline. This approach preserves family choice while shifting the burden of action from opting in to opting out, which research suggests disproportionately benefits underrepresented groups.

Building Belonging

Representation and Early Enrichment

When enrollment gaps are driven in part by uncertainty about belonging, strategies that increase representation and build academic identity may be effective. Research shows that the availability of same-race teachers in advanced course sections increases Black students' enrollment in those courses.[xxiii] Longitudinal evidence from early enrichment programs, such as Project Excite, which provided supplemental STEM enrichment to underrepresented minority students beginning in elementary school, demonstrates that sustained academic preparation can reduce achievement gaps and increase participation in advanced courses over time.[xxiv] University-district partnerships that front-load enrichment experiences for underserved students have shown similar promise.[xxv]

Next Steps

Districts might examine teacher assignment patterns in advanced course sections and consider the role of representation. For longer-term strategies, districts could explore early enrichment partnerships that strengthen prior achievement and academic identity among underrepresented students before the advanced coursework enrollment decision point.

~80% increase

in low-income and minority representation **in gifted programs** after switching from teacher referral to universal screening in one studied district

Why District-Embedded Analysis Matters

This brief combines two types of evidence: a synthesis of peer-reviewed research and findings from an empirical analysis conducted in partnership with a specific school district. This combination is intentional and reflects an important insight from the research-use literature in education.

A growing body of research on research-practice partnerships (RPPs) documents that evidence generated within a district's own context is substantially more likely to inform practice than externally produced findings.[xxvi] **Scholars have argued that the gap between "what works in research" and "what works in practice" cannot be bridged by general evidence alone; local evidence is needed to predict what will be effective in a specific context.**[xxvii] Research-practice partnerships provide a structure for producing context-specific evidence while maintaining methodological rigor.[xxviii]

The district analysis presented in this brief illustrates the value of this approach. A general literature review could show that equity gaps in access to advanced coursework exist nationally. But only a district-embedded analysis can reveal which specific students, at which achievement levels, in which demographic groups are under-enrolling relative to their predicted benefit. This diagnostic specificity is what makes the findings actionable for the partnering district—and it is the type of evidence that research suggests is most likely to drive practice change.

For neighboring districts with similar policy contexts, these findings also provide a useful benchmark and a model for the type of analysis they might conduct with their own data.

Conclusion

Expanding access to advanced coursework through open-enrollment policies is a necessary but insufficient step toward equitable participation.

The evidence presented in this brief, from both the broader research literature and a district-specific empirical analysis, demonstrates that significant enrollment gaps persist even when formal barriers are removed. These gaps are concentrated among Black, Hispanic, and low-income students who appear academically well-positioned to benefit from advanced coursework.

The research literature suggests that these gaps likely reflect a combination of information barriers, differences in social and cultural capital, informal institutional gatekeeping, and uncertainty about belonging. Evidence-informed strategies for closing these gaps include targeted family outreach, restructuring enrollment defaults from opt-in to opt-out, and fostering a sense of belonging through teacher representation and early enrichment programs.

Which strategies will be most effective in a particular district should be determined based on an analysis of the specific challenges locally. As leaders work to ensure that advanced coursework policies deliver on their promise of equitable opportunity, using the best research available, combined with context-specific analysis of their own data, can increase the likelihood of meaningful and lasting change.

References

[i] Steenbergen-Hu, S., Makel, M. C., & Olszewski-Kubilius, P. (2016). What one hundred years of research says about the effects of ability grouping and acceleration on K–12 students' academic achievement. *Review of Educational Research*, 86(4), 849–899.
Austin, M. (2020). Measuring high school curricular intensity over three decades. *Sociology of Education*, 93, 65–90.

[ii] Warne, R. T. (2017). Research on the academic benefits of the Advanced Placement Program: Taking stock and looking forward. *SAGE Open*, 7(1), 1–16.
Long, M. C., Iatarola, P., & Conger, D. (2009). Explaining gaps in readiness for college-level math: The role of high school courses. *Education Finance and Policy*, 4(1), 1–33.

[iii] Coburn, C. E., Penuel, W. R., & Farrell, C. C. (2021). Fostering educational improvement with research-practice partnerships. *Phi Delta Kappan*.

[iv] Schneider, J. (2009). Privilege, equity, and the Advanced Placement Program: Tug of war. *Journal of Curriculum Studies*, 41(6), 813–831.

[v] Kolluri, S. (2018). Advanced Placement: The dual challenge of equal access and effectiveness. *Review of Educational Research*, 88(5), 671–711.

[vi] Education Trust. (2020). Inequities in advanced coursework. https://edtrust.org/rti/inequities-in-advanced-coursework/
Shores, K., Kim, H. E., & Still, M. (2020). Categorical inequality in the face of universal policy: The case of U.S. public schools and the Common Core State Standards. *American Educational Research Journal*, 57(5), 2038–2082.

[vii] Hirschl, N., & Smith, C. M. (2023). Advanced Placement gatekeeping and racialized tracking. *Sociology of Education*, 96(3), 190–210.

[viii] Ricciardi, C., & Winsler, A. (2021). Selection into advanced courses in middle and high school among low-income, ethnically diverse youth. *Journal of Advanced Academics*, 32(3), 291-323. https://doi.org/10.1177/1932202X21990096
Owen, S. (2025). The Advanced Placement Program and educational inequality. *Education Finance and Policy*, 20(1), 1–32.
Card, D., & Giuliano, L. (2016). Universal screening increases the representation of low-income and minority students in gifted education. *Proceedings of the National Academy of Sciences*, 113(48), 13678–13683.

[ix] Kraft, M. A. (2020). Interpreting effect sizes of education interventions. *Educational Researcher*, 49(4), 241–253.

[xi] Note: Some demographic subgroup cells contain small numbers of students. These patterns should be interpreted with caution and confirmed with larger samples before drawing definitive conclusions.

[xii] Grissom, J. A., & Redding, C. (2016). Discretion and disproportionality: Explaining the underrepresentation of high-achieving students of color in gifted programs. *AERA Open*, 2(1), 1–25.
Callen, I., & Stoddard, C. (2024). Putting the "A" in AP: The effect of Advanced Placement state policies on student participation and performance. *Economics of Education Review*, 102.

[xiii] Rogers, T., & Feller, A. (2018). Reducing student absences at scale by targeting parents' misbeliefs. **Nature Human Behaviour**, 2, 335–342.

[xv] Barrow, L., & Sartain, L. (2020). The pathway to enrolling in a high-performance high school: Understanding barriers to access. *Education Finance and Policy*.

[xvi] Lackey, D & Lowery, K. (2023). Where are the African American males? Enrollment criteria and the placement of African American males in Advanced Placement courses. *Urban Education*, 58(10), 2628-2657. https://doi.org/10.1177/0042085920959133

[xvii] Francis, D. V., De Oliveira, A. C. M., & Dimmitt, C. (2019). Do school counselors exhibit bias in recommending students for advanced coursework? *B.E. Journal of Economic Analysis & Policy*, 19(4), 1–17.

[xviii] Goyer, J. P., Garcia, J., Purdie-Vaughns, V., Binning, K. R., Cook, J. E., Reeves, S. L., Apfel, N., Taborsky-Barba, S., Sherman, D. K., & Cohen, G. L. (2017). Self-affirmation facilitates minority middle schoolers' progress along college trajectories. *Proceedings of the National Academy of Sciences*, 114(29), 7594-7599. https://doi.org/10.1073/pnas.1617923114

[xix] Hart, C. M. D. (2020). An honors teacher like me: Effects of access to same-race teachers on Black students' advanced-track enrollment and performance. *Educational Evaluation and Policy Analysis*, 42(2), 163-187. https://doi.org/10.3102/0162373719898470

[xx] Robinson, C. D., Lee, M. G., Dearing, E., & Rogers, T. (2018). Reducing student absenteeism in the early grades by targeting parental beliefs. *American Educational Research Journal*, 55(6), 1163–1192.

[xxii] Austin, M., Backes, B., Goldhaber, D., Li, D., & Streich, F. (2024). Leveling up: An academic acceleration policy to increase equity in advanced high school course taking. *American Educational Research Journal*, 66(1). https://doi.org/10.3102/00028312241282793

[xxiv] Olszewski-Kubilius, P., Steenbergen-Hu, S., Thomson, D., & Rosen, R. (2017). Minority achievement gaps in STEM: Findings of a longitudinal study of project excite. *Gifted Child Quarterly*, 61(1), 20-39. https://doi.org/10.1177/0016986216673449

[xxv] Olszewski-Kubilius, P. (2022). Front-loading STEM enrichment to prepare learners for STEM pathways. *Annals of the New York Academy of Sciences*, 1520(1), 161-169. https://doi.org/10.1111/nyas.14948

[xxvi] Wentworth, L., Mazzeo, C., & Connolly, F. (2017). Research practice partnerships: A strategy for promoting evidence-based decision-making in education. **Educational Research**, 59(2), 241-255. https://doi.org/10.1080/07391102.2017.1314108

[xxvii] Cartwright, N., & Hardie, J. (2012). *Evidence-based policy: A practical guide to doing it better*. Oxford University Press.

[xxviii] Heinrich, C. J., & Good, A. (2018). Research-informed practice improvements: Exploring linkages between school district use of research evidence and educational outcomes over time. *School Effectiveness and School Improvement*, 29(3), 418-445. https://doi.org/10.1080/09243453.2018.1445116

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