



IN PURSUIT OF GREATNESS:

BOLD STRATEGIES TO GROW A STRONG AND DIVERSE EDUCATOR WORKFORCE



Produced by:

MassINC

In Partnership With:



Acknowledgments

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About the Wheelock Educational Policy Center

The Wheelock Educational Policy Center (WEPC) conducts and disseminates rigorous, policy-relevant research in partnership with local, state, and federal policymakers and stakeholders to improve educational opportunities and holistic outcomes for traditionally marginalized students.

About MassINC

MassINC's mission is to make Massachusetts a place of civic vitality and inclusive economic opportunity by providing residents with the nonpartisan research, reporting, analysis, and civic engagement necessary to understand policy choices, inform decision-making, and hold the government accountable.

About Latinos for Education

Latinos for Education's (L4E) mission is to develop, place, and connect essential Latino leaders in the education sector. By building an ecosystem of Latino advocates and infusing Latino talent into positions of influence, L4E prepares nuestra comunidad to break down barriers to educational opportunity for the next generation of Latino students.

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Dear Friends,

Since our founding, MassINC has sought to bring an objective lens to the most pressing public policy problems facing Massachusetts. We have probed many topics in K–12 education, as well as in workforce development. Educator diversity lies at the intersection of these two fields, and hence its paramount importance to the future of our commonwealth. To help unpack this complex topic, we turned to two exceptional partners: Boston University’s Wheelock Educational Policy Center (WEPC) and Latinos for Education (L4E).

WEPC has been at the leading edge of efforts to provide policymakers with insight on the educator workforce in Massachusetts, especially through the tumultuous pandemic. WEPC graciously lent empirical skills to the project, as well as their extensive knowledge of research on the diversity and quality of the teaching workforce. L4E—a leading national education nonprofit that offers programming for Latino Educators and serves as an advocacy organization for Latino students and families—brought an intimate understanding of initiatives and coalition work to increase educator diversity both in our commonwealth and throughout the country.

Equally important, our MassINC–WEPC–L4E research team had the full support of a talented and deeply committed group of leaders at the Massachusetts Department of Elementary and Secondary Education (DESE). They provided us with access to data, as well as information on the agency’s many initiatives, and external evaluations taking stock of their progress to date. DESE staff also generously shared professional knowledge and insight over the course of this lengthy research endeavor.

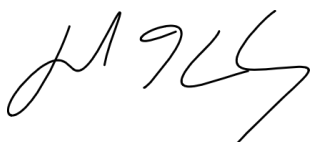
As with all MassINC studies, we relied heavily on an expert advisory board for guidance. Members of this volunteer group selflessly donated their time and expertise, actively participating in meetings, promptly responding to various inquiries, and carefully reviewing and commenting on early drafts of this report.

While this project would not have been possible without the invaluable contributions of so many, this document should be read as an independent MassINC report. MassINC bears all responsibility for the key findings, representations and interpretations of data, and the policy recommendations.

With this important disclaimer, we believe that we can speak for all involved with an invocation to digest this research carefully. Building on excellent reports from WEPC, the Great Schools Partnership, the Rappaport Institute for Greater Boston, and the Education Trust, we hope to draw further attention to the complexities of this formidable challenge and encourage robust policy debate over the most effective ways to meet the needs of our students, teachers, and communities in the future.

As always, we welcome your feedback and ideas, and encourage you to do all that you can to help the commonwealth build a stronger and more diverse educator workforce.

Sincerely,



Joe Kriesberg
President & CEO
MassINC



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Research Director
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TABLE OF CONTENTS

Executive Summary	05
I. Introduction	12
II. Educator Diversity trends, projections, and simulations	15
III. The Educator Diversity Landscape in Massachusetts	31
IV. Strategic Action Items for State Leaders and Legislators	41
Appendix	45
Notes	47





EXECUTIVE SUMMARY

The increasing diversity of students in Massachusetts makes growing a diverse educator workforce a critical policy goal for the Commonwealth. State and local education leaders recognize the imperative of increasing educator diversity to give all students the opportunity to learn from teachers with similar racial, ethnic, and linguistic backgrounds, as well as teachers who have varying experiences and perspectives. Over the past five years, our leaders have met the educator diversity challenge with focus and determination. *In Pursuit of Greatness* shines a light on these advances and the urgent need to double down on them. This executive summary provides a synopsis, highlighting recent educator diversity trends, projection models evaluating the potential of hypothetical scenarios to accelerate the pace of change, and strategic action items with the power to make the theoretical possible.

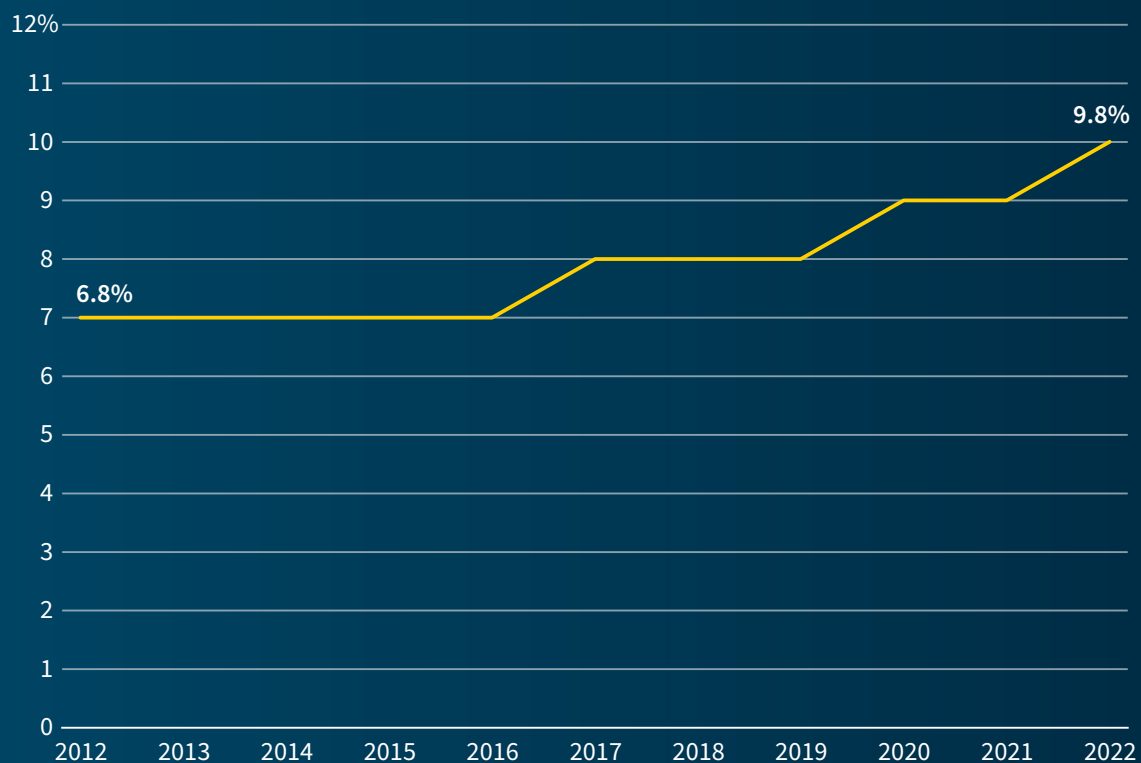
Educator Diversity Trends

Over the past decade, there has been notable demographic change in Massachusetts' educator workforce and K–12 student population. The juxtaposition of these patterns reveals both promising progress and areas of continued concern. Key trends in brief are as follows:

- **Massachusetts doubled the number of teachers of color hired in the last 10 years.** Public schools in Massachusetts hired just 800 teachers of color in 2012; by 2022, the state's new cohort of K–12 educators included over 1,700 teachers of color.
- **With these new hires, the state's teacher workforce gradually became more diverse.** Teachers of color now make up nearly 10 percent of the state's 80,000 K–12 teachers, up from 7 percent in 2012 (**ES-1**). Importantly, most of this progress is reflected among early career and novice teachers, many of whom entered the profession through nontraditional routes.

- **Despite strong growth in the number of teachers of color hired in Massachusetts, student diversity increased faster, leading to a larger gap in representation.** In 2012, students of color made up 33 percent of K–12 enrollment in Massachusetts, and teachers of color comprised 7 percent of the teacher workforce, a representation gap of 26 percentage points. This representation gap grew to 35 percentage points in 2022.
- **Urban districts hired a large majority of new teachers of color over the past decade. However, growth rates varied widely among them.** Urban districts accounted for three-quarters of the net growth in teachers of color in Massachusetts between 2012 and 2022. Western Massachusetts Gateway Cities posted the largest gain, increasing teachers of color as a proportion of their teacher workforces by 10 percentage points. In contrast, growth was much slower in the Central Massachusetts and Southeastern Massachusetts Gateway Cities, which increased the proportion of teachers of color by just 1 and 3 percentage points, respectively.
- **The probability that students of color are assigned to an educator of color fluctuates widely across urban districts.** In the Merrimack Valley Gateway Cities, the probability that students of color have a teacher of color in any given year remains low at around 23 percent (averaging across grade spans). For Metro Boston cities, where teachers of color make up 30 percent of the workforce, the chance of assignment to a teacher of color is approximately one-in-three across K–12 and over 90 percent in high school.

ES-1: Teachers of color as a share of all teachers in Massachusetts, 2012 to 2022



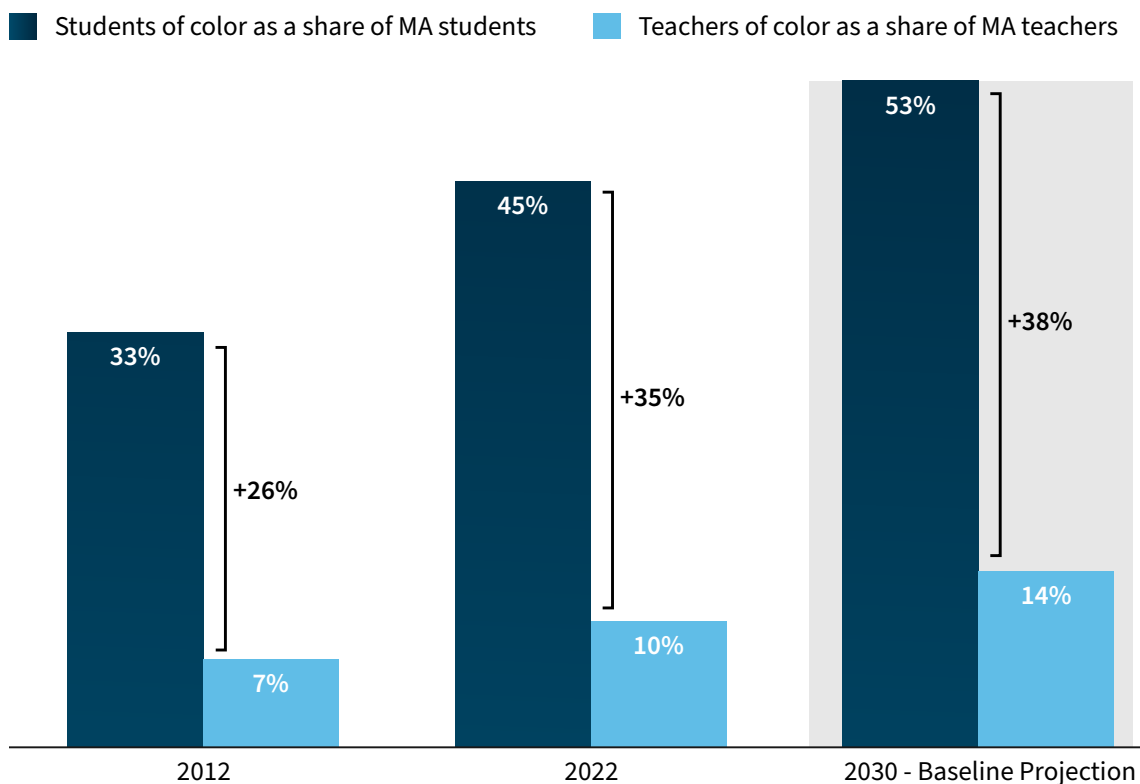
Source: MassINC's analysis of data from the MA Department of Elementary and Secondary Education

Educator Diversity Projections and Simulations

With a projection model developed by WEPC researchers Dr. Andrew Bacher-Hicks and Dr. Olivia Chi, this study provides both a baseline forecast of the racial and ethnic composition of the state’s teacher workforce through 2030, and simulations to demonstrate the impact of various hypothetical scenarios. Forecasts like these are built on current trends and working assumptions. They provide a sense of what could be. However, they are certainly subject to change as context and focus in the state evolves. Despite these limitations, this first-of-its kind analysis provides invaluable insights, including four key takeaways:

- **If status quo trends hold, the representation gap will be larger in 2030.** If the state’s educator workforce continues to diversify at a constant rate, it is projected that teachers of color will comprise almost 14 percent of Massachusetts teachers at the end of the decade. However, the state’s K–12 students will continue to become more diverse faster, reaching more than half of enrollment by 2030. Due to this more rapid change in the demographics of our students, the baseline model projects the representation gap, which was 26 percentage points in 2012, will increase to 38 percentage points by 2030 (**ES-2**).

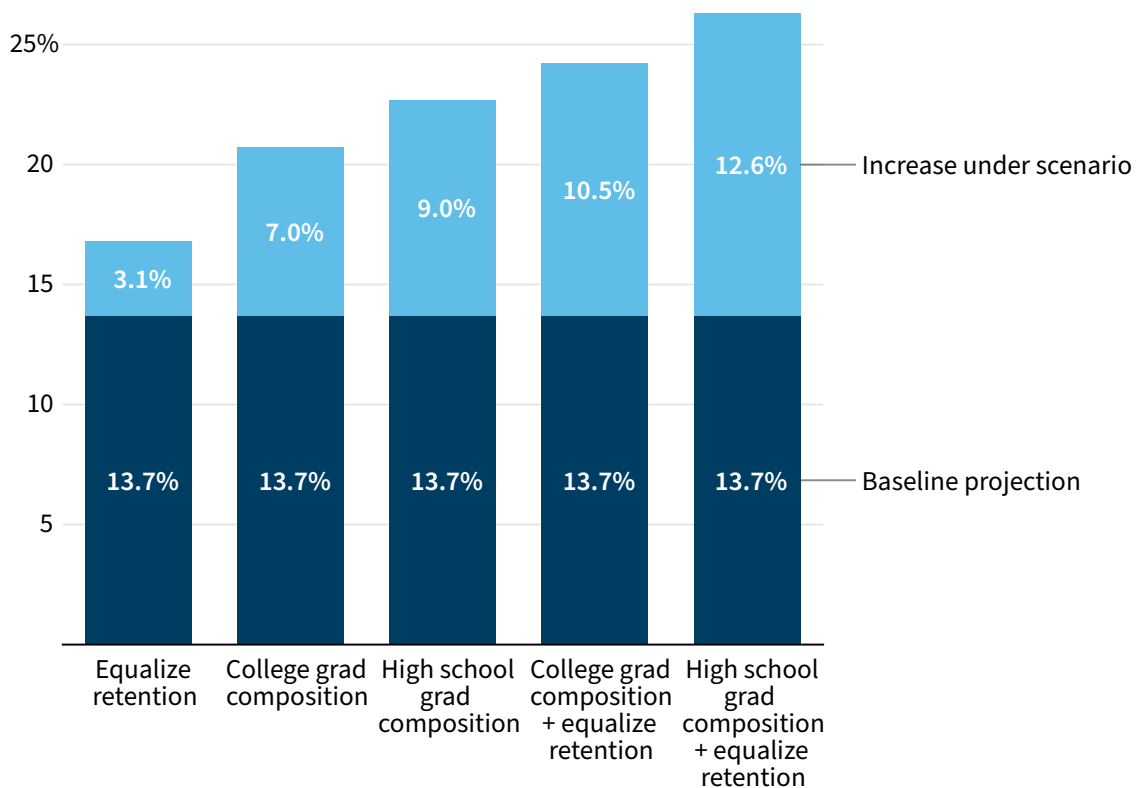
ES-2: Students of color vs. teachers of color representation gaps



Source: WEPC’s analysis of data from the MA Department of Elementary and Secondary Education

- **A homegrown strategy to close gaps in college access and success could have considerable impact.** If new hires reflected the demographic composition of the state’s high school graduates each year between now and the end of the decade, the projection model shows teachers of color would make up 23 percent of the workforce by 2030, 9 percentage points above the baseline projection.
- **Drawing more of the state’s diverse college graduates into teaching could generate large gains.** In 2021, students of color made up 35 percent of graduates from four-year colleges in Massachusetts, while people of color comprised just 18 percent of those entering the teacher workforce. If new teachers matched the demographics of those graduating from the state’s four-year colleges each year through 2030, teachers of color would represent nearly 21 percent of the Massachusetts workforce at the end of the decade, 7 percentage points above the baseline projection (**ES-3**).
- **Focusing on closing retention disparities has limited impact on the diversity of the state’s educator workforce in the near-term.** Massachusetts retains roughly 90 percent of White teachers each year, whereas retention rates for teachers of color in the state hover around 85 percent. Projections suggest that equalizing retention such that 90 percent of all teachers of color return each year beginning in 2023 would increase the share of teachers of color in the workforce to 17 percent in 2030, which is 3 percentage points above the baseline projection.

ES-3: Percentage point increase in teachers of color above 2030 baseline under different scenarios



Source: WEPC’s analysis of data from the MA Department of Elementary and Secondary Education

Note: Figure provides projected increases in teachers of color above 2030 baseline projection for scenarios that change the composition of each year between 2023 and 2030 as follows: Equalize Retention = teachers of color have same retention rate as White educators; High School Grad Composition = new hires have same demographic composition as Massachusetts high school graduates in 2022; High School Grad Composition + Equalize Retention = new hires have same demographic composition as Massachusetts high school graduates in 2022 and the same retention rate as White educators; College Grad Composition = new hires have same demographic composition as Massachusetts college graduates in 2022; College Grad Composition + Equalize Retention = new hires have same demographic composition as Massachusetts college graduates in 2022 and the same retention rate as White educators.

Seven Strategic Action Items for State Leaders and Legislators

While the Commonwealth’s robust efforts to increase educator diversity provide a strong foundation, the forecasts and simulations presented in this report demonstrate the need for bigger and bolder change. In particular, we must grow the pool of diverse educators by closing large gaps in college access and success and changing dynamics so that students of color who earn four-year degrees see the same opportunity in a teaching career as White college graduates. This will require a truly systemic approach with policy, regulation, communication, and investment all working in alignment. Toward this end, the full report outlines seven high-priority strategic action items for state education leaders and lawmakers to consider, as they work to shape comprehensive educator diversity legislation:

1. Establish achievable goals and subgoals, with particular emphasis on districts that have diverse student populations and relatively few teachers of color.

A key objective for this research is to inform goalsetting to provide both motivation and sound accountability for change. As the analysis reveals, there are many districts in Massachusetts with very diverse student populations and relatively few teachers of color. The state could establish a high-level goal, such as ensuring that teachers of color make up at least one-third of the workforce in “priority districts” where students of color make up half or more of total enrollment. With growth in diverse educators remaining relatively constrained in the short term, such a goal would help focus limited state resources on the diverse districts where large numbers of students of color are most underserved.

2. Provide the Board of Elementary and Secondary Education with full authority to adopt multiple approaches to licensure.

A large body of evidence shows that there is no single method to demonstrate competency that ensures all candidates with the ability to help students reach their full potential receive certification to teach in Massachusetts. The legislature must give the Board of Elementary and Secondary Education the authority to adopt multiple approaches, including methods that do not conform with current law’s constraints of a “test” to accurately identify effective educators. This recommendation is particularly urgent, as providing alternative paths to demonstrate competency and receive full licensure will position schools to retain high-performing educators hired under pandemic-era emergency licensure policies.

3. Strategically target financial incentives to urban districts with the largest representation gaps, and suburban districts with comprehensive plans that further integration and inclusion.

Financial incentives offer a powerful tool to grow the pool of diverse teachers, but Massachusetts must be strategic to ensure that this relatively expensive form of intervention generates cost-effective outcomes. Coupled with state funding for hiring and retention bonuses for novice teachers and teachers with skills in underserved languages, state investment in early retirement incentives could have powerful impacts both diversifying the teacher workforce and improving students learning outcomes in the primarily urban priority districts with the largest representation gaps. In the interest of integration, Massachusetts should also provide this powerful toolset to suburban communities with a demonstrated commitment to inclusion.



4. Support the growth of Early College and create stronger educator pathways. Massachusetts's Early College Initiative is closing the college completion gaps that are at the root of our shortage of diverse educators. But to have systemic impact, the commonwealth needs far more students to take advantage of Early College programs. Integrating structured career pathways is a powerful motivator. Strengthening Early College educator preparation pathways is vital, but high-quality career fields such as health, life sciences, and IT could also yield many future educators.

5. Launch apprenticeship programs for adults without four-year degrees. Massachusetts must act with expediency to seize the opportunity presented by the recent federal determination to make teaching eligible for federal apprenticeship funding. While DESE has already hired a project manager and contracted with the National Center for Grow Your Own to design a teacher apprenticeship program, the department will need to assemble a team of professionals with deep experience, building such partnerships to create and rapidly scale this approach.

6. Provide sustainable grant funding to nonprofits leading high-impact educator diversity initiatives and leverage their expertise. A growing network of grassroots community groups and nonprofit organizations have helped fuel educator diversity efforts in Massachusetts. For the past several years, DESE has resourced many of these groups through its modest Educator Diversity Grant program. But this does not provide the reliable revenue that these organizations will need to build their capacity and scale high-quality programs. Proven models like affinity networks, teacher residencies, leadership accelerant programs, and community-to-educator pipeline programs take time to grow and mature. Massachusetts will need a sustainable funding vehicle to provide these groups with reliable multiyear grants.

7. Use the state's regulatory authority and convening capacity to help educator preparation programs align on standards for new pathways. As Massachusetts melds varied efforts into a cohesive strategy, traditional and alternative educator preparation programs have out-sized roles to play. From public and private colleges to large nonprofits and community-based organizations, the state must help diverse institutions with varied interests come together to meet shared goals for new pathways.



With so many independent institutions, it will take considerable effort to create clear and predictable paths to careers in education for underrepresented students and families. Approaching this task program by program will not produce timely results, and building piecemeal will make it harder to create consistent expectations. Aligning program offerings and requirements for completion will accelerate development of new pathways and position educator preparation programs to communicate more efficiently and effectively, particularly around the availability of state financial aid and financial incentives.

“

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I. INTRODUCTION

Worker shortages will pose acute problems in many sectors of the Massachusetts economy in the coming years, but education must be foremost on our minds. Schools prepare future workers for all industries, and teacher quality is one of the most important factors in how effectively they perform this vital function.¹

Both here in Massachusetts and across the country, education workforce efforts have focused heavily on recruiting more diverse teachers over the past decade. These initiatives are rooted in a mountain of evidence that shows students of color who are afforded with opportunities to learn from same race teachers perform better on standardized tests, have fewer absences and disciplinary incidents, take more advanced courses, and graduate high school and attend college at higher rates.² In this regard, effective educator diversity strategies are essential to closing racial and ethnic disparities in educational achievement. However, we must also recognize how these educator diversity efforts will benefit all students and contribute to the state's broader need for a skilled workforce.

Increasingly, schools in Massachusetts have a much smaller pool of talent to draw from when hiring for open positions. This is largely because historic and systemic challenges dissuade and inhibit people of color from entering the teaching profession. If these conditions remain in place, the more diverse our prime working-age population becomes, the more the teacher talent pipeline will narrow, leaving schools with fewer and fewer applicants per job; teacher quality will decline, and the productivity of our entire workforce will suffer.³

As we contemplate strategies to increase teacher diversity and ponder how much to invest in this issue, given the many pressing challenges in education and the state writ-large, we must recognize that the Commonwealth's teacher workforce is already enduring startling losses, with students of color approaching 40 percent of graduates from public schools and teachers of color accounting for just 18 percent of new hires in Massachusetts.

The root causes of this gaping disparity are multiple and deep, but it is not a matter of employment discrimination in hiring. The teaching profession is losing young people of color along the entire path from high school through postsecondary studies and entry into the teacher workforce, as recently demonstrated by Melanie Rucinski's invaluable research.⁴

Students of color are less likely than White students to graduate high school. Those who do are much less likely to go on to college and complete four-year degrees, even when they are exceptionally well-prepared for postsecondary studies.⁵ Equally problematic, those who do earn four-year degrees are far less likely than their White peers to pursue a career in education. Students of color are not choosing careers in teaching partially due to economics; they carry more college debt and have less family wealth, and teaching is not as financially lucrative as other professional opportunities open to those with a college degree.⁶ But money is not the most formidable deterrent.

Many prospective educators of color endured racism in various forms as K-12, college, and graduate students. They carry this trauma knowing that structural racism continues to permeate education. While schools today are very much on the frontlines of efforts to dismantle it, diverse college graduates are fully aware of the conflict that this work entails, and the considerable personal sacrifice that teaching will require. Those who are drawn to the field despite these challenges shoulder added workplace stress. This causes teachers of color to exit the profession early in their careers at elevated levels, leaving fewer to fill leadership positions or to offer peer support.⁷

“*Teachers of color will still likely represent less than **14 percent** of the teacher workforce at the end of the decade.*”

Massachusetts recognizes the complexity of this multifaceted problem. With support from the legislature, DESE is pursuing educator diversification from multiple flanks and the state is making considerable progress. With each incremental gain, there are more candidates of color for open teaching positions, and students of color see their probability of placement with a same race educator rise. While there is much to celebrate here, the pace of change in the educator workforce remains relatively slow compared to the changing demographics of the state’s student population.

To gain insight into how Massachusetts’ educator workforce is likely to develop in the coming years, both under status quo conditions and if policymakers adopt various strategies, we employ a statistical model developed by researchers at the BU Wheelock Education Policy Center (WEPC). Baseline estimates from this model suggest large disparities between the racial and ethnic makeup of students and educators will continue to widen through the end of this decade. Due in great part to the historical makeup of our largely White workforce, even if the state continues with all of the meaningful initiatives as they are currently, teachers of color will still likely represent less than 14 percent of the teacher workforce at the end of the decade.

This finding should not discourage us. The state is gaining valuable lessons from its efforts to date, and DESE is focused on improving and expanding this work in the coming years. By strategically allocating resources, Massachusetts can bend the curve and ensure that it ends the decade with a far more diverse and inclusive educator workforce. In furtherance of this outcome, the pages that follow provide analysis to help leaders size up leaks in the pipeline and target them with well-informed goals and effective interventions at sufficient scale.



THE DIFFERENCE A DIVERSE TEACHER WORKFORCE MAKES

An impressive body of research shows that teachers of color improve both academic and nonacademic outcomes for students of color. The benefits are apparent in immediate outcomes, including test scores, student discipline, and attendance.⁸ But they also show up in long-term outcomes. Black students who have at least one Black teacher in elementary school are more likely to graduate from high school and go on to college.⁹ Students of color who have struggled in the past often find particularly large benefits from assignment to same race teachers.¹⁰ The largest gains likely come when students have both race and gender matches.¹¹

While the mechanism for these gains is complex, reductions in bias resulting in higher expectations appears to be an important component.¹² It is also likely that students of color feel more welcome and connected to the school community when same race educators are present.¹³

Though more limited, there is also emerging evidence that teachers of color bring a stronger growth mindset and make greater effort to individualize instruction, leading to larger student gains among White students.¹⁴ Drawing on research examining the benefits of exposure to diversity, some theorize that White students who have the opportunity to learn from educators of color will also gain in terms of greater empathy and less racial bias.¹⁵

Schools with more diverse faculty may also operate more effectively due to higher levels of parent engagement.¹⁶ More diverse faculty will also decrease turnover among teachers of color, which will likely mean more teachers of color progressing to school leadership positions. Just as having more teachers of color in the labor pool will improve teacher quality, thickening the pool of talented principals of color should enhance school performance system wide.¹⁷



II. EDUCATOR DIVERSITY TRENDS, PROJECTIONS, AND SIMULATIONS

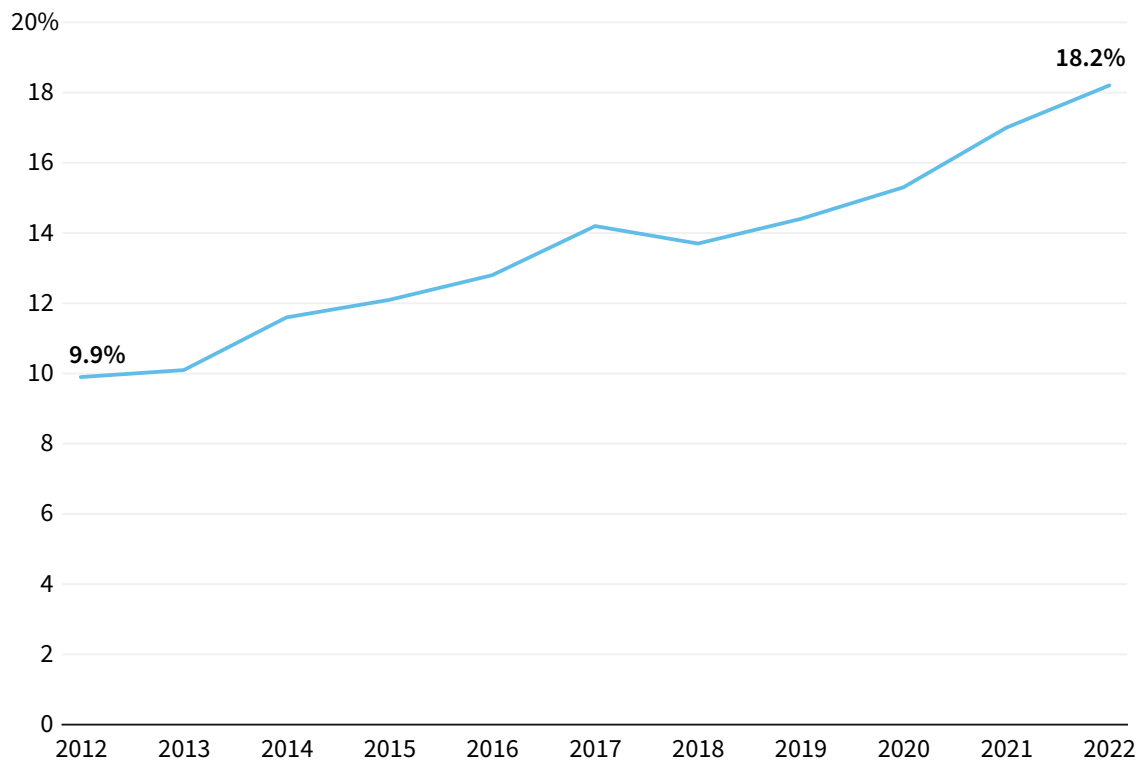
As civic leaders, education advocates, and policymakers in Massachusetts coalesce around efforts to grow a strong and diverse educator workforce, they will require a thorough understanding of how the state’s teacher workforce is changing, and the extent to which its trajectory can be altered. This information is especially valuable for setting goals that provide motivation and accountability for change. It is critically important that logic grounds these goals and the selection of strategies to meet them. Towards these ends, this section breaks down recent trends, presents a baseline projection of the state’s educator workforce through 2030, and gauges the power of simulated scenarios to alter this trajectory.

Educator Diversity Trends

To understand the demographic change in Massachusetts’ educator workforce over the past decade, MassINC explored growth in teachers of color in the aggregate, relative to students of color, and geographically. This analysis captured several notable patterns:

- **Massachusetts doubled the number of teachers of color hired each year.** In 2012, teachers of color represented less than 10 percent of new hires at the state’s public K–12 schools; by 2022, they accounted for over 18 percent of incoming faculty (**Figure 1**). The change in raw numbers was even more dramatic. Public schools in Massachusetts hired just 800 teachers of color in 2012; by 2022, the new crop of educators included over 1,700 teachers of color.

Figure 1: Teachers of color as a share of new hires in Massachusetts, 2012 - 2022

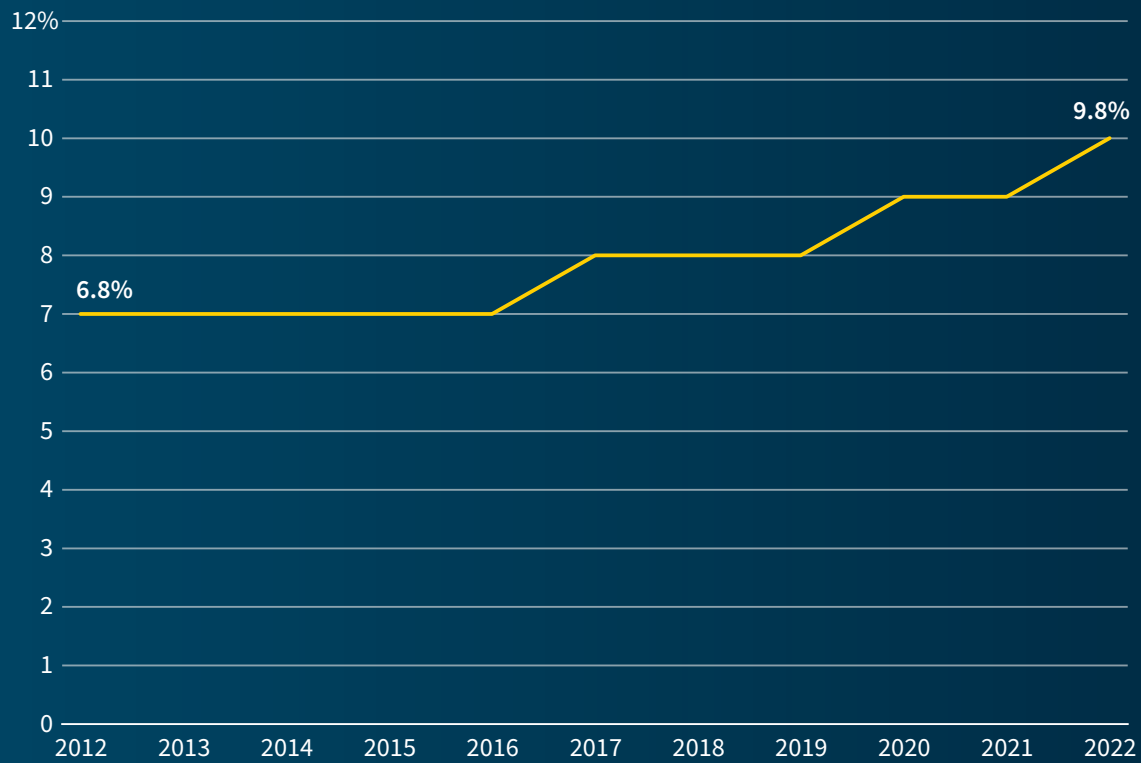


Source: MassINC’s analysis of data from the MA Department of Elementary and Secondary Education



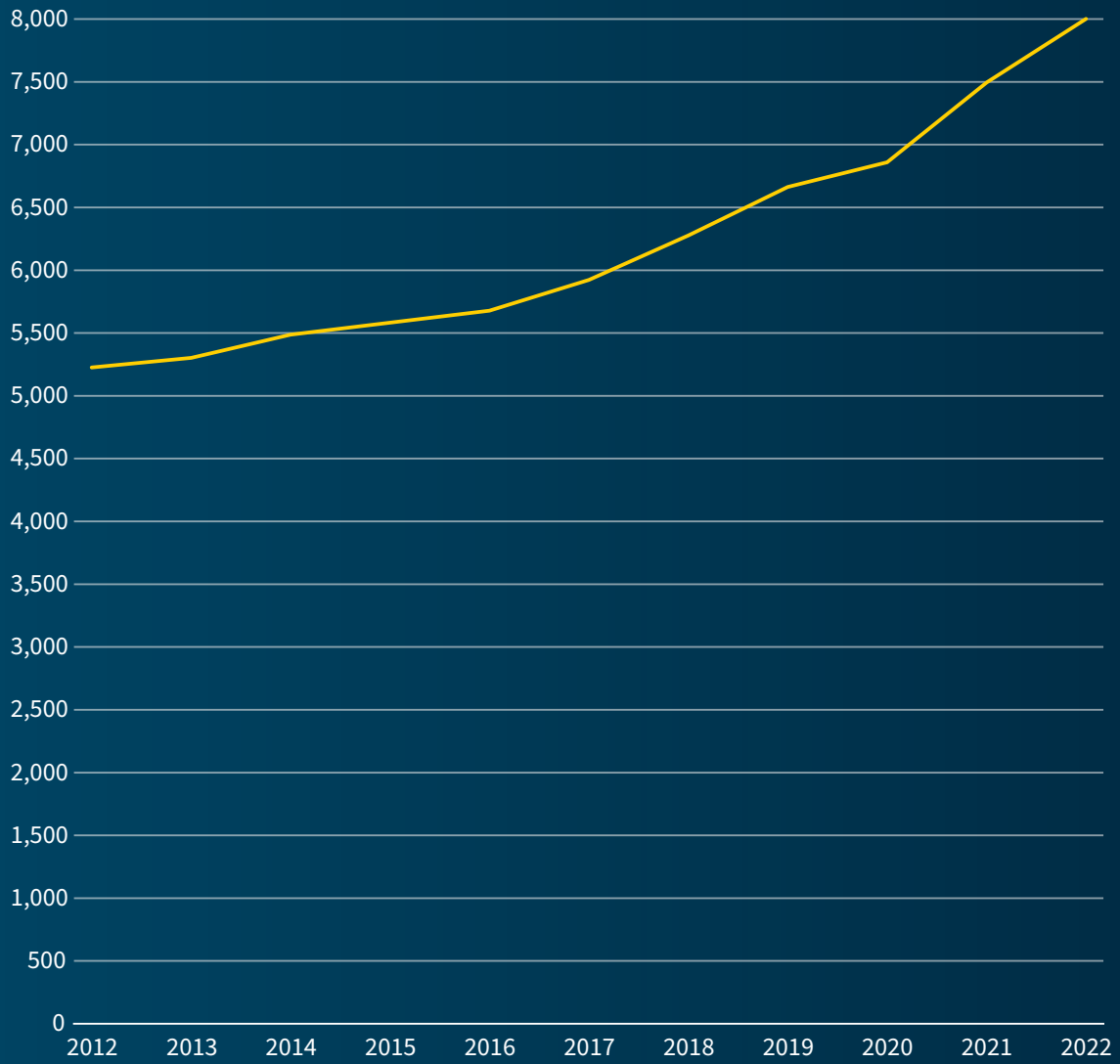
- **With these new hires, the state’s K–12 teacher workforce gradually became more diverse.** The total number of teachers of color in the Massachusetts teacher workforce climbed from around 5,200 in 2012 to over 8,000 in 2022, a 67 percent increase. Teachers of color now make up nearly 10 percent of the state’s 80,000 K–12 teachers, up from 7 percent in 2012 (**Figure 2**).

Figure 2: Teachers of color as a share of all teachers in Massachusetts, 2012 to 2022



Source: MassINC’s analysis of data from the MA Department of Elementary and Secondary Education

Figure 3: Number of teachers of color in Massachusetts, 2012 to 2022

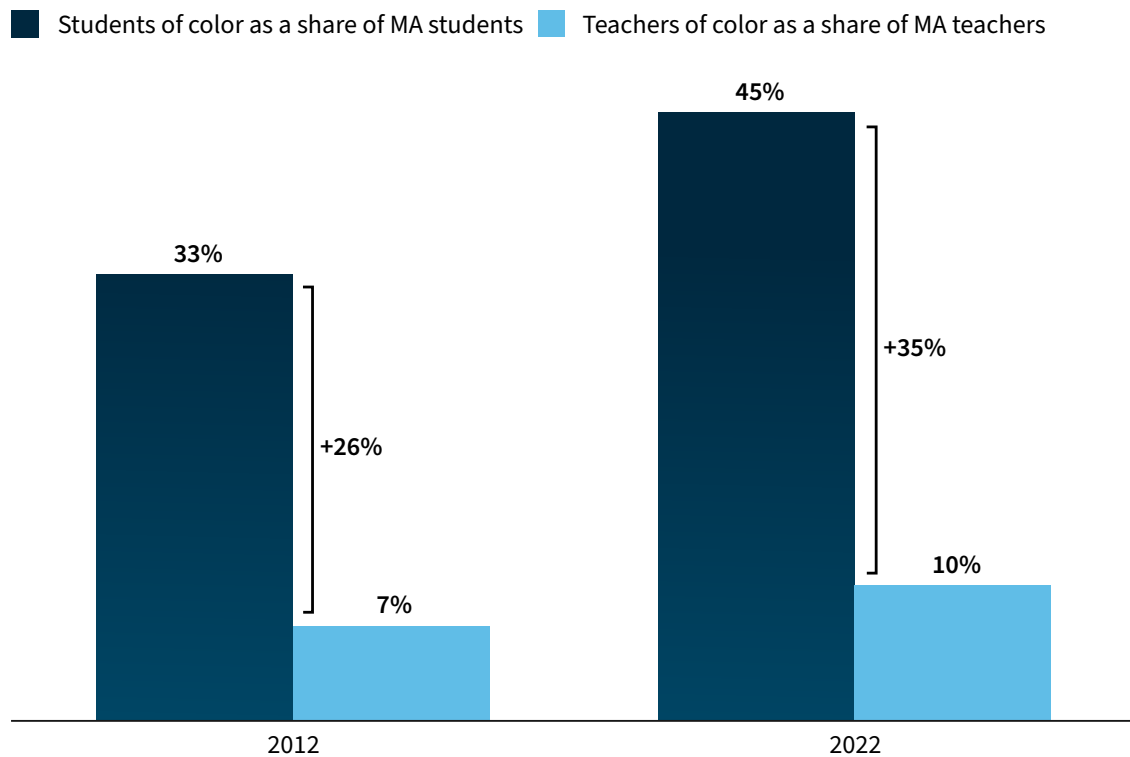


Source: MassINC's analysis of data from the MA Department of Elementary and Secondary Education



- **Despite strong growth in the number of teachers of color hired in Massachusetts, the workforce actually became less representative of the state’s increasingly diverse students.** In 2012, students of color made up 33 percent of K–12 enrollment in Massachusetts and teachers of color comprised 7 percent of the teacher workforce, a representation gap of 26 percentage points. This representation gap grew to 35 percentage points in 2022, with students of color increasing to 45 percent of enrollment, and teachers of color reaching 10 percent of the state’s teacher workforce (**Figure 4**).

Figure 4: Students of color vs. teachers of color representation gaps, 2012 and 2022



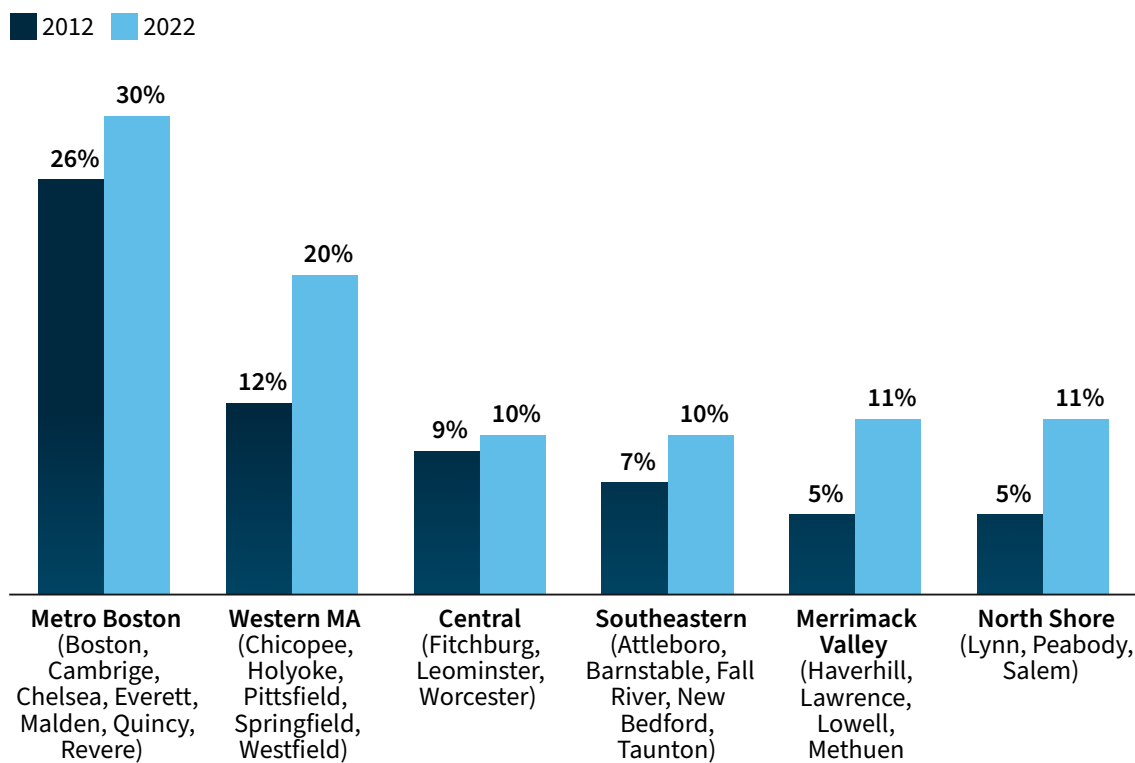
Source: MassINC’s analysis of data from the MA Department of Elementary and Secondary Education

- Urban districts hired a large majority of new teachers of color over the past decade. However, growth rates varied widely among them.** Urban districts accounted for more than half (54 percent) of the growth in the state’s teacher workforce between 2012 and 2022, but they were responsible for three-quarters (76 percent) of the net growth in teachers of color in Massachusetts.

With a 4 percentage point increase to 30 percent teachers of color in 2022, Boston and surrounding cities continue to have the most diverse teacher workforces in the state (**Figure 5**). Western Massachusetts Gateway Cities posted the largest gain, increasing teachers of color as a proportion of their teacher workforces by 8 percentage points between 2012 and 2022. Merrimack Valley and the North Shore Gateway Cities followed with 6 percentage point gains. However, growth was much slower in the Central Massachusetts and Southeastern Massachusetts Gateway Cities, which increased their teachers of color proportions by just 1 and 3 percentage points, respectively.

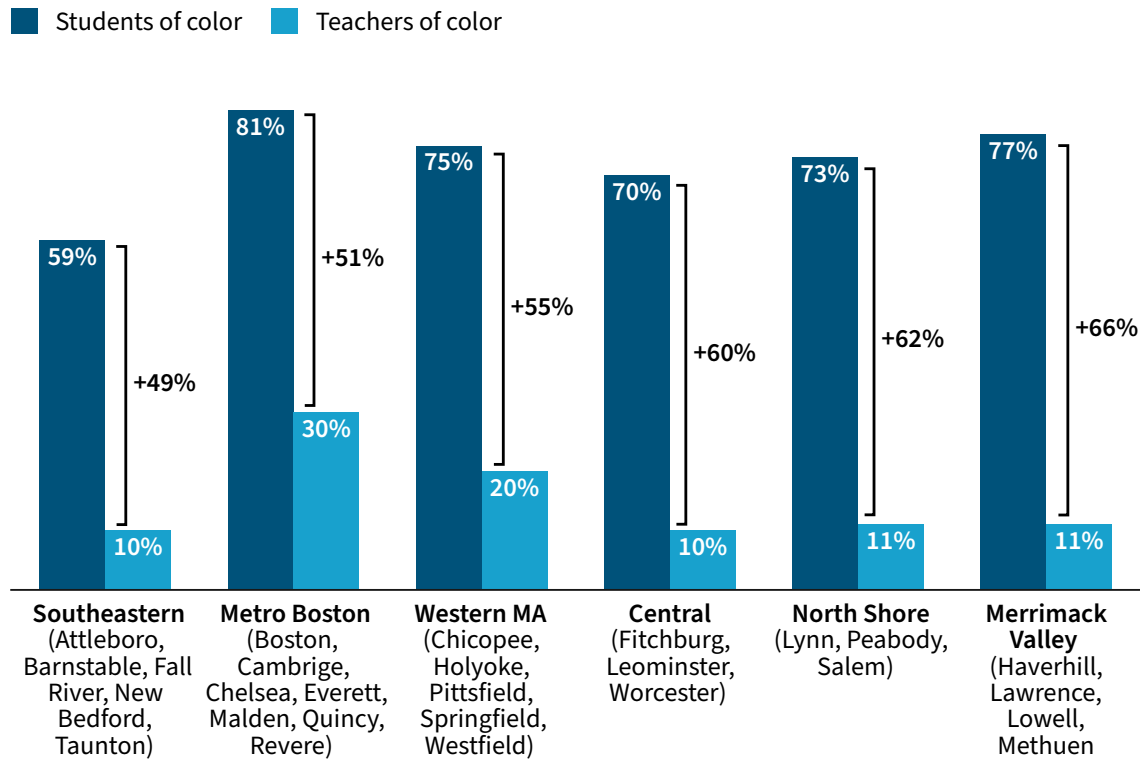
Across the cities, the representation gap is smallest in the Southeastern Massachusetts cities at 49 percentage points and largest in the Merrimack Valley at 66 percentage points (**Figure 6**). Metro Boston is the only area where urban districts saw the representation gap narrow, falling from 52 percentage points in 2012 to 51 in 2022.

Figure 5: Teachers of color as a share of the teacher workforce in urban districts, 2012 and 2022



Source: MassINC’s analysis of data from the MA Department of Elementary and Secondary Education

Figure 6: Teachers of color workforce share vs students of color enrollment share in urban districts, 2022



Source: MassINC's analysis of data from the MA Department of Elementary and Secondary Education

The probability that a student of color is assigned to an educator of color fluctuates widely across urban districts. Uneven growth patterns across districts means assignment to teachers of color varies considerably based on the district a student attends. While it is difficult to accurately gauge exposure to teachers of color without a more detailed analysis of course schedules, calculating hypothetical probabilities based on the overall share of teachers of color in districts (and assuming students and teachers of color are allocated evenly across schools within the district) is instructive.

With growth from 5 percent to over 10 percent teachers of color in the Merrimack Valley Gateway Cities, students of color in 2022 should be twice as likely to have assignments to ethno-racially diverse educators as compared to 2012. Still, the probability that students of color have a teacher of color in any given year remains low at around 23 percent (averaging across grade spans).

For Metro Boston cities, where teachers of color make up 30 percent of the workforce, the chances of assignment to a teacher of color should be around 60 percent across K–12 and over 90 percent in high school (**Figure 7**). While Boston and surrounding cities remain far from achieving parity, students of color in these districts should have exposure to 8 teachers of color as they progress from K to 12, whereas for students from the Merrimack Valley and the North Shore, only 3 of their roughly 35 classroom instructor assignments during this journey would likely be teachers of color.

This exercise in probabilities shows how meaningful an increase from 10 to 30 percent of the workforce can be for students. While 30 percent educators of color will still be very unbalanced for many urban districts, achieving parity in these settings is likely not the ideal outcome. This would simply reinforce existing patterns of segregation and exclusion and make it more difficult for both educators of color and families of color to find inclusive school communities outside of the state’s urban areas.

At the same time, we must also be careful not to overstate the impact of a workforce with 30 percent teachers of color in a diverse school. With current gender imbalances, a student of color in a district where teachers of color make up 30 percent of teachers would have only a 5 percent probability of assignment to a male teacher of color in elementary school and fewer than two male teachers of color during high school, on average.

Equally important, we must remember that the most powerful achievement teacher matching gains for students of color come from same race matches, and these probabilities group all educators of color together. In a school with 30 percent educators of color and diversity within this group, the likelihood that a Hispanic student is assigned to a Hispanic teacher or a Black student to a Black teacher will still be fairly low.

Figure 7: Probabilities of assignment to teachers of color by their share of the district’s workforce

Teachers of color as share of workforce:	Any teacher of color				Male teacher of color			
	5%	10%	20%	30%	5%	10%	20%	30%
Probability of having at least one teacher of color each year								
K-5	5%	10%	20%	30%	1%	2%	4%	5%
Middle	14%	27%	49%	78%	3%	5%	10%	15%
High School	23%	41%	67%	92%	10%	18%	34%	47%
K-12	13%	23%	41%	60%	4%	8%	15%	21%
Average number of assignments to teachers of color over grade span								
K-5	0.3	0.6	1.2	1.8	0.1	0.1	0.2	0.3
Middle	0.4	0.8	1.5	2.4	0.1	0.2	0.3	0.5
High School	0.9	1.6	2.7	3.7	0.4	0.7	1.4	1.9
K-12	1.6	3.1	5.4	7.8	0.5	1.0	1.9	2.7

Source: MassINC’s analysis of data from the MA Department of Elementary and Secondary Education

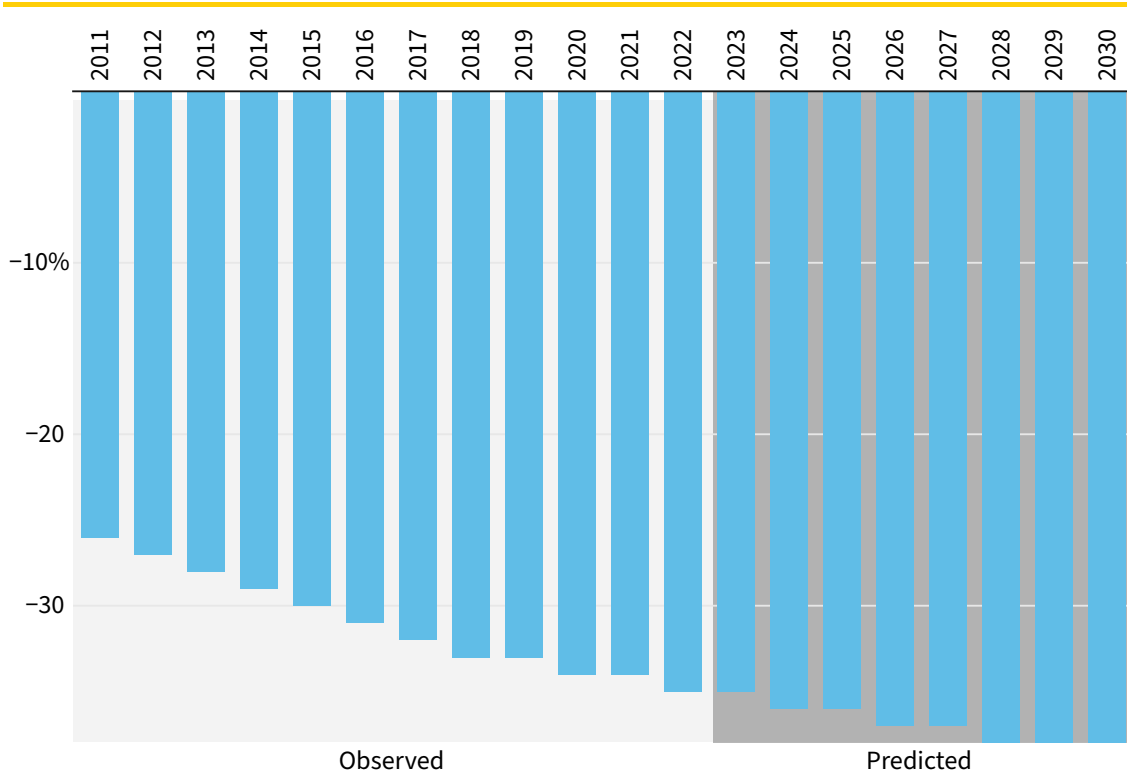
Notes: Assumes one classroom instructor per year in K-5, three in K-8, and 5 in high school, equating to 35 instructors across K-12. Also assumes male teachers make up 18 percent of the teacher of color workforce in K-8 and 40 percent in K-12.

EDUCATOR DIVERSITY PROJECTIONS AND SIMULATIONS

With this important context, our analysis now turns to the WEPC projection model.¹⁸ First, Bacher-Hicks and Chi establish a baseline that tells us how the demographic composition of the state’s educator workforce will shift in the near future, absent additional change or intervention. Next, they explore the potential to alter this trajectory by simulating changes to key factors—such as retention rates or new teacher hiring composition. This analysis yields the following takeaways:

If status quo trends hold, classrooms will be even more demographically unbalanced in 2030. With the changes leading to more diversity in the state’s educator workforce unfolding at a constant rate, teachers of color are projected to comprise almost 14 percent of Massachusetts teachers at the end of the decade. But the state’s K–12 students will become more diverse faster. By 2030, students of color are projected to make up nearly 53 percent of total enrollment. This means Massachusetts’ teacher workforce will be even more out of parity with the student population. The baseline model projects an increase in the gap from 35 percentage points in 2022 to 38 percentage points in 2030 (**Figure 8**).

Figure 8: Teachers and students of color, representation gap (percentage point difference)



Source: WEPC’s analysis of data from the MA Department of Elementary and Secondary Education



NOTES ON PROJECTION AND SIMULATION METHODS AND KEY TERMS

Boston University WEPC faculty built a linear projection model to forecast changes in the teacher workforce in the coming years. This technique extends trend lines from the recent past, capturing all of the various forces shaping the workforce under the status quo, assuming they will continue to unfold at the present pace (see the Appendix for more detailed methodology). Taking the total number of teachers in the workforce projected each year through 2030 from this baseline linear model as a given, they simulate a variety of factors that influence educator diversity over time, including changes to the composition of newly hired teachers and varying rates of retention. A few key terms will be helpful to keep in mind:

Teachers. Individuals with a teacher job code, including special education and bilingual education teachers. Does not include guidance counselors, paraprofessionals, or other instructional support staff.

Students/teachers of color. Individuals who identify as Black, Hispanic/Latinx, Asian, American Indian, or multiple/other races.

New teachers. Teachers who entered the Massachusetts public school workforce for the first time (i.e. no teaching history in Massachusetts within the prior three years). Excludes teachers with professional or temporary licenses. This definition is used in baseline projections.

Newly hired teachers. Teachers who enter the Massachusetts public school workforce for the first time since the previous school year. Includes all license types. This definition is used in the simulations.

Focusing on retention disparities alone has limited impact on the diversity of the state’s educator workforce in the near-term. Massachusetts retains roughly 90 percent of White teachers each year, whereas retention rates for teachers of color in the state hover around 85 percent. Equalizing retention such that 90 percent of all teachers return each year beginning in 2023 would increase the share of teachers of color in the workforce to 17 percent in 2030, 3 percentage points above the baseline projection.

However, this finding should not reduce attention to efforts to increase retention. The impact is modest in the near-term because teachers of color remain a relatively small fraction of the workforce. As their numbers increase, so will the power of retention. Moreover, retention likely has a significant influence on how other people of color view teaching conditions. The more teachers of color thrive in the workplace, the more likely their peers will be to consider teaching as a profession.

“*Students of color who earn four-year college degrees are much less likely than White college graduates to choose education as a career.*”

While Massachusetts has made considerable progress hiring more diverse educators, there are no visible signs that it has had success improving retention to date. Between 2012 and 2022, retention rates for teachers of color have not increased nominally or relative to White teachers.

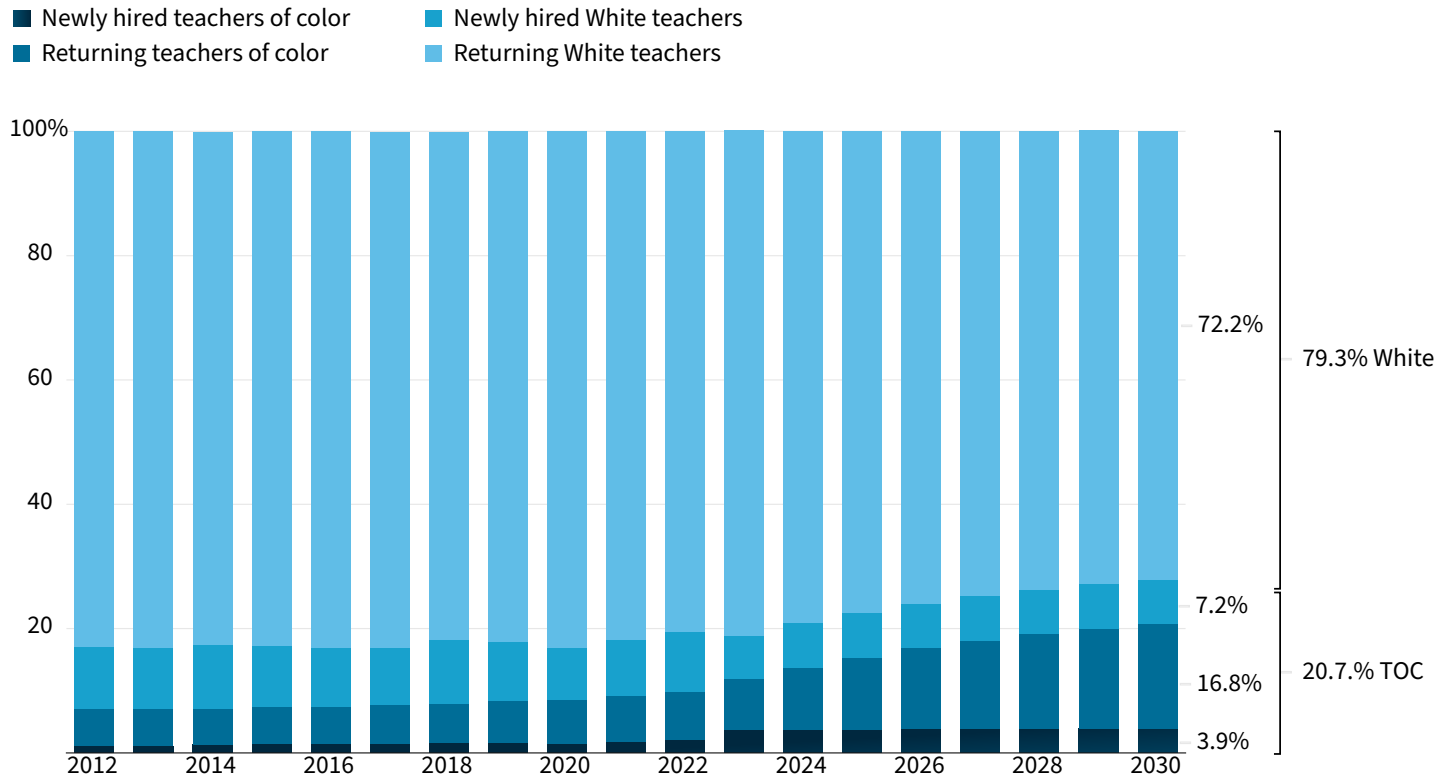
Racial differences in retention are largely driven by disparities in the first few years of teaching. Within five years, less than 40 percent of teachers of color remain in the workforce in Massachusetts compared to over 50 percent of White teachers. This suggests retention could have particularly powerful peer effects given that these relatively young teachers likely have strong connections to others early in their career decision-making process.

Drawing more of the state’s diverse college graduates into teaching could generate large gains.

Students of color who earn four-year college degrees are much less likely than White college graduates to choose education as a career.¹⁹ In 2021, students of color made up 35 percent of graduates from four-year colleges in Massachusetts, while people of color comprised just 18 percent of those entering the teaching profession. If new teachers matched the demographics of those graduating from our four-year colleges each year through 2030, teachers of color would represent nearly 21 percent of the Massachusetts workforce at the end of the decade (**Figure 9**).

While this hypothetical scenario has significant impact, it is particularly challenging to realize. College graduates in Massachusetts are far more diverse than high school students because we attract so many students from other states and abroad. Recruiting and retaining these graduates for careers in education has its own set of difficulties. Still, this simulation shows that there is a large supply of diverse four-year college graduates who are not choosing teaching for various reasons, some of which we can likely address.²⁰

Figure 9: Composition of Massachusetts teachers imputed with four-year college graduate composition



Source: WEPC’s analysis of data from the MA Department of Elementary and Secondary Education

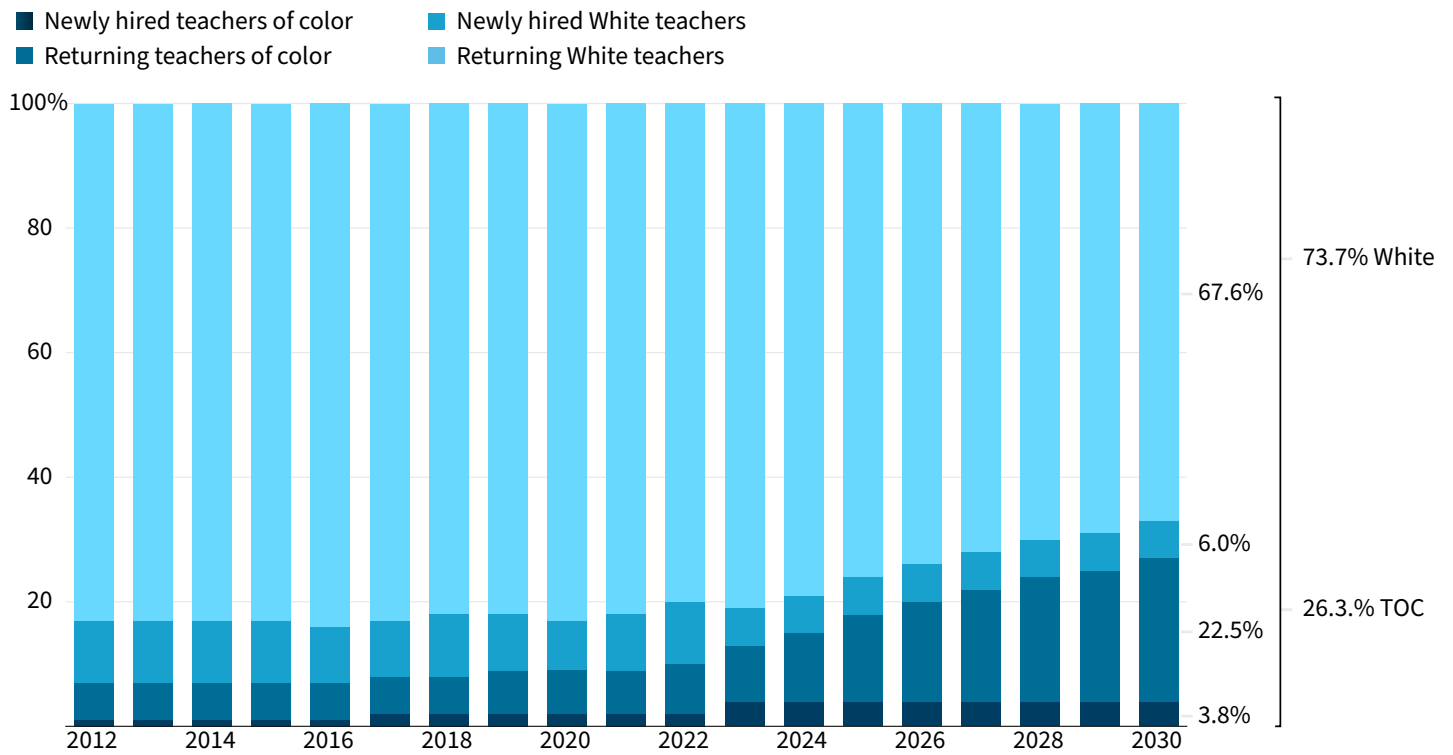
A homegrown strategy to close gaps in college access and success could have even greater impact.

Massachusetts high school graduates are increasingly diverse—students of color made up 38 percent of the graduating class of 2021—but too few are on postsecondary paths that bring them into our teaching workforce. More than half did not continue on to any postsecondary institution the fall after high school graduation. Increasingly, research here in Massachusetts suggests strong interventions at the beginning of the pipeline will be essential to increasing educator diversity.²¹

The projection model shows teachers of color would make up 23 percent of the workforce by 2030, if new hires reflected the demographic composition of the state high school graduates each year between now and the end of the decade. This hypothetical scenario would mean both closing large gaps in college access and success, and changing dynamics such that students of color who earn four-year degrees see the same opportunity in a teaching career as White college graduates.

As more graduates pursue teaching, retention efforts will have more power. If we could hypothetically close college success gaps, bring college graduates of color into the pipeline at the same rate as White college graduates, and equalize retention rates, the share of teachers of color in the state’s teacher workforce would reach 26 percent by 2030 (Figure 10).

Figure 10: Composition of Massachusetts teachers imputed with high school graduate composition and equalized retention



Source: WEPC's analysis of data from the MA Department of Elementary and Secondary Education

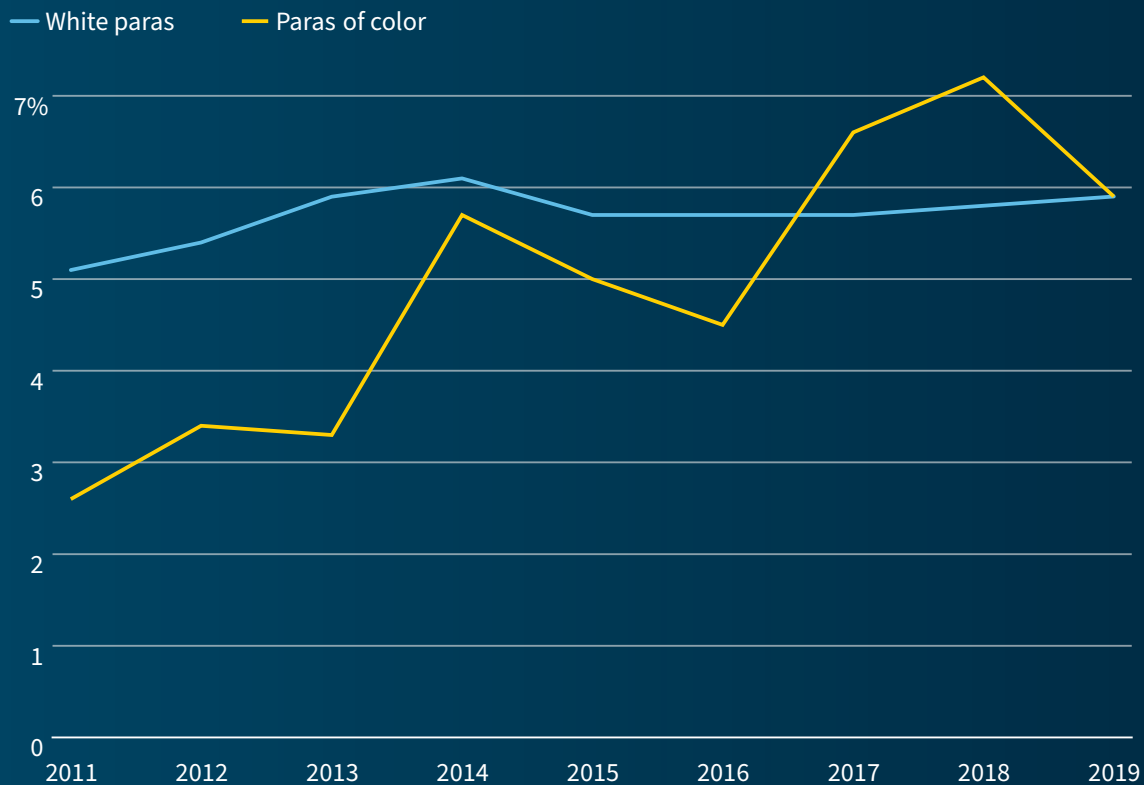
This analysis reveals the maximum possible influence that addressing sources of disparities could have on the racial and ethnic composition of the state's educator workforce in the near-term. In this sense, the simulations represent entirely hypothetical scenarios—no known interventions will eliminate disparities in retention, career choice, and college access and success overnight. From a strategy, policy, and goal-setting standpoint, however, they are illuminating. In addition, the WEPC model can be employed going forward to track progress and adjust plans for the future accordingly.

PARA PROFESSIONAL CONVERSION IN MASSACHUSETTS

Massachusetts has seen a steady increase in the share of paraprofessionals (paras) of color who become teachers each year over the past decade. Fewer than 3 percent of paras of color in 2011 became teachers the following year. In comparison, nearly 8 percent of paras of color from 2021 were teaching in 2022 (**Figure 11**). The conversion rate for White paras also grew considerably during this 10-year span, from 5 percent to over 7 percent.

We lack research to document the forces behind these gains, and para conversion is only one measure of success. However, it is likely that the state's intentional efforts to recruit teachers from the diverse paraprofessional ranks contributed meaningfully to this growth. However, people of color make up only about 14 percent of paras, and with their conversion rates now surpassing that of White educators, it may be difficult to recruit significantly more educators of color from this limited pipeline. Still, these large gains suggest Massachusetts should consider broadening its adult-focused grow your own efforts to other school support staff.

Figure 11: Para to teacher conversion rate



Source: WEPC's analysis of data from the MA Department of Elementary and Secondary Education



DOWNSIDE RISKS COULD WIDEN THE REPRESENTATION GAP

New teaching positions create more opportunities for people of color to enter the profession. Extrapolating from the pattern of modest growth over the past decade, the baseline model assumes the Massachusetts teacher workforce will increase by another 7 percent through 2030. However, there are several reasons to believe actual hiring will be lower in the coming years.

Schools' district budgets today are not recovering from a major recession, as was the case for much of the 2010s. And while the workforce grew amidst enrollment declines in recent years, enrollment is likely to fall more sharply in the near future, especially if outmigration continues to cost the state residents. While many urban districts are still seeing enrollment growth and they could continue to hire with new resources from the Student Opportunity Act (SOA), there is always the possibility that fiscal challenges will resurface.²²

If the state faces budgetary pressures and holds back on increasing SOA aid, low-wealth urban districts could be forced to lay off recently hired teachers. This would set teacher diversity efforts back because teachers of color are disproportionately new to the workforce, and they are concentrated in cities that are especially vulnerable to state budget volatility.

A final—and perhaps the most concerning downside risk—is that there simply will not be enough teachers of color available to hire in the near-term. The baseline projection assumes schools can bring on more and more teachers of color each year, reaching nearly 2,300 new recruits in 2030. This is 30 percent above 2022 levels and 80 percent greater than the 2019 pre-pandemic hiring figure.

Much of the diversity among new teachers in 2021 and 2022 came from those entering with emergency licenses. The state temporarily delayed the requirement to pass the Massachusetts Tests for Educator Licensure (MTEL) and complete teacher preparation requirements, allowing new recruits to enter the profession during the pandemic with only a bachelor's degree. It is likely that this policy released pent up supply of potential teachers of color; college graduates could give teaching a try without the considerable upfront investment of time and energy that preparing for the tests require.²³

A man with dark hair, glasses, and a mustache is smiling broadly. He is wearing a dark blue suit jacket, a white dress shirt, and a dark tie. He has his arms crossed. The background consists of a row of grey school lockers in a hallway.

“

“The state is emerging as a leader in Early College with more than 8,000 high school students expected to participate in the current school year.””



III. THE EDUCATOR DIVERSITY LANDSCAPE IN MASSACHUSETTS

The simulations in the previous section show Massachusetts must shore up each stage of its educator workforce pipeline to draw fully on the talents of its diverse population. We turn now to the how, taking stock of what we can learn from research on educator development, licensure, and retention, as well as the impressive range of educator diversity efforts that are currently underway in Massachusetts.

A. Educator Development

Enlarging the mouth of the pipeline is priority number one for Massachusetts. A far larger share of students of color must earn the four-year college degrees that are a prerequisite for entry into the profession. At the same time, people of color with four-year degrees must see a place for themselves in education. Achieving this change at-scale will require expansion of grow your own programs, innovation in educator preparation, and targeted use of financial incentives.

1. Grow Your Own Programs

School districts have long sought to tap their own talent pools as a human capital strategy. This approach is rooted in evidence that homegrown teachers produce stronger student outcomes and have lower turnover.²⁴

Grow your own (GYO) programs vary widely in approach. Some focus on recruiting middle and high school students and guiding them to four-year colleges with well-regarded education departments. Others exclusively target adults, including teaching aids, involved parents, and community activists.²⁵ Many GYO initiatives have a community building and racial justice orientation. Youth-serving programs often utilize a curriculum designed to build critical consciousness, instilling in students a sense of how they can help dismantle structural racism by pursuing a career in teaching.

While GYO programs have been in place for decades, and much has been written about them over the years, there is little direct empirical evidence of their impact on the teacher pipeline.²⁶ However, many of the youth-serving programs throughout the US have an Early College structure, and rigorous evidence shows providing low-income students and students of color with opportunities to earn a large number of college credits while in high school with structured support dramatically increases the likelihood that they will earn postsecondary degrees.²⁷

Impact evaluation of adult-serving GYO initiatives is also quite limited, but studies suggest program completers have very high retention.²⁸ There is also some evidence that those who enter the field with experience as paraprofessionals generate higher teacher value-added on student learning outcomes than other novice teachers.²⁹

While we still lack a full understanding of how much GYO programs can contribute to the educator workforce, some states are already making them a cornerstone of their educator diversity efforts. For instance, Michigan recently invested \$175 million in its Future Proud Michigan Educator Grow Your Own grant. Many states are working to leverage federal funding to expand adult-serving programs, by instituting a new apprenticeship model developed first in Tennessee. Drawing on federal resources available for apprenticeships will allow these programs to both cover their instructional expenses and provide adult students with income while they train (see box below).

Massachusetts has the bones for a strong GYO pillar in its educator diversity strategy. DESE has provided resources to districts working to develop grow your own initiatives through its Educator Diversity Grant. The state is emerging as a leader in Early College with more than 8,000 high school students expected to participate in the current school year. And as the roughly 60 state-designated Early College high schools mature, many are thinking deeply about how they strengthen their career development offerings, including their education pathways. State leaders in Massachusetts are also working to fashion an apprenticeship program, beginning with hiring a full-time project manager to lead strategic planning efforts and partnering with the National Center for Grow Your Own to develop the pilot model.

FOLLOWING TENNESSEE'S TRAILBLAZING PATH TO TEACHER APPRENTICESHIPS

In 2020, Tennessee took advantage of federal recovery resources to launch 65 no-cost GYO programs to serve both high school graduates and career changers. The state found a way to make these district and higher education partnerships financially sustainable by organizing them as apprenticeships. Prospective teachers are mentored by veteran educators for a period of one to three years. They receive modest wages while apprenticing. When they complete the program, they receive a bachelor's degree and full certification, all at no cost. This model is now financially sustainable because the Biden administration formally designated teaching as an "apprenticeable" occupation in 2022. The US Department of Labor has already extended designation to teaching apprenticeships in 18 states.

2. Educator Preparation

Teachers generally complete a formal course of studies through an education preparation program to receive an initial license to teach in a Massachusetts public school. They can train at a traditional college or university or through an alternative educator preparation program. Both routes have been studied carefully by researchers examining how students of color experience the educator development process.

Reforming Traditional Educator Preparation Programs

Students of color have long been underrepresented in education departments in comparison to their enrollment in baccalaureate programs, and scholars have argued that traditional programs have failed to adequately prepare the relatively few students of color that they do serve for the profession.³⁰

Over the past two decades, programs have sought to improve by introducing coursework on culturally responsive teaching. But studies suggest the approach has often been superficial and limited to one or two course offerings.³¹ Increasingly, programs grapple with the need to help White students overcome their own



“Boston Teacher Residency Program shows participants were more diverse, had higher retention rates, and equal or stronger student value-added compared to other novice teachers hired by the district.”

internalized deficit views of minoritized students, while also preparing educators of color for the unique challenges that they will face in the workplace.³² In response to this dual mandate, some are dramatically restructuring with a focus on helping future educators approach cultural competence and culturally responsive teaching as a broad set of essential practices in effective schools.³³

DESE is utilizing the state’s regulatory powers to pressure traditional educator programs operated by both public and private colleges and universities to undertake this work. Earlier this year DESE issued updated **Guidelines for Educator Preparation Program Approval**. The first revision since 2013, the new approval standards seek to help programs draw more diverse enrollment and prepare all graduates for culturally responsive teaching. The new guidelines explicitly call on programs to demonstrate how they are providing appropriate and comprehensive support for students, with particular focus on those who have been systematically marginalized or underserved by our education systems.³⁴ With a grant from the Institute of Education Sciences (IES), DESE will use qualitative methods to gain insight on how the practices used by educator preparation programs prepare teacher candidates to work with racially diverse students. National Center for Grow Your Own to develop the pilot model.

Expanding Alternative Educator Preparation Programs

Over the past two decades, many organizations have cropped up to provide an expedited pathway into the profession for college graduates with no prior experience or training. These alternative programs, which are often referred to as teacher residencies, vary considerably. Some place candidates alongside mentors for an entire school year; others allow residents to serve as a teacher of record, while they complete education coursework during nights, weekends, and summer breaks. Teach for America is one of the largest and most well-known, but many school districts and charter organizations run their own residency programs. Candidates generally receive a modest stipend to help with living expenses. They also earn state certification and graduate coursework leading to a master’s degree in education at significantly reduced cost. In exchange, they teach in the district for a specified period.

While studies generally find that teachers gain more instructional knowledge and have higher retention when they attend traditional preparation programs, prior research on programs in Massachusetts reveals no consistent difference in test-based value-added across program pathways when controlling for student demographics.³⁵ Research on teacher residency programs that aim to serve candidates of color in urban districts finds they can generate both higher retention and value added. For example, a rigorous analysis of the Boston Teacher Residency Program shows participants were more diverse, had higher retention rates, and equal or stronger student value-added compared to other novice teachers hired by the district.³⁶

Several states have made significant commitments to scaling teacher residencies. Most notably, California, which provided \$75 million for the California Teacher Residency Grant Program in 2018 and another additional \$350 million in one-time funds in 2021. New York recently made a \$30 million investment in the Empire State Teacher Residency Program.³⁷

TRADITIONAL VS. ALTERNATIVE EDUCATOR PREPARATION IN MASSACHUSETTS

Massachusetts is home to over 65 educator preparation providers. Most are very small, with two-thirds serving fewer than 100 students. The five largest capture half of the enrollment. While they have grown more diverse, students of color still represented only 18 percent of enrollment in 2021, significantly lower than their share of undergraduate enrollment in Massachusetts (38 percent). Even more concerning, enrollment in educator preparation programs is down much more sharply than postsecondary enrollment overall. Between 2012 and 2021, the number of students of color in these programs dropped by half (from 2,391 to 1,222).³⁸

In the years leading up to the pandemic, approximately 10 percent of Massachusetts teachers entered the workforce through alternative programs. The number of candidates participating in these programs has also fallen dramatically. While participation was falling prior to emergency licensure, it is likely that making it possible for college graduates to assume full teaching responsibilities further impacted enrollment. Programs will now need to scale up again as this pathway is no longer an option.

Massachusetts has taken great care to evaluate its educator preparation programs, both traditional and nontraditional. A 2017 report by AIR examined not only 70 educator preparation providers, but also 2,000 distinct programs within them. It found the performance of these programs varies considerably, with some having considerable impact on teacher effectiveness. In contrast to the national studies, they found teachers prepared by postgraduate or alternative programs tend to receive higher summative performance ratings but have lower retention rates.³⁹

3. Financial Incentives

Affordability is an increasingly formidable barrier to college access for students of color in Massachusetts. Incentives that make teaching a more financially viable path through postsecondary studies could have systemic impact on the workforce. Financial incentives targeted specifically to education could also help tilt the balance in favor of teaching, given that education's relatively low pay for a college degree profession is one reason why students of color pursue other fields.⁴⁰

States use a variety of financial incentives to draw more students into the teaching pipeline. Studies examining the efficacy of these efforts yield mixed results. There are notable examples of failed experiments, including the Massachusetts Signing Bonus Program for New Teachers. However, there is also strong evidence that providing higher salaries and signing bonuses can induce graduates of color to enter teaching.⁴¹ Loan forgiveness is also a promising approach for educators of color, who typically enter teaching with more student loan debt.⁴²

Massachusetts has an increasing number of financial incentives available. They include two brand new scholarships programs that provide generous financial aid, which should make attending public colleges and universities significantly more affordable for those interested in pursuing education. The **Tomorrow's Teachers Scholarship Program** provides up to \$25,000 per year for both undergraduate and graduate studies. Recipients must provide one year of service in Massachusetts public school for each year that they receive scholarship aid. These grants convert to loans if this service requirement is not met. With resources from the Question One ballot initiative, the legislature expanded funding for the state's **High-Demand Scholarship Program** from \$1.5 million annually to \$25 million in the FY 2024 budget. Students studying education in Massachusetts are eligible for an additional state financial aid (for full-time undergraduates, the annual grant is \$6,500 at UMass, \$5,500 at a state university, and \$4,000 at a community college). Students must declare education as their major and maintain a college GPA of 3.0 or higher to be eligible for these funds. They must also commit to working in the commonwealth for at least five years.

While these programs could have significant impact, one major concern is students who do not pass teacher certification or who have trouble finding a teaching job in an economic downturn, could be saddled with high levels of debt that they are unable to afford. Even if we do an excellent job communicating these scholarship opportunities, the difficult history of abusive student loan practices in this country, particularly for students of color, may make many weary about assuming these obligations.

DESE has also made financial incentives an eligible use of the **Teacher Diversification Grant**. Established in April 2019, 55 school districts have participated, piloting a range of strategies to increase educator diversity. Districts can utilize these grants to offer financial incentives up to \$25,000, including signing bonuses, relocation allowances, and loan repayment reimbursements. In FY 2023, DESE distributed \$2.7 million through the program. The FY 2023 state budget also included \$7.5 million for up to \$7,500 in student loan forgiveness for graduates of public colleges and universities in Massachusetts who commit to teaching for four years, with priority given to recruitment and retention of racially, culturally, ethnically, and linguistically diverse teachers.

B. Educator Licensure

As candidates of color proceed through the educator pipeline which includes steps like college graduation and passing the licensing exams necessary to teach in Massachusetts, up to half exit the pipeline. The barrier posed by standardized tests explains much of this loss. All states require prospective teachers to demonstrate that they have a basic level of competence by passing these certification tests. The practice has attracted considerable scrutiny, in part because it creates additional barriers for candidates of color, contributing to their underrepresentation in the teaching workforce. Moreover, research nationally finds these tests are only modestly predictive of teacher quality. Producing professional certification tests that predict teacher effectiveness is especially difficult because the impact of same-race matches is so large. One study found Black candidates with low scores were as effective as White candidates with the highest scores when teaching Black students.⁴⁵

The reasons why candidates of color struggle to complete these exams are not entirely understood. It is at least partially related to the burden exposed by the time and expense. Some studies suggest content bias in the test themselves contribute to racial and ethnic disparities, at least historically.⁴⁶ And stereotype threat—underperformance because of anxiety and self-doubt that they will conform to negative stereotypes about their group—remains a pernicious problem for minoritized populations taking any form of high-stakes standardized test.⁴⁷

Massachusetts has developed and administered its own certification tests since 1998. Independent analysis suggests the Massachusetts Tests for Educator Licensure (MTEL) are predictive of teacher value-added, and there is no clear evidence that the tests are less predictive of value-added for teachers of color. While candidates of color have significantly lower MTEL pass rates, analysis suggests the steps the state has taken to prevent bias in test items has been effective.⁴⁸ Some of the disparity in pass rates is because educators of color do not retake the test as often when they fail the first time.⁴⁹ However, stereotype threat likely contributes to the large unexplained differences in performance that remain. As long as this persists, our tests are adversely screening out effective educators of color.

Working within the somewhat rigid constraints of current state law, DESE is experimenting with other valid models to demonstrate knowledge and skills to give teaching candidates multiple pathways to licensure. In October of 2020, the Board of Elementary and Secondary Education approved an amendment to the Regulations for Educator Licensure to create and evaluate alternative methods of assessment through 2025.



Several alternative pathways have been approved by the department. They include five alternative tests to the main Communication and Literacy Skills Test (CLST). Candidates who have near-passing scores on MTEL subject tests can provide written analysis of a test objective to demonstrate their depth of subject area knowledge through a new program known as MTEL-Flex. Five educator preparation programs can provide attestations that candidates possess the requisite content knowledge to teach in alignment with department-issued guidelines. Candidates that meet specific eligibility criteria can also access two alternative ETS subject matter knowledge assessments approved by the department.

DESE selected the National Center for Analysis of Longitudinal Data in Education Research (CALDER) as the external evaluator for this pilot. They will link teachers participating in the pilot to Massachusetts data on student and teacher outcomes. Preliminary data collection through the summer of 2022 found CLST pass rates on alternative assessments were similar to the MTEL. Pass rates on the MTEL Flex were about 9 percentage points higher. Candidates of color were slightly more likely to take an alternative CLST test and slightly less likely to utilize MTEL-Flex.⁵⁰ While sample sizes are limited and those who could be observed to data may not be representative (e.g., they are more likely to be emergency license holders with some level of classroom experience), initial evaluation suggests teachers passing both the CLST alternative assessments and MTEL-Flex have similar value-added as those passing the MTEL traditional test.⁵¹

With support from IES, DESE will continue to partner with CALDER to probe educator licensure and educator preparation more deeply. These efforts include studying how licensure impacts a range of non-test outcomes, such as discipline, grades, and grade progression, advance coursework, college enrollment, and adult voting behavior.⁵²

LEARNING FROM EMERGENCY LICENSURE

To ensure that the pandemic disruption did not prevent schools from onboarding new educators, DESE granted emergency licenses from June 2020 through November 2023. Applicants could receive these temporary licenses with just a bachelor's degree, forgoing the need to complete a formal preparation program or testing. The emergency license is valid for one year and can be extended twice.

In the first 12 months of availability, roughly 5,800 individuals received emergency licenses. The lower-barrier to entry appears to have led many to a larger and more diverse pool of candidates entering the field. Initial, administrative and survey data show that those hired on emergency licenses in the pandemic period are staying in the field at rates similar to other license holders, and the vast majority (86 percent) hope to remain in the profession.⁵³

A recently completed evaluation that included teacher quality measures found students assigned to emergency license holders who had prior classroom experience and/or educator preparation experience have learning gains in tested subjects equivalent to students in classrooms with novice provisional license holders. While the scores are lower than those who completed teacher preparation programs and hold an initial license, the differences are not statistically significant. Performance ratings followed a similar pattern, suggesting that emergency license holders with some prior experience are serving students effectively.⁵⁴

The state has made considerable effort to help ensure that these emergency licensure holders are able to obtain professional licensure. This includes waiving test fees, working with educator prep programs to provide free MTEL prep, and helping with childcare for those attending these sessions.

C. Recruitment, Retention, and Professional Development

During the stage that runs from completing licensure to teaching for at least three years, the educator of color workforce pipeline narrows once again by about half.⁵⁵ As more novice teachers of color enter the classroom, this attrition will become more costly. Shoring up the end of the teacher pipeline is also critical to success at the entry point because the ability of educators of color to thrive in the profession will have great bearing on the initial choices that students make to pursue teaching careers. First and foremost, this requires a macro-level focus on school climate and culturally responsive teaching. But mentoring and affinity groups, and financial incentives can also play meaningful roles.

1. School Climate and Culturally Responsive Teaching

A large body of literature documents the various ways that schools can be hostile work environments for teachers of color, reducing the likelihood that people of color will enter the profession and causing those who do teach to exit at elevated rates. Educators of color frequently report feeling isolated, stereotyped, and discriminated against, and the growing pains that all novice teachers experience are likely to be racialized.⁵⁶ Witnessing students experience racism is especially difficult for teachers of color, who often suffered similarly in their youth and now find themselves in a complicated position to intervene.⁵⁷ In some settings, teachers of color even face stigma from students of color, who question their participation in a field with such White dominance.⁵⁸



“Witnessing students experience racism is especially difficult for teachers of color, who often suffered similarly in their youth and now find themselves in a complicated position to intervene. In some settings, teachers of color even face stigma from students of color, who question their participation in a field with such White dominance.”

DESE is working to produce more inclusive and culturally responsive schools by diversifying the leadership ranks. In 2019, the department partnered with the Leadership Institute to create the Influence 100 program. The effort seeks to increase the diversity of superintendents in the state and create more culturally responsive district leaders. Educators who wish to become superintendents in the future can participate in a two-year fellowship that offers monthly programming, mentorship, and support preparation for securing a superintendency. The initiative offers support directly to districts working on climate and culture and effort to diversify their educator workforces. So far, 88 leaders have progressed through the program in four cohorts. A UMass Donahue Institute evaluation of the first cohort found that nearly one-quarter of participants moved to higher positions of leadership during the two-year fellowship, and their districts made progress instating equity-focused practices. However, the review also pointed to unique challenges that school leaders of color face, and the need for the program to provide greater assistance preparing candidates to overcome these obstacles.⁵⁹

While there is limited research on the impact of superintendents on school climate and educator diversity, studies show that principals are powerful “brokers” of school climate and working conditions, and their leadership has a strong influence on teacher turnover.⁶⁰ More diverse principles are also associated with more diverse teaching staff and higher retention, particularly in schools where teachers of color are underrepresented.⁶¹ And there is a feedback loop, as diverse principals beget more diverse teachers who will eventually rise to principalships in greater numbers.⁶²

Massachusetts made gains diversifying the ranks of principals over the past decade, increasing the number of principals of color by over 60 percent from 9 to 14 percent of public K–12 school leaders. DESE plans to reinforce this trend by creating a one-year Aspiring Principals Fellowship for those seeking their provisional administrator license, which is a new license introduced in February 2023 to expand access to the school leader pipeline.

The state is also working to ensure that school leaders are building an inclusive school climate and supporting culturally responsive teaching through evaluation. Last school year, the state piloted a new rubric for evaluating administrators, and this school year it will pilot a similarly updated rubric for the evaluation of classroom teachers. These updated rubrics include practices related to recruiting and hiring diverse and effective educators, allocating resources in a manner that promotes an equitable and culturally responsive school community, and supporting culturally and linguistically sustaining instructional practices.⁶³

2. Mentoring and Affinity Groups

Many school districts provide structured mentoring and other induction activities to help novice teachers build their skills and adapt to the challenges of the job. Research on the impact of these efforts yields mixed results. While some researchers find mentoring novice teachers produces positive impacts on student learning, improvements in retention are less common.⁶⁴ Though few studies explicitly focus on educators of color, qualitative evidence suggests racial affinity groups may have more power to help retain teachers of color. By offering supportive spaces to openly discuss challenges and workplace stress, these groups increase community, social belonging, and opportunities for collaborative problem-solving.⁶⁵ In 2023, DESE launched communities of practices for program directors to design and implement differentiated induction and mentoring supports with a particular focus on emergency and provisionally licensed teachers, the goal of which is to better support and address the specific needs of this teacher population.

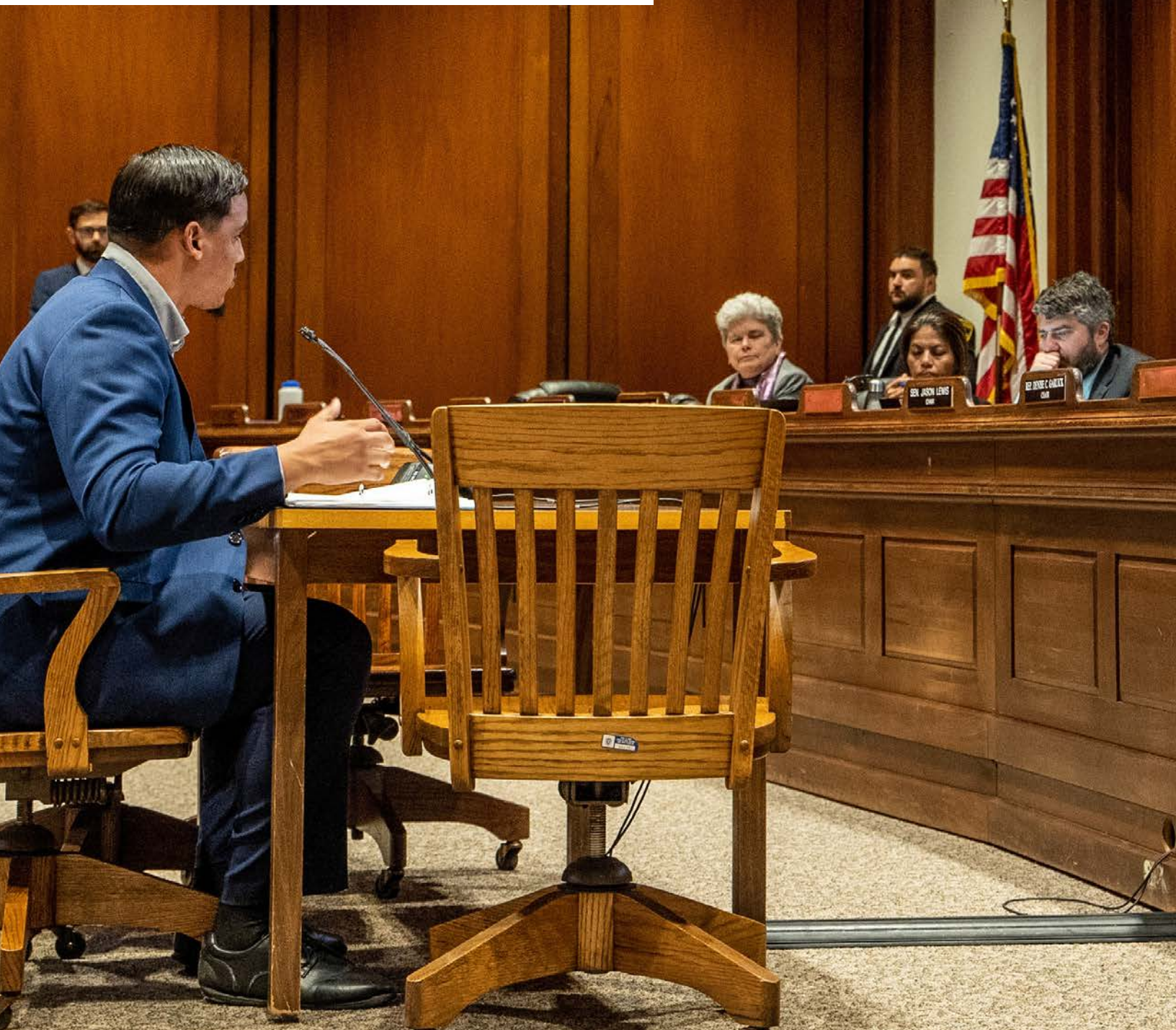
In 2018, DESE created the InSPIRED Fellowship to provide professional opportunities for educators interested in helping to lead efforts to grow a more diverse workforce. InSPIRED fellows draw on their own background and personal connections to cultivate students and encourage them to seek pathways into the profession. DESE also convenes the fellows as an affinity network to create connection among them and elevate their voices with regard to both district and state-level efforts to build a more diverse educator workforce. Since 2019, more than 70 educators have participated in the program.

3. Financial Incentives

In addition to encouraging college students to enter the field, financial incentives could play a role supporting teacher retention in urban districts where teachers of color disproportionately serve.⁶⁶ Evidence comes from a fairly large body of research on retention bonuses for teachers in high-need districts. These studies generally find retention bonuses do significantly reduce turnover.⁶⁷ However, some have indicated that the effects are larger for more experienced teachers, which might make them less likely to efficiently further diversification goals. Researchers have also examined the impact of early retirement incentives on educators with many years of service. They find that lower-quality teachers are more likely to take advantage of this incentive to exit the workforce early, leading to improvements in student learning, particularly in high-need districts.⁶⁸

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“The state could establish a high-level goal, such as ensuring that teachers of color make up at least one-third of the workforce in “priority districts” where students of color make up half or more of total enrollment.”





IV. STRATEGIC ACTION ITEMS FOR STATE LEADERS AND LEGISLATORS

A strong and diverse teacher workforce is clearly a priority for education leaders and policymakers in Massachusetts. The state has launched numerous efforts to bring more teachers of color into public schools and to create working conditions essential for their success. The state has also taken unprecedented steps to gain a better understanding of what works by rigorously evaluating these nascent efforts. While this report suggests the current trajectory will leave us far short of parity for the foreseeable future, the state’s efforts to date provide a strong launch pad for bold ideas that accelerate the pace of progress. Building on this foundation will require a systemic approach with policy, regulation, communication, and investment all working in alignment. Toward this end, state education leaders and lawmakers are working to shape comprehensive educator diversity legislation. Below we present seven key strategies that a high-impact legislative package should seek to advance:

- 1. Establish achievable goals and subgoals, with particular emphasis on districts that have diverse student populations and relatively few teachers of color.** A key objective for this research is to inform goalsetting at both the state and local level to provide motivation and meaningful accountability for change. Given how far Massachusetts is from parity in the state’s overall teacher workforce, it is critical to have sound goals to direct near- to medium-term efforts. Many school districts with very diverse student populations still have relatively few teachers of color. The state could establish a high-level goal, such as ensuring that teachers of color make up at least one-third of the workforce in “priority districts” where students of color make up half or more of total enrollment. With growth in diverse educators remaining relatively constrained in the short term, such a goal would help focus limited state resources and attention on the diverse districts where large numbers of students of color are most underserved. This prioritization is consistent with language in An Act Relative to Educator Diversity (H. 549/S. 311), which calls on the department to privilege districts with “demographic disparities” and “critical needs.”

At the district level, it is important to establish more refined subgoals to monitor actual progress providing students of each race and ethnicity with access to teachers from similar backgrounds. DESE could facilitate this work by including metrics that capture exposure to same-race (and same-race and gender) educators on EDWIN reports. DESE could also help districts monitor progress with linguistic diversity in the teacher workforce. The department does not currently collect information on the linguistic backgrounds of teachers in Massachusetts. This is one of the few material weaknesses in the state's educator data. Addressing this gap is critical to understanding the impact of linguistic diversity on student outcomes, especially with the LOOK Act increasing demand for bilingual educators.

2. Provide the Board of Elementary and Secondary Education with full authority to adopt multiple approaches to licensure. A large body of evidence shows that there is no single method to demonstrate competency that ensures all candidates with the ability to help students reach their full potential receive certification to teach. As prescribed by An Act Relative to Educator Diversity, the legislature must give the Board of Elementary and Secondary Education the authority to adopt multiple approaches, including methods that do not conform with the current law's constraints of a "test" to accurately identify effective educators.

In considering alternative approaches, the board should look closely at mechanisms for principal endorsement. While research on this method remains limited, principals have direct exposure to a candidate's performance in actual classrooms. Principals that see novice teachers providing strong contributions to their teams should have access to a structured endorsement process, grounded by evidence, that allows them to put these valued educators on a path to full licensure. A principal endorsement path will also enhance the position of these leaders as human capital managers tasked with recruiting, hiring, developing, and retaining talented teachers.

Among our recommendations, this is the most urgent action item. DESE has made considerable effort to ensure that those granted emergency licenses during the pandemic can demonstrate competency and receive full certification. Providing alternative paths to full licensure will position schools to retain new educators who are serving effectively. These alternative paths will also set these new teachers up to model for their peers that there are many viable ways to demonstrate competency as an educator in Massachusetts.

3. Strategically target financial incentives to urban districts with the largest representation gaps and sub-urban districts with comprehensive plans that further integration and inclusion. Financial incentives offer a powerful tool to grow the pool of diverse teachers and accelerate progress, but Massachusetts must be strategic to ensure that this relatively expensive form of intervention generates cost-effective outcomes. With teacher pay scales providing relatively low compensation in the early years, offering hiring and retention bonuses for new educators working in the primarily urban priority districts could help overcome the outsized financial challenge that teaching in Massachusetts presents, particularly for students of color who are more likely to come from low-income backgrounds.⁷⁰

Many of the priority districts have a fairly large number of primarily White educators approaching retirement. Early retirement incentives could encourage those worn down by the challenging COVID-19 years to exit early, opening opportunities for fresh teachers to enter the classroom. Coupled with hiring and retention bonuses that significantly expand the pool of novice teachers, state investment in early retirement incentives could have powerful impacts both diversifying the teacher workforce and improving students learning outcomes in priority districts with large representation gaps. If these districts face fiscal challenges in the coming years, the ability to offer early retirement benefits as an alternative to layoffs will be especially crucial to meeting educator diversity goals.

In the interest of integration, Massachusetts should also provide this powerful toolset to suburban communities committed to inclusion. Towns that are actively working to build housing at all levels and to create inclusive schools by revising curricula for culturally responsive teaching and other structural changes should also receive priority for these limited funds.

An Act Relative to Bilingual Educators and Dual Language Certification Incentives (H. 3947) provides a model for funding such incentives to teachers with skills in underserved languages by drawing resources from the Sports Wagering Fund. This framework could be expanded to support a broader teacher diversity financial incentive strategy.

4. Support the growth of Early College and create stronger educator pathways.

Massachusetts will not have a diverse and representative educator workforce so long as yawning racial and ethnic gaps in college completion persist. Massachusetts has spent nearly a decade building a strong Early College initiative with the power to close these gaps. To realize the initiative's potential, these budding programs must enroll far more students. Experience in other states shows that we can do this by offering structured career pathways to motivate high school students and make challenging college coursework more relevant to them. Strengthening Early College educator preparation pathways is vital, but high-quality career fields such as health, life sciences, and IT could also yield many future educators.⁷¹

To make these pathways work, Massachusetts must continue to focus on deepening credit counts so that all students are earning up to two years of college credit that is fully transferable toward a major at the state's four-year universities. We will also need far more robust evaluation of the initiative. While Early College has set the standard with quantitative data collection to monitor post-secondary progression and the state has funded several contracts for external evaluation, we need a far better qualitative understanding of how students and families experience Early College and the impact it is having on their college and career identity development.



5. Launch apprenticeship programs for adults without four-year degrees. Recent success preparing para-professionals suggests there is a deep well of adults in communities across the state with the ability to connect with youth who would make excellent educators, if only they had viable opportunities to complete four-year degrees. The ability to prepare adults without college degrees for careers in education through apprenticeship is a potential gamechanger.

Massachusetts must act with expediency to seize this opportunity. DESE has already hired a project manager and contracted with the National Center for Grow Your Own to design a teacher apprenticeship program. This is an excellent start, but we must anticipate strong interest and fully staff this initiative from the outset. Early College is an informative example of what will be required to create programs with multiple partners across the state. DESE will need a relatively large team of professionals with deep experience building such partnerships to create and rapidly scale this approach.

In addition to ensuring that DESE has sufficient funding to carry out this important work, the legislature can provide a strong statutory foundation for these efforts by adopting the teacher apprenticeship provisions contained in An Act Relative to Teacher Pathways and Educator Diversity (H. 528).

6. Provide sustainable grant funding to nonprofits leading high-impact educator diversity initiatives and leverage their expertise. A growing network of grassroots community groups and nonprofit organizations have helped fuel educator diversity efforts in Massachusetts. For the past several years, DESE has resourced many of these groups through its modest Educator Diversity Grant program. But this does not provide the reliable revenue that these organizations will need to build their capacity and scale high-quality programs.

Proven models like affinity networks, teacher residencies, leadership accelerant programs, and community to educator pipeline programs take time to grow and mature. An Act Relative to Educator Diversity establishes a fund that would allow DESE to provide these groups with more reliable multiyear grants in the future.

7. Use the state's regulatory authority and convening capacity to help educator preparation programs align on standards for new pathways. As Massachusetts melds varied efforts into a cohesive strategy, traditional and alternative educator preparation programs have outsized roles to play. From public and private colleges to large nonprofits and community-based organizations, the state must help diverse institutions with varied interests come together to meet shared goals for new pathways.

With so many independent institutions, it will take considerable effort to create clear and predictable paths to careers in education for underrepresented students and families. Approaching this task program by program will not produce timely results, and building piecemeal will make it harder to create consistent expectations. Aligning program offerings and requirements for completion will accelerate development of new pathways and position educator preparation programs to communicate more efficiently and effectively, particularly around the availability of state financial aid and financial incentives.

APPENDIX

Below, we offer more detail on the methods employed to produce both the baseline forecast and the simulations. Excel workbooks with the complete models are available for download at massinc.org/educator-diversity.

Baseline Forecast

The forecasting algorithm proceeds in two steps:

- **Step 1:** We use the following formula to estimate time trends from 2011 through 2022:

$$PctWhite_t = \beta_0 2022_t + \beta_1 TimeSince2022_t + \beta_2 TimeSince2022_t^2 + \epsilon_t$$

The outcome of interest is the percentage of teachers who identify as White in each year (t), which is estimated as a function of the share of teachers who are White in 2022 (β_0) and a quadratic time trend based on the distance (i.e., number of years) from 2022 (β_1 and β_2).

- **Step 2:** We generate an out-of-sample forecast in each year (t) from 2023 through 2030 based on the time trends estimated in Step 1. All predictions include 95 percent confidence intervals. (Note: the 95 percent confidence intervals do not mean the projections are 95 percent likely to come true. Instead, if the model is accurate, there is a 95 percent chance that the projection falls within the illustrated bounds.)
- We use the same algorithm to generate predictions for all outcomes, though in some cases the number of available prior years differs.

Our forecasting model simply extends forward the historical trends we have seen over the past decade. The model accounts for everything that has been changing historically (e.g., demographics, enrollment size, differences across groups/regions, etc.) and does not make any additional assumptions beyond incorporating all the dynamics that are already at play. This approach captures more nuance than attempting to control for specific individual factors observed in the data.

Simulations

We begin with a baseline model that forecasts three key components of teacher supply:

1. The total number of teachers needed in the workforce in each year.
2. The one-year retention rates of existing teachers for each year (forecasted separately for teachers of color and White teachers).
3. The share of newly hired teachers who are people of color in each year.

We forecast each of these components through 2030 based on linear projections of historical trends and ensure that the sum of the retained teachers and newly hired teachers equals the projected total workforce size in each year. We then simulate retention and/or new hire targets to be immediately achieved beginning in 2023 and continuing onwards with compounding effects through 2030. Specifically:

- **Retention rate simulation:** We augment the baseline projections by setting the projected retention rate of teachers of color equal to the projected retention rate of White teachers in each year. We then fill remaining vacancies according to the projected shares of newly hired teachers of color and White teachers.

- **New hire simulations:** We augment the baseline projections by changing the composition of newly hired teachers. In one scenario, we set the new hire composition in each year equal to the 2021 composition of four-year college graduates. In a second scenario, we set the new hire composition in each year equal to the 2022 composition of high school graduates.
- **Combination:** Finally, we offer simulations that modify both. We first equalize retention rates as described above. We then fill remaining vacancies according to the composition of either four-year college graduates or high school graduates.

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