

Diversifying the Teaching Workforce Through K-12 Work-Based Learning Experiences

Louise Yarnall Madeline Coole Vanessa Coleman Hannah Kelly Caroline E. Parker

CCNETWORK Comprehensive Center Network **REGION 4** Delaware District of Columbia

Maryland New Jersey Pennsylvania

Diversifying the Teaching Workforce Through K-12 Work-Based Learning Experiences

This publication is in the public domain. While permission to reprint is not necessary, reproductions should be cited as:

Yarnall, L., Coole, M., Coleman, V., Kelly, H., & Parker, C. (2024). Diversifying the teaching workforce through K-12 work-based learning experiences. CCNetwork.

The content of this brief was developed under a grant from the Department of Education through the Office of Program and Grantee Support Services (PGSS) within the Office of Elementary and Secondary Education (OESE), by the Region 4 Comprehensive Center at Policy Studies Associates under Award #S S283B190047. This contains resources that are provided for the reader's convenience. These materials may contain the views and recommendations of various subject matter experts as well as hypertext links, contact addresses, and websites to information created and maintained by other public and private organizations. The U.S. Department of Education does not control or guarantee the accuracy, relevance, timeliness, or completeness of any outside information included in these materials. The views expressed herein do not necessarily represent the positions or policies of the U.S. Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service, enterprise, curriculum, or program of instruction mentioned in this document is intended or should be inferred.

Diversifying the Teaching Workforce Through K-12 Work-Based Learning Experiences

A Resource Brief for District Leaders

Louise Yarnall, Madeline Coole, Vanessa Coleman, Hannah Kelly & Caroline E. Parker

The need to grow and diversify the teaching workforce

School districts nationwide face critical teacher shortages and a situation in which the rising diversity of their student body outpaces the diversity of their teacher workforce. An average of 174,000 teachers per year are expected to leave the field through 2026,¹ and the numbers of students enrolling in and completing teacher preparation programs declined by a third to a quarter, respectively, between 2010 and 2020.² Research indicates that students achieve more when their teachers and administrators share similar life experiences;³ it makes sense, therefore, to expand both the number and diversity of those interested in teaching.

While alternative paths to teacher credentialing provide one solution, this brief presents a more foundational strategy: increasing the number of K-12 students interested in teaching by offering them more career readiness opportunities that engage them in this work.

We intend this brief to support those who are designing new district-level, "teaching focused" programs in career technical education and work-based learning. It builds on a work-based learning <u>continuum framework</u> based in Maryland that offers several strategies for career awareness, exploration, and preparation, as well as job seeking and advancement.⁴ While that framework provided strategies for elementary through college levels for any career path, this brief focuses on the subset of specific strategies that support exploration of—and preparation for—the teaching field. Most of the strategies we identify (including structured coursework, counseling, and direct field experiences) focus on students in grades 11 and 12.

This brief describes the disjunction between the diversity of the teaching workforce and the students in their classrooms, as well as how this pattern varies around the country. It then describes the different strategies used by K-12 work-based learning programs that encourage students from diverse backgrounds to enter teaching, as well as providing summaries of different K-12 work-based learning programs across the country. It also offers some guidance for developing such programs, including how to identify organizational partners to build the teacher workforce and best practices for selecting design strategies.

The U.S. public school student population is growing more diverse than the teacher population

African American, Latine, Native American, Asian American (AAPI), and bi- or multi-racial populations will collectively comprise approximately 50 percent of the total U.S. population by the mid-2040s and more than 60 percent of the under-18 population by 2060. While the teaching workforce has grown more diverse in recent years—with teachers of color increasing from 12.5 percent of the workforce in 1987-1988 to 20 percent in 2017-2018—these rates lag behind shifts in student demographics.⁵

Such national trends reflect how the nation is changing, but the changes in teacher and student demographics vary widely by state and local conditions. A 2022 research report found significant regional variations in teacher-student diversity gaps by race and ethnicity through visual maps (see Figure 1).⁶ These maps show that U.S. regions with higher teacher-student diversity gaps (in orange) tend to have larger student populations that are Latine (e.g., the Western U.S.) and African American (e.g., the Southern U.S.). By contrast, there are fewer teacher-student diversity gaps in regions that have larger populations of White students (in blue). District administrators should focus on understanding local trends as a first step in developing work-based learning programs in their communities.

In addition to using this metric, administrators should understand how other local conditions can affect supply and demand for teachers from diverse backgrounds. For example, states with higher immigration rates, such as California, Texas, and New York, also experience greater demographic shifts and higher demand for teachers.⁷ Variations in teacher credentialing policies can also affect supply. States that use accelerated, lower-cost alternative credentialing pathways can diversify their teaching pool more efficiently.

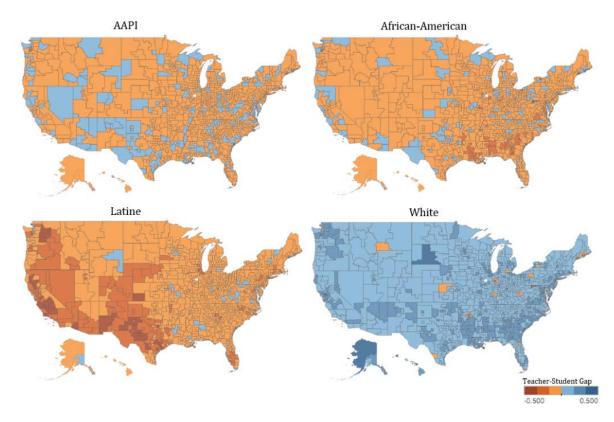


Figure 1. Local disparities in relative teacher population diversity versus student population diversity

Note. Disparities in relative diversity of the teacher versus student population are represented as a difference in proportion by race and ethnicity based on public use microdata areas (PUMA), which are non-overlapping, statistical geographic areas dividing each state into areas containing no fewer than 100,000 people.

AAPI: Asian American and Pacific Islander

Source. American Community Survey 2014-2017, Public Use Microdata Sample. *Original visualization produced in Cooc & Kim (2022). Image reproduced by permission. Labels edited for consistency.

The benefits of diversifying the teaching workforce; the risks of not diversifying

The challenges of addressing educator shortages should be considered in light of the multifaceted benefits of diversifying and making the educational workforce more representative of the students in U.S. schools. These benefits are not just theoretical; they are well supported by research and have profound implications for students, teachers, and the broader educational landscape.

Improved Student Outcomes and Engagement

- Low-income African American students who have at least one African American teacher in elementary grades are significantly more likely to graduate from high school and enroll in college. This suggests that representation matters greatly in fostering student engagement and perseverance.⁸
- African American male students taught by African American male teachers both improved in academic performance, including higher test scores, and showed fewer disciplinary issues. This points to the power of teachers as role models and mentors, and teacher beliefs about students.⁹
- For Spanish-speaking children, having a teacher who linguistically matches them in the early grades is linked to enhanced attention, memory skills, and English literacy. This illustrates the importance of linguistic and cultural congruence in the classroom.¹⁰

Cultural Competence and Inclusivity

- Teachers from diverse backgrounds bring unique cultural competencies that enrich the learning environment. They are often more adept at incorporating culturally responsive teaching practices, which benefit all students by promoting inclusivity and understanding.¹¹
- Teachers from diverse backgrounds serve as crucial role models, particularly for students of color. They help to break down stereotypes and broaden students' perspectives on who can be a teacher and what they can achieve.¹²

Long-Term Educational Benefits

- A diverse teaching workforce helps to prepare all students to succeed in an increasingly diverse society. It promotes tolerance, empathy, and a better understanding of different cultures and perspectives.¹³
- By addressing educational disparities and improving outcomes for students of color, a diverse teaching staff contributes to reducing systemic inequities and fostering social cohesion.¹⁴

Diversifying the teaching workforce is not just a matter of equity; it is a strategic imperative with farreaching benefits. It enhances the educational experience for all students, contributes to their success, and has positive implications for society. As district leaders and other interested parties consider initiatives to address teacher shortages, they should focus both on recruiting more teachers and on ensuring that the workforce reflects the diverse tapestry of the student population it serves.

Barriers along the path to a diversified teacher workforce

Individuals of color face systemic barriers and disparities on their pathway to teaching that result in a "leaky pipeline." This metaphor aptly describes the gradual loss of potential and actual teaching candidates of color at various stages of their educational and professional journey. Research indicates that the pipeline begins leaking in K-12 education, where educational disparities and unequal outcomes set the stage. These persist into college, affecting both access and experience. Hiring for teaching positions is impacted by these inequities, and the retention of teachers of color in public education also suffers.

Administrators should consider how well their district supports the pathway to becoming a teacher for candidates of color. The following sections highlight key challenges and barriers at each stage of

this pipeline:

At the K-12 level...

- Fewer youth of color finish basic schooling and enter college than White youth.¹⁵
- African American male high school students face more negative K-12 school experiences with stereotyping, over-disciplining, microaggressions, and lack of support.¹⁶
- African American students face exclusion from gifted programming and advanced placement courses¹⁷ and attend schools with fewer offerings for college preparatory courses.¹⁸
- High schools emphasize academic achievement as the sole path to teaching rather than providing programs that emphasize social support and personal goals.¹⁹

Transitioning to college...

- Students of color encounter more financial shortfalls and greater need to work and support family during college.²⁰
- African American male students who begin on a college teaching track can feel either shunned or detached from mainstream campus life.²¹
- A lack of culturally responsive pedagogy in teacher education programs can alienate or disadvantage students of color.²²
- There are insufficient financial aid and scholarship opportunities specifically tailored to support aspiring teachers of color.²³

Getting a teaching position...

- Biases in the recruitment and hiring processes can disadvantage candidates of color.²⁴
- Teacher licensing exams present another hurdle. Differences between the success rates of African American and White test-takers—sometimes as high as 35 percent—raise questions about cultural bias in these exams.²⁵
- Qualified African American applicants have a significantly lower chance than White candidates
 of receiving a job offer, and when hired, are disproportionately placed in schools with large
 populations of children of color or children in poverty.²⁶
- The working conditions in schools with large populations of children of color or children in poverty are also more likely to offer less-than-desirable working conditions for teachers. For example, such schools are more likely to fail to provide teachers with autonomy over classroom issues or influence over schoolwide decisions that affect their jobs. Teacher turnover rates are 50 percent higher in schools serving lower-income students and 70 percent higher in schools with larger concentrations of students of color.²⁷
- There is a lack of systemic support for new teachers of color in the early years of their career. This support is crucial for long-term retention.²⁸
- Data reveal large differences among subgroups in the pace of attaining teaching jobs. The number of African American teachers increased by 29 percent since the late 1980s, the number of Asian teachers increased by 263 percent, and the number of Latine teachers increased by 373 percent.²⁹

Sustaining a teaching career...

- School culture and climate impact the job satisfaction and retention rates of teachers of color.³⁰
- Teachers of color have more negative experiences in schools, which leads to higher rates of attrition. Facing poor working conditions, minimal classroom autonomy, and weak influence around school issues, their annual turnover rate from public schools increased by 45 percent between the late 1980s and 2012–2013.³¹
- Most growth in teacher diversity has been in higherpoverty public schools, and teachers of color are two to three times more likely than White teachers to work in schools serving students from communities that have

As administrators think about developing K-12 work-based learning programs, they can also consider how well their district addresses the barriers facing teaching candidates from diverse backgrounds. The <u>Insights on</u> <u>Diversifying the Educator</u> <u>Workforce Tool</u> from the Center for Great Teachers and Leaders can support this work.

high levels of poverty, high numbers of students of color, and are located in urban areas.³²

How can K-12 work-based learning programs connect more students from diverse backgrounds to the teaching profession?

K-12 work-based learning programs can address several barriers to teacher diversity, particularly those occurring while students are still in secondary school or transitioning to college. At the most fundamental level, these programs offer additional experiential and socially supportive approaches to proactively engage secondary students from diverse backgrounds in considering teaching as a profession. As students transition to college, these programs involve customized school counseling and guidance to connect students from diverse backgrounds to financial and social supports to attend college teaching programs. Then, once teachers from diverse backgrounds are in the workforce, such work-based learning programs let them serve as mentors and role models, contributing to their own personal growth and professional advancement while helping their students from diverse backgrounds consider careers in teaching.

What are some common K-12 work-based learning strategies that educators use to increase both interest and diversity in the teaching profession?

While work-based learning programs vary greatly depending on the local context, many of them draw from a pool of strategies that are designed to increase high school student interest in and eventual participation in teaching careers. A search of recent literature found multiple strategies implemented in the K-12 context (see Box 1 for methods and Table 1 for strategies). Courses and field experiences offer secondary students career exploration opportunities. These may be offered as elective stand-alone courses, after-school activities, or as part of a career technical education (CTE) career cluster. Some programs also offer dual enrollment courses, allowing students to earn college credit. Some include a cohort model to provide both peer and adult supports in the face of ongoing biases and challenges. Other approaches include strategic counseling strategies, which help students navigate the pathway in and through postsecondary programs for teaching.

Core WBL Strategy	Description	Prevalence	How the Strategy Promotes Student Engagement in Teaching Careers
Targeted Courses	Courses focused on teaching as a tool of social transformation are offered to high school students who represent key demographic groups. These may be offered as career technical education (CTE) courses in the career clusters of education and training.	10 of 14 identified K- 12 programs	Counters negative K-12 experiences affecting students from diverse backgrounds
Cohort Model & Peer Supports	High school career academies are designed to introduce students to the teaching profession.	9 of 14 identified K- 12 programs	Counters negative K-12 experiences affecting students from diverse backgrounds
Strategic Counseling	School counselors connect high school students with postsecondary teaching programs offering a range of special supportive services (e.g., financial, social). This might include career fairs.	8 of 14 identified K- 12 programs	Mitigates problems in the transition to college for students from diverse backgrounds
Dual Enrollment	High school students take college-level teaching classes for credit.	7 of 14 identified K- 12 programs	Mitigates problems in the transition to college for students from diverse backgrounds
Field Experiences	Older students in high school and middle school who represent key demographic groups are trained to tutor or teach younger students with support from mentor teachers.	5 of 14 identified K- 12 programs	Counters negative K-12 experiences affecting students from diverse backgrounds

Table 1. Work-based learnin	g strategies to engage K	(-12 students in exploring careers in tea	ching
-----------------------------	--------------------------	---	-------

Box 1. How we scanned research literature

We scanned 20 articles that were found through two methods: a query-based search of the ProQuest research database and outreach to an expert. Going back to 2014, the search focused on conference papers & proceedings, dissertations and theses, magazines, reports, and scholarly journals in the APA PsycINFO and Education Databases. We employed the terms "secondary school students," "teacher recruitment," "minority employment," "career preparation and secondary education," and "teacher retention." The initial search returned 329 articles, which were screened down to 30 articles focused on recruitment and retention, program outreach, policy action, creating job opportunities, hiring trends, and root causes of educator diversity. That list was screened down to 24 that focused on describing programs to increase teacher diversity. To synthesize the findings across these articles, researchers tracked each specific program discussed in the articles by the type and number of workbased learning strategies, educational level(s), community context, population type, and outcome metrics. We identified 14 programs in our literature scan that met the criteria of being (1) focused on increasing the diversity of the teacher workforce and (2) implemented in K-12 settings. The programs are run by a diversity of organizations (state education agencies, institutes for higher education, nonprofits), are in rural, suburban, and urban settings, and target different student groups (see Table 2 for the list of programs; we provide more details about three of the programs in the body of this brief). The evidence of efficacy remains mostly descriptive. Rigorous studies necessarily require longer-term designs that examine how career outreach interventions can influence outcomes that can take several vears to achieve.

The work-based learning programs described in this brief are located in both rural and urban communities. Some focus on specific student groups, such as African American or multilingual students, while others target all students of color. Some do not specify their targeted student group. Work-based learning programs encompass diverse designs and partners. Some are led by local university teacher education departments, some by non-profits that focus on designing effective work-based learning programs, and others are based in state or local education agencies. Sustainability of programs remains a challenge; grants fund programs for a limited time, and many programs continue to work on resolving the need for long-term financial support.³³

Administrators considering K-12 work-based learning programs should explore local teacher education programs and partners that might want to support their high school students to enter teaching. They may also consider obtaining training from national non-profit agencies that specialize in designing and delivering teacher diversity courses and activities, such as the national <u>Pathways2Teaching</u> program and regional efforts like the <u>Black Male Teacher Initiative Consortium</u> in Maryland and <u>Alaska Educators Rising</u>. Finally, they should stay abreast of emerging state or federal opportunities, such as the U.S. Department of Education's <u>Pathways for Global Engagement</u> initiative for any new funding opportunities.

Related Definitions

The following terms are often used to describe K-12 work-based learning programs that support exploration and preparation for teaching careers:

- **High school pipeline programs:** These are career technical education (CTE) programs in which students take skills-focused courses for high school credit and dual or concurrent enrollment in which students enroll in college credit-bearing courses.
- Education and Training career cluster: This category of CTE programs includes different career pathways such as Teaching and Training, Administration & Administrative Support, and Professional Support Services.
- **Grow Your Own programs:** These are partnerships between educator preparation programs, school districts, and community organizations that recruit and prepare local community members to enter the teaching profession and teach in their communities. They are often designed to engage community members, school aides and paraprofessionals, and recent graduates.

K-12 work-based learning program examples

The three examples of K-12 work-based learning programs described here illustrate how innovators have combined various work-based learning strategies to encourage students to consider teaching as a career. Most of the programs employ more than one work-based learning strategy; we have selected examples to represent several of the strategies. For each program, we summarize the geographic location, grade levels, funders, and the district systems that should be in place in participating districts to achieve success.

Pathways2Teaching

Many work-based learning programs include **targeted courses** focused on what some term "educational justice." These courses encourage students to frame their diverse backgrounds and experiences as sources of powerful cultural, social, and linguistic assets that enable them to connect with underserved populations of students.

Pathways2Teaching,³⁴ a program for 11th and 12th grade students, Pathways2Teaching

Location(s): Colorado, Oregon, Tennessee

Grade Level(s): 11 and 12

Funder: District (partnership with nonprofit and university)

Recommended district systems for success: Online professional development, mentoring resources, continuous outcome tracking

Core WBL Strategies

√ Targeted Courses	Cohort Model & Peer Supports	√ Strategic Counseling	√ Dual Enrollment	√ Field Experiences
-----------------------	------------------------------------	---------------------------	----------------------	------------------------

uses the work-based learning strategy of **targeted courses** to motivate student engagement in other work-based strategies: **dual enrollment** in college-level teaching courses, **strategic counseling** focused on college readiness, and **field experiences** tutoring younger students.

To support the program, a district offers weeklong **professional development** in these workbased learning strategies to both administrators and classroom teachers using online instruction. All participants receive **mentoring resources** for implementation. This prepares teachers to mentor cohorts of students who tutor at local elementary schools. Districts also **continuously track outcome metrics**, such as participants' school achievement and college enrollment in education majors. All the students in the program's first 2013 cohort later enrolled in college, with roughly 1 in 5 participants declaring majors in education; this is above the national average.³⁵

Recruiting Washington Teachers (RWT) and Bilingual Educator Initiative (BEI)

Other K-12 work-based learning programs use a **cohort model**, sometimes termed a teacher cadet program. These programs can offer students an opportunity to explore the teaching profession, earn high school and college credits through **dual enrollment**, and engage in **field experiences** that prepare them for the workforce. Washington state's Professional Educator Standards Board (PESB) provides grants to districts to support implementation. This

Recruiting Washington Teachers (RWT)							
Location(s): Washington							
Grade Level(s): 11 and 12							
Funder: Professional Educator Standards Board (state education agency)							
Recommended district systems for success: Secondary- postsecondary partnership							
Core WBL Strategies							
Targeted Courses	√ Cohort Model & Peer Supports	Strategic Counseling	√ Dual Enrollment	√ Field Experiences			

program is described as "a high school teacher academy designed to recruit and support students as they explore cultural identity and educational opportunities through the lens of the teaching profession." The state education agency frames this as a "Grow Your Own" effort complemented by the more recently established BEI, which "builds off the RWT program to recruit, prepare, and mentor bilingual high school students to become future bilingual teachers and counselors."

Grants from PESB allow districts to tailor administration approaches and **secondarypostsecondary partnerships.** The program is expected to include a yearlong curriculum sequence within the context of a **cohort model** "to support students in observing, reflecting, and applying theory to their own experiences in the classroom and community." RWT and BEI participants may also receive credit from institutions of higher education that are partnered with the district. Program survey respondents report high satisfaction with the program: 90 percent "described their overall experience as 'good' or 'very good,'" and 54 percent "reported that participation in RWT increased their interest in the teaching profession."36

Diverse Educator Pathway Program

Oregon's Diverse Educator Pathway (DEP)³⁷ program provides field experiences within the context of a **cohort model** for high school seniors who identify as BIPOC (Black, Indigenous, and people of color) and are interested in the teaching profession. The program provides paid field experiences in the form of summer internships and **strategic counseling** in the form of postsecondary planning counselors. In the Tigard-Tualatin School District (TTSD), the

Diverse Educator Pathway Program

Location(s): Oregon

Grade Level(s): 12

Funder: Forest Grove, Hillsboro, Beaverton, Tigard-Tualatin and Sherwood school districts

Recommended district systems for success: Postsecondary planning counselors

Core WBL Strategies

coaches—called "navigators" or "connectors"—provide the following:

- Goal-setting/academic planning, higher education program selection and application guidance, and FAFSA and scholarship information and support
- Summer internships with TTSD summer programs with a \$3,000 scholarship given at end of the internship to be used by the student for college textbooks, classes, or living expenses
- Affinity space meetings (e.g., future educator clubs, racial identity spaces) held with DEP Connectors/Navigator
- Guaranteed interview opportunities with TTSD after program completion³⁸

School district connectors meet with anyone interested in a career in education. They provide help with the following:

- College, scholarship, and financial aid applications
- **Connector relationships**
- Collaboration with higher education partners
- Establishment of affinity groups³⁹

Further, they help students understand if DEP is the right fit for them, complete the program application, and understand teacher licensing. They also offer supports around time management, study skills, job applications, interviewing strategies, and equity and identity concerns.⁴⁰

Upon graduating from the program, participants interview for positions with their home districts.

Conclusion

As administrators embark on the journey to expand and diversify their teaching workforce, they take a critical step toward addressing educational disparities and enhancing the learning environment for all students. This brief has outlined the key steps in that process (see Box 2). suggested partners and funding sources, and described both work-based learning strategies and provided examples of specific programs using those strategies. As district leaders seek to cultivate interest in teaching among K-12 students, particularly from diverse backgrounds, they also need to consider the broader systemic issues facing students of color throughout their educational trajectory. Biases in hiring practices, lack of support for new teachers, unjust placements, insufficient pay, and low societal appreciation for educators pose significant challenges. Acknowledging and addressing these systemic barriers is paramount to not only attracting but also retaining a diverse and dedicated teaching workforce. Implementing the strategies discussed in this brief can be a transformative step, yet it must be part of a larger, concerted effort to reform educational systems to value and support teachers from all backgrounds.

Box 2. Steps to Diversifying Your Teaching Workforce through K-12 Work-Based Learning

- Examine current teacher diversity and develop vision for K-12 work-based learning
 - Assess the teacher-student diversity ratio in your district
 - Review potential benefits to student performance
 - Assess your teacher pipeline, checking for "leakage" affecting teachers of color
- Design and deliver a work-based learning program
 - Assemble team of partners
 - Local teacher education programs
 - National or local experts who offer teacher exploration programs, particularly to diverse students
 - State or local resources for programming and funding
 - Design and implement work-based learning program
 - Determine partnerships and roles of each partner
 - Secure funding
 - Choose relevant strategies to align with district vision (e.g., courses, counseling for postsecondary, mentoring opportunities)
 - Evaluate program and make revisions
 - Use continuous improvement model to encourage ongoing review
 - Work with partners to design rigorous impact evaluation as appropriate

Program	State or Region	Description	Institutions involved	Targeted courses	Cohort models & peer supports	Strategic counseling	Dual enrollment	Field experiences	Primary funding source(s)
<u>Alaska's Educators</u> <u>Rising</u>	Alaska	Students explore education professions, gain confidence through competitions, and learn leadership skills.	University Non-profit	X	x				University
<u>Black Male Teaching</u> <u>Initiative Consortium</u> <u>(BMT-IC)</u>	Maryland, National	The BMT-IC focuses on recruiting young Black boys and men in middle and high schools into teacher education and educational leadership programs and into the profession.	Universities Non-profit LEAs		x	х			Non-profit
<u>California Mini-Corps</u>	California	The program provides tutoring to increase migrant student academic achievement and prepares bilingual-bicultural, credentialed teachers that will be better equipped to work with migrant students.	SEA Universities	х	x	х		x	SEA
<u>Center for Black</u> <u>Educator Development</u> <u>Teaching Academy</u>	Pennsylvania	The Academy is a high school CTE course for Black students interested in teaching. The LeCount-Catto Curriculum, based in Black pedagogy, helps students make the connection between teaching and activism.	Non-profit	х	x	х	x		Foundations
<u>Central Virginia</u> <u>Undergraduate</u> <u>Mathematics</u> <u>Scholarship Program</u>	Virginia	Program targeted high school students and undergrads, providing support to become STEM educators.	University		x	X	х		Noyce (NSF and AAAS)
DREAMS to Teach	Georgia	The program worked with Black male students after 11th grade, prepared them for college success through curriculum-specific activities, advising and mentoring, and provided preparation for STEM teaching careers.	Morehouse College	x	x	x			NSF
Educators Rising	National	Educators Rising is a community-based movement in which schools feed teacher preparation programs to provide a clear pathway to increase teacher diversity and teacher quality.	Non-profit	x	x			x	SEA, local funders, foundations

Table 2. Educator workforce programs for K-12 students

Program	State or Region	Description	Institutions involved	Targeted courses	Cohort models & peer supports	Strategic counseling	Dual enrollment	Field experiences	Primary funding source(s)
Foundation for Oklahoma City Public Schools High School to Teacher Pipeline Project	Oklahoma	The program recruits high school students to its pipeline program, which offers a path to teaching, financial support, and work opportunities while studying.	LEA Non-profit			x	x		Non-profit
<u>Kentucky Teaching and</u> <u>Learning Career</u> <u>Pathway</u>	Kentucky	Students complete four courses and additional credentialing.	SEA	х				x	SEA
<u>Pathways2Teaching</u> (P2T)	National	P2T is a concurrent enrollment program for 11th & 12th grade students to explore teaching while examining critical issues related to educational justice and earning college credit.	University For-profit organization	х		х	x	х	LEA
<u>Recruiting Washington</u> <u>Teachers (RWT)</u>	Washington	RWT is a high school teacher academy program, founded in equity pedagogy, that helps students explore cultural identity and educational opportunities through the lens of the teaching profession.	Professional Educator Standards Board	x	х	х	x	х	SEA
<u>Recruiting, Developing,</u> <u>and Retaining</u> <u>Tomorrow's</u> <u>Outstanding STEM</u> <u>Teachers in Oklahoma</u>	Oklahoma	Recruits pre-college students into STEM education programs	Langston University	х	x				Noyce (NSF and AAAS)
<u>South Carolina Teacher</u> <u>Cadets</u>	South Carolina	The Teacher Cadet Program encourages talented young people to explore the teaching profession through a challenging introduction to teaching.	Non-profit				x		Fee-based
<u>Texas Education Agency</u> <u>Grow Your Own Grant</u>	Texas	The program addresses teacher shortages in hard-to-staff areas, closes demographic gaps between students and teachers, and builds interest in the teaching profession among high school students.	SEA	Х			x		SEA

Endnotes

Redding, C. (2019). A teacher like me: A review of the effect of student-teacher racial/ethnic matching on teacher perceptions of students and student academic and behavioral outcomes. Review of Educational Research, 89(4), 499–535. https://doi.org/10.3102/0034654319853545

Gershenson, S., Hart, C.M.D., Hyman, J., Lindsay, C.A., & Papageorge, N.W. (2022). The Long-Run Impacts of Same-Race Teachers. American Economic Journal: Economic Policy, 14(4), pp. 300–342. https://doi.org/10.1257/pol.20190573 ⁴ Region 4 Comprehensive Center. (2020). *Maryland's work-based learning continuum: Describing the research and common practices*. Washington, DC: Author. <u>https://www.marylandpublicschools.org/programs/Documents/CTE/Work-based Learning/MD WBL Continuum Research and Common Practices.pdf</u>

⁵ U.S. Census Bureau. (2015). Projections of the size and composition of the U.S. population: 2014 to 2060: Estimates and projections. Washington, DC.

⁶ Cooc, N., & Kim, G.H. (2022). *Revisiting the "Decline" in Asian American and Pacific Islander Teachers*. Educational Policy, 36(7), 1759-1790. http://doi.org/10.1177/08959048211012509

⁷Redfield, M. (2023). What's the job outlook for teachers in 2023. Career Guide. Indeed. <u>https://www.indeed.com/career-advice/finding-a-job/teachers-job-outlook</u>

⁸ Gershenson, S., Hart, C. M. D., Hyman, J., Lindsay, C. A., & Papageorge, N. W. (2022). *The Long-Run Impacts of Same-Race Teachers*. American Economic Journal: Economic Policy 2022, 14(4): 300–342, https://doi.org/10.1257/pol.20190573

⁹ Gershenson et al., (2022).

¹⁰ Tang, S., Dearing, E., & Weiss, H. B. (2012). Spanish-speaking Mexican-American families' involvement in school-based activities and their children's literacy: The implications of having teachers who speak Spanish and English. *Early Childhood Research Quarterly*, *27*(2), 177–187. https://doi.org/10.1016/j.ecresq.2011.09.001

Partika, A. (2023). The intersection of teacher-child language & ethnic match for Hispanic/Latine dual language learners in early elementary school. *Early Childhood Research Quarterly, 62,* 347–359.

https://doi.org/10.1016/j.ecresq.2022.10.001

¹¹ Dickson, G. L., Haejung, C., & Fernández, I. T. (2015). The development and initial validation of the student measure of culturally responsive teaching. *Assessment for Effective Intervention*, *41*(3), 141-154.

¹² Achinstein, B., & Ogawa, R. T. (2011). Change(d) agents: school contexts and the cultural/professional roles of new teachers of Mexican descent. *Teachers College Record: The Voice of Scholarship in Education*, 113(11), 2503-2551.

¹³ Plachowski, T. J. (2019). Reflections of preservice teachers of color: implications for the teacher demographic diversity gap. *Education Sciences*, *9*(2), 144.

¹⁴ Goodwin, A. L. (2020). Learning to teach diverse learners: teachers and teacher preparation in the united states. Oxford Research Encyclopedia of Education.

¹⁵ Toldson, I. A., & Lewis, C. W. (2017). Advancing Teacher Training Programs at Historically Black Colleges and Universities through Technical Assistance and Federal Investments. *The Journal of Negro Education, 86*(2), 83-93. Morales, A. R., & Shroyer, M. G. (2016). Personal Agency Inspired by Hardship: Bilingual Latinas as Liberatory Educators. *International Journal of Multicultural Education, 18*(3), 1-21.

¹⁶ Goings, R. B., & Bianco, M. (2016). It's hard to be who you don't see: an exploration of black male high school students' perspectives on becoming teachers. *The Urban Review*, *48*(4), 628-646.

¹⁷ Graham, A., & Erwin, K. (2011), "I don't think Black men teach because of how they get treated as students": high achieving Black boys' perceptions of teaching as a career option. *The Journal of Negro Education, 80*(3), 398-416. ¹⁸ United States Department of Education Office for Civil Rights. (2012). The civil rights data collection: Revealing new truths about our nation's schools. Retrieved from <u>https://www2.ed.gov/about/offices/list/ocr/docs/crdc-2012-data-summary.pdf</u>

¹⁹ Morton, T. R., Ramirez, N. A., Meece, J. L., Demetriou, C., & Panter, A. T. (2018). Perceived Barriers, Anxieties, and Fears in Prospective College Students from Rural High Schools. *The High School Journal 101*(3),155-176. https://doi.org/10.1353/hsj.2018.0008

²⁰ Wood, J. L., & Williams, R. C. (2013). Persistence factors for Black males in the community college: An examination of background, academic, social, and environmental variables. *Spectrum: A Journal on Black Men*, 1(2), 1-28.

¹ Torpey, E. (2018). Projections for teachers: How many are leaving the occupation? *Career Outlook*, U.S. Bureau of Labor Statistics. https://www.bls.gov/careeroutlook/2018/data-on-display/how-many-teachers-are-leaving.htm

² Saenz-Armstrong, P. (2023). Data brief: How do trends in teacher preparation enrollment and completion vary by state? National Council on Teacher Quality, <u>https://www.nctq.org/blog/Data-Brief:-How-do-trends-in-teacher-preparation-enrollment-and-completion-vary-by-state</u>

³ Bartanen, B., & Grissom, J.A. (2023). School Principal Race, Teacher Racial Diversity, and Student Achievement. Journal of Human Resources, March 2023, 58 (2) 666-712; DOI: <u>https://doi.org/10.3368/jhr.58.4.0218-9328R2</u>

²¹ Kim, E., & Hargrove, D. T. (2013). Deficient or resilient: A critical review of Black male academic success and persistence in higher education. *The Journal of Negro Education*, 82(3), 300-311.

²² Tangen, D., Beutel, D., & Spooner-Lane, R. (2019). An exploratory study of early career teachers as culturally responsive teachers. *5th International Conference on Higher Education Advances* (HEAd'19).

https://doi.org/10.4995/head19.2019.8928

²³ Allen, D. M. (2017). *African American teacher recruitment: A case study in Oregon*. [Dissertation, Portland State University]. Portland State University Library. <u>https://doi.org/10.15760/etd.3409</u>

²⁴ Engel, M., & Finch, M. A. (2014). Staffing the classroom: How urban principals find teachers and make hiring decisions. *Leadership and Policy in Schools*, 14(1), 12-41. <u>https://doi.org/10.1080/15700763.2014.983131</u>

²⁵ Tyler, L. (2011). Toward increasing teacher diversity: targeting support and intervention for teacher licensure candidates. Educational Testing Service. Available at: www.ets.org/Media/Research/pdf/ETS-NEA-2011-01.pdf
 ²⁶ D'Amico, D., Pawlewicz, R. J., Earley, P. M., & McGeehan, A. P. (2017). Where Are All the Black Teachers? Discrimination in the Teacher Labor Market. *Harvard Educational Review 87*(1), 26-49.

²⁷ Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

²⁸ Johnson, B., Down, B., Cornu, R. L., Peters, J., Sullivan, A., Pearce, J., … & Hunter, J. (2014). Promoting early career teacher resilience: a framework for understanding and acting. *Teachers and Teaching*, *20*(5), 530-546. https://doi.org/10.1080/13540602.2014.937957

²⁹ Ingersoll et al. (2021)

³⁰ Achinstein, B., Ogawa, R. T., Sexton, D., & Freitas, C. J. (2010). Retaining teachers of color: a pressing problem and a potential strategy for "hard-to-staff" schools. *Review of Educational Research*, *80*(1), 71-107.

https://doi.org/10.3102/0034654309355994

³¹ Ingersoll, R., Merrill, E., Stuckey, D., Collins, G., & Harrison, B. (2021). The Demographic Transformation of the Teaching Force in the United States. *Education Science*, *11*, 234. <u>https://doi.org/10.3390/educsci11050234</u> ³² Ingersoll et al. (2021)

³³ Swisher, A. (2023). *State of the States 2023: Policies to Increase Teacher Diversity*. Washington, D.C.: National Council on Teacher Quality.

³⁴ Beuten, C. (2017, July 24). Pathways2Teaching encourages youths to teach close to home: High schoolers in underserved communities examine how to break the cycle of inequity. University of Colorado.

https://www.cu.edu/article/pathways2teaching-encourages-youths-teach-close-home.

³⁵ Tandon, M., Bianco, M., & Zion, S. (2014). Pathways2Teaching: Being and becoming a "Rida." In C. E. Sleeter, L. I. Neal, & K. K. Kumashiro (Eds.), Addressing the Demographic Imperative: Recruiting, Preparing, and Retaining a Diverse and Highly Effective Teaching Force (pp. 111–125). NY: Routledge.

³⁶ Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of* color. Palo Alto, CA: Learning Policy Institute.

³⁷ Northwest Regional Education Service District. *Diverse Educator Pathways*. 2023.

https://www.nwresd.org/departments/instructional-services/professional-learning/diverse-educator-pathways. Accessed 8 December 2023.

³⁸ Tigard-Tualatin School District. *TTSD Diverse Educator Pathway Program - Student Participant Overview*. 2023. <u>https://www.ttsdschools.org/Page/10459</u>. Accessed 8 December 2023.

³⁹ Northwest Regional Education Service District. *Aspiring Teachers in Northwest Oregon Can Receive Individualized Support on Pathway to Licensure*. 2023. https://www.nwresd.org/Home/Components/News/News/321/59. Accessed 8 December 2023.

⁴⁰ Tigard-Tualatin School District. *Diverse Educator Pathway Program*. 2023. <u>https://www.ttsdschools.org/Page/10459</u>. Accessed 8 December 2023.