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Progress in Increasing the Preparation and Diversity of Teacher Candidates and New Teachers in Maryland

Report to the Accountability and Implementation Board pursuant to the Blueprint for Maryland's Future

Submitted by:

Maryland Longitudinal Data System Center In consultation with

Maryland State Department of Education Maryland Higher Education Commission

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Introduction

Reporting Requirements

This Report is submitted in fulfillment of the requirement in the *Blueprint for Maryland's Future*, Chapter 36 of 2021 (see Education Article § 5-413, Annotated Code of Maryland). The Maryland Longitudinal Data System (MLDS) Center, in consultation with the Maryland State Department of Education (MSDE) and the Maryland Higher Education Commission (MHEC) is required to produce a report on the progress made in increasing the preparation and diversity of teacher candidates and new teachers in the State as required by the Blueprint for Maryland's Future. Specifically, the report shall include:

1. Data trends in:

- The number of applications to and acceptance by Maryland teacher education institutions and alternative programs that prepare educators, as a whole and disaggregated by gender, racial, and ethnic background;
- ii. Teacher quality as measured by the grades, class standing, and accountability test performance of students applying to and admitted to institutions and alternative programs;
- iii. The proportion of graduates of teacher education programs, including those graduates expecting to teach at the elementary school level, who have majored as undergraduates in the subjects they plan to teach to the total number of graduates of teacher education programs;
- iv. The proportion of new teachers hired in the State who were trained out of State to those trained in the State;
- v. The satisfaction of school district officials with newly hired teachers who have just graduated from Maryland institutions as determined by the school district officials' responses to questions on a form the officials helped develop; and
- vi. The proportion of graduates of teacher education programs who pass required tests for licensure on the first attempt and after subsequent attempts;
- 2. Measures taken to increase the proportion of highly qualified individuals from groups historically underrepresented in the teaching profession who apply to teacher education institutions;
- 3. Measures taken to increase the number of high school graduates with very strong academic backgrounds who select teaching as a career;
- 4. Measures taken to make teacher education in the underlying disciplines more rigorous;
- 5. Measures taken to better align the programs of the teacher education institutions with State curriculum frameworks;
- 6. Measures taken to improve the background of beginning teachers in research and research techniques;
- 7. Implementation of more rigorous licensing standards and measures for new teachers in both mastery of the subject being taught and the methods for teaching it;
- 8. Implementation of incentives to attract high–quality high school graduates into careers in teaching;
- 9. Trends in the rates at which teachers are acquiring the credentials needed to advance up the career ladder, established under Title 6, Subtitle 10 of this article, including National Board Certification and higher steps on the ladder;
- 10. Trends in the distribution of teachers along the steps of the career ladder;

- 11. Trends in longevity in teaching in Maryland schools and, in particular, schools serving high proportions of historically underserved students;
- 12. Trends in the number of teacher candidates of color hired by local school systems disaggregated by higher education institution and alternative teacher preparation program and the systems in which those new teachers were hired; and
- 13. Trends in the number of teachers certified through alternative preparation programs that meet the requirements of the Blueprint for Maryland's Future related to a longer practicum by school system.

Executive Summary

This is the second annual report responding to the requirements established in Education Article § 5-413 Annotated Code of Maryland. In total there are 18 required questions that the report must address. Below is a synopsis of the responses:

| Question | Response |
|--|---|
| (1)(i) Diversity of applicants accepted to teacher education institutions | The report provides overall acceptance numbers and charts provided by MSDE showing enrollment demographics |
| (1)(ii) Teacher quality based on academic profile of applicants to accepted educator preparation programs (EPP). | The report provides an analysis using MLDS data of three different indicators of strong academic high school performance and the percent of students who enrolled in educator preparation programs who met the indicator requirements. The same analysis is done for all majors. It is notable that in each year and for each indicator, a higher percentage of students who enrolled in educator preparation programs met the indicator criteria compared to those who enrolled in all other majors. |
| (1)(iii) The proportion of EPP graduates who are teaching in subjects consistent with their major | The report provides an analysis using MLDS data of students who completed an EPP and whether they are teaching in a Maryland public school in the grade level of their EPP. <i>Overall</i> , 70% of EPP graduates are teaching in grade level within three years of EPP completion. |
| (1)(iv) The proportion of new teachers who were trained out-of-state | While hiring information is not available, the report provides a data analysis by MSDE of individuals applying for certification broken down by whether they completed a MD approved program; were trained out-of-state; training was unidentified; or were a professional from out-of-state. <i>The analysis show that approximately 50% of MD certification applicants were prepared in another state.</i> |
| (1)(v) Satisfaction of school districts officials with new hires from EPPs | No response provided. A survey needs to be developed and implemented. |
| (1)(vi) Proportion of EPP graduates who pass certification testing on first attempt | The report cites a U.S. Department of Education report that contains reporting from EPP providers indicating an 83% statewide assessment pass rate in 2020-2021. This is a decrease from 94% in the prior two academic years. |
| (2) Measures taken to increase the number of highly qualified applicants to EPPs from groups underrepresented in the teaching profession into EPPs | The report includes information provided by MSDE on a relevant marketing campaign and the grow-your-own staffing programs being funded under the Maryland Leads grant program. |
| (3) Measures taken to increase the number of high school grads with very strong academic backgrounds who select teaching as a career | The report includes a narrative provided by MSDE on the Maryland Teach program. |

| (4) Measures taken to make teacher education more rigorous | According to MSDE, each of these questions are addressed by new regulations that are scheduled to be published in the Maryland register in July 2023. |
|---|--|
| (5) Measures taken to better align the programs of the teacher education institutions with State curriculum frameworks | July 2023. |
| (6) Measures taken to improve the background of beginning teachers in | |
| (7) Implementation of more rigorous licensing standards and measures for new teachers in both mastery of the subject being taught and the methods for teaching it | |
| (8) Implementation of incentives to attract high quality high school graduates into careers in teaching | The report cites information from MHEC on the Teaching Fellows for Maryland Scholarship program, the federal TEACH Grant, and 2023 legislation, Maryland Educator Shortage Act, which establishes t eh Teacher Development and Retention Program. |
| (9) Trends in the rates that teachers are acquiring credentials needed to advance up the career ladder (including National Board Certification) | The report provides information from MSDE about Career Ladder implementation plans and provides current data on the number of National Board Certified teachers in each local school system. Trend analysis cannot be provided until the Career Ladder is fully implemented. |
| (10) Trends in the distribution of teachers along the Career Ladder | Trend analysis cannot be provided until the Career Ladder is fully implemented. |
| (11) Trends in longevity in teaching in Maryland schools – including schools serving high proportions of historically underserved students | The report analyzes longevity using two metrics: (1) average number of years of teaching experience of teachers in a given year; (2) average number of years of teaching of teachers in schools designated as having a disadvantaged student population. For example, in 2022, there were approximately 67,000 teachers and they had an average number of years of teaching experience of 12.2. That same year, there were approximately 34,000 teachers teaching in disadvantaged or low performing schools and they had an average number of years of teaching experience of 11.1. |
| (12) Trends in the number of teacher candidates of color hired by local school systems disaggregated by EPP and the system in which they are hired | There is no data directly responsive to this question. However the Report provides two tables that provide the demographic composition of current teachers by gender and race/ethnicity. MSDE also provided a chart that shows the percentage of new teachers by race/ethnicity at the start of a given school year. |
| (13) Trends in the number of teachers certified through alternative preparation programs that meet the requirements of the Blueprint related to longer practicum. | There is no data directly responsive to this question. The report includes information from MSDE that regulations requiring alternative programs to have a 100 day practicum went into effect in July 2022. Data on the number of teachers certified through alternative programs is also provided. |

Responses to Reporting Requirements

(1) (i) The number of applications to and acceptance by Maryland teacher education institutions and alternative programs that prepare educators, as a whole and disaggregated by gender, racial, and ethnic background;

MHEC does not regulate admission or acceptance into programs and therefore cannot assert a need to collect such data. As a result, the MLDS does not have relevant data to answer this question. However, educator preparation programs report the number of students admitted to their programs on the

Traditional Program Annual Report (TPAR) and Alternative Program Annual Report (APAR) to MSDE. The admissions data are not reported to MSDE by gender or racial and ethnic background. In *Table 1* below, MSDE provides the number of students admitted to an educator preparation program as reported by educator preparation programs on their TPARs and APARs.

Table 1 - Number of Students Admitted to an Educator Preparation Program

| A and amin Wann | Number of Students Admitted to an Educator Preparation Program | | | | | |
|---------------------------------|--|----------------------|--|--|--|--|
| Academic Year | Traditional Programs | Alternative Programs | | | | |
| 2019-2020 | 2,219 | 462 | | | | |
| 2020-2021 | 2,386 | 515 | | | | |
| 2021-2022 | * | 444 | | | | |
| * Data are currently available. | | • | | | | |

MSDE compiles the TPAR and APAR data and reports it in accordance with Title II of the Higher Education Act of 1965. These, as well as further information on educator preparation programs, data are available on the U.S. Department of Education's website for academic year 2011-2012 to present.

In Charts 1 and 2, MSDE reports² on the demographics of candidates enrolled in Maryland educator preparation programs between 2016 and 2020, comparing traditional educator preparation programs and alternative educator preparation programs.

Traditional Educator Preparation Programs 100% 0% 80% 66% 69% 69% 61% 65% 60% 40% 6% 4% 7% 3% 6% 7% 20% 20% 19% 18% 17% 16% 0% 2016 2017 2018 2019 2020 ■ Black/African-American ■ Hispanic/Latino Asian White Other Two or More

Chart 1 - Maryland Traditional Teacher Preparation Enrollment Demographics

¹ https://title2.ed.gov/Public/Home.aspx

² The chart is from MSDE's Maryland's Teacher Workforce: Supply, Demand and Diversity (July 26, 2022). rPipelineAndDiversity.pdf

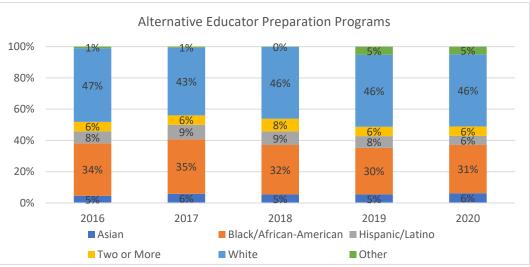


Chart 2 - Maryland Alternative Teacher Preparation Enrollment Demographics

Finally, MSDE reports that the Maryland State Board of Education and the Professional Standards and Teacher Education Board promulgated amendments to the regulations governing the approval of educator preparation programs in Maryland. Those regulations, which will be published in the Maryland Register in July 2023, for public comment, require educator preparation programs to provide annual enrollment data aggregated by race, ethnicity, and gender.

(1) (ii) Teacher quality as measured by the grades, class standing, and accountability test performance of students applying to and admitted to institutions and alternative programs;

This reporting requirement seeks to assess teacher quality by analyzing the academic profile of high school students who pursue teacher education in college. Three indicators were selected to evaluate the academic profile of high school graduates.

- Indicator 1 Ready for Postsecondary Success- This indicator is whether the graduate was evaluated as ready for postsecondary success according to scores on the College Board ACT and SAT assessments. To be deemed ready for success a high school graduate must have a composite score of 21 or higher on the ACT exam or a score of 530 or higher on the SAT math exam and a score of 480 or higher on the SAT Evidence Based Reading and Writing (EBRW) exam.
- *Indicator 2 Cumulative GPA above 3.0* This indicator is whether the high school graduate had a cumulative grade point average at or above a 3.0 at graduation from high school.
- Indicator 3 Meets Freshman Admissions Requirement for University System of Maryland (USM) This designation requires a high school graduate to complete four or more years of English, three or more years of science, three or more years of social science/history, two or more years of a foreign language, and four or more years of math (which included Algebra, Algebra II, and geometry). Program completion does not guarantee students admission to the System institutions but is meant to signify, through its high school curriculum requirements, college readiness.

Table 2 provides an academic profile of Maryland public high school graduates who enroll in a Maryland institution of higher education in the Fall immediately following high school graduation. The three individual indicators are used to evaluate (Part 1) the academic profile of high school graduates who are enrolled in educator preparation program in the first term of college and (Part 2) the academic profile of

high school graduates who enroll in college in any degree-seeking program. Additionally, the table below reports the number of high school graduates who met all three standards at the time of graduation.

Table 2- Academic Profile

| Part 1 – Educator Preparation Program | | | | | | | | | | |
|---------------------------------------|-----------------------------|-------------------|----------------------|--------|-------------------------------------|--|--|----------------------|---------------------------------|--|
| Graduation | Immediate | Postsecondary hig | | | | at High hool | Attains Standar High So Graduat | ds at chool | Meets all Three Standards | |
| Year [1] | Fall in EPP [2] | n | % | n | % | n | % | n | % | |
| 2017-2018 | 712 | 476 | 67% | 461 | 65% | 632 | 89% | 350 | 49% | |
| 2018-2019 | 687 | 479 | 70% | 496 | 72% | 573 | 83% | 372 | 54% | |
| 2019-2020 [6] | 665 | 462 | 69% | 510 | 77% | 623 | 94% | 394 | 59% | |
| Part 2 –Any M | lajor | | | | | ' | | | | |
| Graduation | Immediate | | hig Postsecondary | | SPA or at High hool uation | Attains Standar High So Graduat | ds at | Meet Thi Stand | ree | |
| Year [1] | Fall in Any Major [2, 5] | n | % | n | % | n | % | n | % | |
| 2017-2018 | 20,703 | 12,623 | 61% | 12,046 | 58% | 17,534 | 85% | 8,896 | 43% | |
| 2018-2019 | 20,734 | 12,968 | 63% | 13,547 | 65% | 16,341 | 79% | 9,470 | 46% | |
| 2019-2020 [6] | 19,234 | 12,276 | 64% | 14,212 | 74% | 17,132 | 89% | 10,305 | 54% | |

Notes

(1) (iii) The proportion of graduates of teacher education programs, including those graduates expecting to teach at the elementary school level, who have majored as undergraduates in the subjects they plan to teach to the total number of graduates of teacher education programs;

Table 3 provides the counts of students who completed an undergraduate educator preparation program between 2017-2018 and 2020-2021 by grade level of the program completed and whether they are teaching in a Maryland public school in the grade level of their educator preparation program.

^[1] High graduate is defined as a Maryland public high school student who earns a diploma. Students earning a certificate of completion are excluded from analysis.

^[2] A student is considered to be enrolled in a Maryland college if the enrollment is in the fall term as a full-time degree-seeking student immediately following high school graduation.

^[3] Students met either the SAT score requirement or the ACT score requirement.

^[4] Includes high school graduates earning a diploma with the USM or USM/Career and Technical Education (CTE) Flag.

^[5] All enrollees are included, both those enrolled in educator preparation majors and non-educator preparation majors.

^[6] High school graduates from 2019-2020 enter college for the first time in Fall 2020, which is six months into the COVID shutdown in Maryland. In the initial COVID period, traditional college-going patterns and SAT testing were disrupted.

Completers of *Early Childhood Education* programs are counted as teaching within grade level if they are teaching at an elementary school or a comprehensive school that combines all grade levels. Completers of *Elementary Education* programs are counted as teaching within grade level if they are teaching at an elementary school, a middle school or a comprehensive school that combines all grade levels as Elementary Education programs may prepare educators to teach in grades 1 through 6. Completers of *Middle School* programs are counted as teaching within grade level if they are teaching at an elementary school, a middle school, a high school or a or a comprehensive school that combines all grade levels as Middle School programs may prepare educators to teach in grades 4 through 9. *Subject Area Specialists* are counted as teaching within grade level if they are teaching at any type of school as subject specialists may span all grade levels (PreK to 12) or be focused on grades 7 to 12.

Table 3 – Teaching in Grade Level

| | | | thin 3 years of Completion | Teaching in Grade Level of Program within 3 years of completion | | | |
|---|--|-------|-------------------------------|---|-----------------|--|--|
| Educator Preparation Program Group | Undergraduate Completers 2018-2021 | N | % of Completers | N | % of Completers | | |
| Early Childhood Education | 843 | 605 | 71% | 590 | 70% | | |
| Elementary Education | 2,335 | 1,755 | 75% | 1,686 | 72% | | |
| Middle School | 147 | 113 | 77% | 111 | 76% | | |
| Subject Area Specialists (PreK to 12) | 1,324 | 882 | 67% | 846 | 64% | | |
| Total | 4,649 | 3,355 | 72% | 3,233 | 70% | | |

Notes:

- To be counted as a teacher, a completer had to be classified as either a Teacher (Staffing Code 11), Other Instructor (Staffing Code 13), or Teaching Aide (Staffing Code 26), and employed under the code 2 years prior to completion of the educator preparation program or three years after completion of the educator preparation program and have less than 3 years of experience when employment at the staffing code began.
- Completers of educator preparation programs with a Special Education are included in the totals for Elementary Education. Special Education programs are offered at a variety of grade level groups (e.g., grades 1 to 8, Infant to 6, and 6 to Adult).
- All completers of non-teaching programs are excluded from this analysis. This includes completers of administrative program, library programs, counseling programs, speech therapist program and others.
- Subject area specialties include students who completed educator preparation programs in foreign languages (e.g., French or German), sciences (e.g., biology or chemistry), or arts, humanities and social sciences (e.g., history or theater). Due to data limitations, complete linking cannot be made between the subject area of specialty and the subject area of the teaching position.

(1) (iv) The proportion of new teachers hired in the State who were trained out of State to those trained in the State;

The MLDS Center does not receive data needed to directly answer this question. However, MSDE data collections and reports include the number of individuals applying for certification based on whether they: (1) completed a Maryland approved program; (2) were trained out-of-state; (3) were a professional coming from out-of-state; or (4) their training was unidentified. Specifically, in *Chart 3*, MSDE reports that approximately 50% of Maryland certification applicants are prepared in another state.

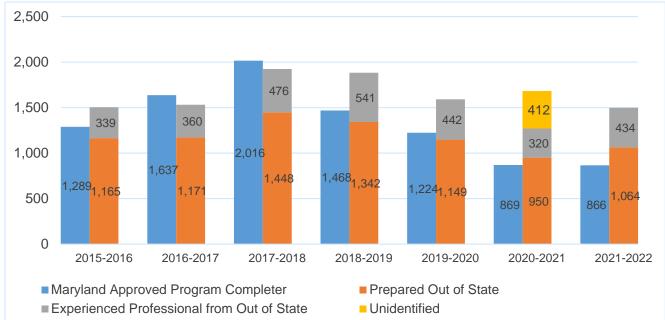


Chart 3 – Preparation Location of Initial Certificates

(1) (v) The satisfaction of school district officials with newly hired teachers who have just graduated from Maryland institutions as determined by the school district officials' responses to questions on a form the officials helped develop

Measuring the satisfaction of school district officials with newly hired teachers will require the development of a survey of district officials. The MLDS Center will work with MSDE and MHEC to develop a survey instrument to address this question. The survey will be developed in consultation with the Center's Research Branch partners at the University of Maryland School of Social Work and College of Education. Another set of perception data that may complement the survey of district officials is to also survey new teachers' perceptions of their working conditions, experiences, and how well their training prepared them for teaching. The development of a survey instrument, testing it for validity, identifying the survey population, and conducting and analyzing the survey results will take a number of months to implement properly.

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³ The chart is from MSDE's *Maryland's Teacher Workforce: Supply, Demand and Diversity* (July 26, 2022). https://www.marylandpublicschools.org/stateboard/Documents/2022/0726/TabGBlueprintAndDataDeepDiveTeacher rPipelineAndDiversity.pdf

(1) (vi) The proportion of graduates of teacher education programs who pass required tests for licensure on the first attempt and after subsequent attempts.

The MLDS Center has limited teacher certification data and cannot directly answer this question.

MSDE reports that its access to teacher certification is also limited, but notes that teacher educator preparation programs may request test outcome information for each of its graduates directly from *Educational Testing Service* (ETS), which administers the *Praxis* exam that the State uses for certification assessment.

As part of Title II of the Higher Education Opportunity Act, the United States Department of Education provides reports from teacher education preparation programs on the pass rates on assessments necessary for an initial teaching credential. These data are available on the Department of Education's website for academic year 2011-2012 to 2020-2021.⁴ According to MSDE, the data show that teacher preparation providers in Maryland report an 83% statewide assessment pass rate for academic year 2020-2021 of their program completers. This is down from 86% and 94% in 2019-2020 and 2018-2019, respectively.

(2) Measures taken to increase the proportion of highly qualified individuals from groups historically underrepresented in the teaching profession who apply to teacher education institutions;

MSDE reports the following measures:

In 2022, MSDE launched a new strategic digital marketing campaign utilizing modern graphics and bold messaging to inspire individuals to consider teaching in Maryland. Digital art and messaging focused on targeting three demographics: high school and college students, career changers, and certified teachers outside of Maryland. Marketing campaigns, both paid and organic, run on four major social platforms, Facebook, Instagram, LinkedIn, and Twitter, utilizing sophisticated targeting tools to reach the identified key demographics nationwide. MSDE continues to pursue additional digital marketing opportunities to recruit future Maryland teachers.

MSDE also supports increasing the number of teachers from groups historically underrepresented through Maryland Leads. Maryland Leads is a grant initiative designed to support Local Education Agencies (LEAs) in utilizing federal funds to overcome the learning loss resulting from the COVID-19 pandemic, accelerate student learning to narrow opportunity and achievement gaps, and provide more targeted support for historically underserved students and their communities. Maryland Leads also supports LEAs in addressing short and long-term challenges related to the current labor shortage and attends to the longstanding need to establish and strengthen teacher pipelines and development.

One of the Maryland Leads strategies is to implement Grow-your-own (GYO) staffing programs to develop teaching talent in-house. The GYO strategy allows LEAs to launch initiatives to grow the pipelines of teachers and other professional support staff, with particular attention to increasing the presence of underrepresented groups in Maryland's teaching force. GYO includes several different types of programs that aim to recruit, train, and deploy new teachers and instructional support staff.

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⁴ https://title2.ed.gov/Public/Home.aspx

Multiple program designs are necessary because GYO programs recruit from different populations and create pipelines to fill different types of positions.

New GYO programs and activities have the potential to generate more than 300 new teachers, 100 new paraprofessionals, support more than 400 conditionally certified teachers to pass licensure exams, and build sustainable talent pipelines for years to come in Maryland. Many approved programs focus on hard-to-staff fields and/or developing pipelines with underrepresented demographic subgroups.

MSDE provides the following three examples of GYO programs:

- 1. The BA to Certification (including Alternate Pathways) program design in Montgomery County Public Schools will create MCPS University, an alternative certificate pathway, to ensure that MCPS is able to build a pipeline of diverse candidates to serve and support our students. MCPS University will focus on the following degree programs: school counselors, school psychologists, social workers, special education teachers, and early childhood teachers. MCPS will recruit 150 new staff, comprised of special education teachers, school psychologists, school counselors, and certificated staff serving early childhood critical needs areas over the next four years.
- 2. The Paid Residency program design in Washington County is a paid Residency Program, in Partnership with Frostburg State University that provides an accelerated 13-month program and a year-long mentorship by experienced teachers culminating in a Master of Arts in Teaching degree. Maryland Accelerates aims to build systemic capacities in high-need rural communities through teacher-leader residencies with career advancement pathways for inclusive excellence. WCPS will have a minimum of 10 residents during the 2022-2023 school year. At the completion of the 2022-2023 residency, WCPS will hire at minimum 80% of the residents as full-time teachers. WCPS will have a minimum of 15 residents during the 2023-2024 school year. At the completion of the 2023-2024 residency, WCPS will hire at minimum, another 80% of the residents as full-time teachers.
- 3. The Degree-Based Teacher Apprenticeship program design in St. Mary's County is working to develop and implement a Teacher Apprenticeship Program. The program assigns apprentices to schools and pairs them with other new teachers to develop classroom-based experiences. Apprentices will be assigned to support the non-tenured and conditionally certified teachers to provide co-teaching, small group instruction, classroom management, and monitoring classes while conditionally certified teachers are out of the classroom for professional development including instructional walkthroughs and observations. SMCPS will work with MSDE, local colleges and universities, and the Department of Labor on a process for awarding credit for classroom experiences. SMCPS will support Level 1 Teacher Apprentices to earn an Associates of Arts in Teaching (AAT) with 80% completion by the end of SY 2024-2025 and support Level 2 Apprentices to earn full Maryland teaching certification with 80% eligible to be hired as fully certified teachers by the start of SY 2025-2026.

Educator preparation programs are required to submit the Traditional Program Annual Report (TPAR) and the Alternative Program Annual Report (APAR) to the State Department of Education. The 2021 report asks the programs to provide a narrative on the following two topics that are responsive to this question:

- 1. In the past year, how is the EPP addressing teacher diversity needs in Maryland? Reflecting on the MSDE's Office of Research's presentation on Teacher Diversity in Maryland, what are the EPP's stated goals and identified areas of growth to increase diversity in Maryland.
- 2. In the past year and moving forward how is the EPP ensuring equity by preparing candidates to teach diverse populations including English learners and Gifted and Talented students.

The narrative responses are provided in Appendix D of the 2022 version of this report.⁵

(3) Measures taken to increase the number of high school graduates with very strong academic backgrounds who select teaching as a career;

According to MSDE, they, along with the Maryland Higher Education Commission (MHEC), Maryland colleges and universities, local education agencies (LEAs), and the Office of Tourism formed a Digital Recruitment Steering Committee in 2018 to guide the digital recruitment efforts required in Md. Code, Education Article §2-306. Utilizing input from the committee, MSDE led the effort for recruitment of a diverse teacher pipeline, including targeted recruitment of Maryland high school students, candidates of color, and National Board Certified teachers.

The Teach Maryland website ⁶ was developed in 2019 and was recently revamped as a "one-stop shop" for individuals interested in pursuing the teaching profession in Maryland. This website is updated on a continual basis and currently includes critical information regarding teacher preparation, certification, available incentives for teachers, and a description of each LEA, including student and teacher demographics, top vacancy areas, and a direct link to apply for employment. The Teach Maryland website also provides a link to MHEC's financial aid website, as well as information about the Teacher Fellows Scholarship program.

The Teach Maryland campaign utilizes a combination of digital and print advertising, social media posts, radio spots, posters, flyers, bus wraps, bus shelter advertisements, digital billboards, and streaming services as a platform for the recruitment of a diverse pool of potential teachers. Initiatives have included a partnership with the Maryland Vehicle Administration to advertise the Teach Maryland campaign on transportation vehicles and enclosures, renting strategically placed digital and print billboards across the State, and partnering with Radio One to promote the campaign through urban radio stations on-air and through the social media accounts of popular influencers. MSDE continuously recruits on social media outlets such as Twitter, Instagram, Facebook, and LinkedIn.

In May 2023, MSDE hosted the second Teach Maryland conference for our high school students interested in pursuing a career in teaching. The conference hosted 270 Maryland high school students from 15 LEAs, as well as representatives from 19 Maryland educator preparation programs for a full-day conference that included two keynote speakers, 2-panel discussions, and 16 breakout sessions.

(4) Measures taken to make teacher education in the underlying disciplines more rigorous;

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 $[\]frac{5 https://mldscenter.maryland.gov/egov/publications/CenterReports/ProgressinIncreasingthePreparation and Diversity}{of TeacherCandidates and New Teachers/Blueprint Teacher CertReport Final 7-1-2022.pdf}$

⁶ teach.maryland.gov

MSDE reports that the Maryland State Board of Education and Professional Standards and Teacher Education Board promulgated amendments to the regulations governing the approval of educator preparation programs in Maryland. Those regulations, aligned to the Blueprint for Maryland's Future, establish rigorous entrance, instructional, and practicum requirements, as well as annual reporting requirements to ensure that teacher preparation programs are producing candidates who are ready to enter Maryland classrooms. The regulations are scheduled to be published in the Maryland Register in July 2023.

(5) Measures taken to better align the programs of the teacher education institutions with State curriculum frameworks;

MSDE reports that the regulations referenced in #4 above also require teacher preparation programs to align their coursework with the Maryland College and Career Ready curriculum frameworks.

(6) Measures taken to improve the background of beginning teachers in research and research techniques;

MSDE reports that the regulations referenced in #4 above also require teacher candidates to conduct action research during the practicum component of the program. Findings must be presented to the partner school where the candidate is completing the practicum, as well as the teacher preparation program. Candidates are expected to ensure these findings include the ongoing cycle of problem identification, data collection, reflection, analysis, and lessons learned for the next cycle. These regulations are scheduled to be published in the Maryland Register in July 2023.

(7) Implementation of more rigorous licensing standards and measures for new teachers in both mastery of the subject being taught and the methods for teaching it;

MSDE reports that the regulations referenced in #4 above also establish more rigorous licensing standards. These regulations are scheduled to be published in the Maryland Register in July 2023.

(8) Implementation of incentives to attract high-quality high school graduates into careers in teaching;

MHEC reports that, beginning with the 2019-2020 academic year, a new scholarship program, administered by the Maryland Higher Education Commission (MHEC) was funded by the State of Maryland: *Teaching Fellows for Maryland Scholarship*. The Teaching Fellows for Maryland Scholarship provides financial assistance to students who, upon completion of their studies, pledge to work as Maryland public school or public prekindergarten teachers at schools that have at least 50% of the students in the *school eligible for free or reduced-price meals* (FRPM). Recipients of the scholarship receive funds for up to three years for tuition, fees, and room and board, contingent upon institution type, residency status, and academic standing. Information about the administration of the scholarship is available at MHEC's website⁵. *Table 4* reports on the total number of students who have received the *Teaching Fellows for Maryland Scholarship* annually, the average amount of the award and the total funds awarded.

Table 4 - Teaching Fellows for Maryland Scholarships

| | | Undergraduate St | udents | Graduate Students | | | | |
|------------------|------------------------------|------------------|------------------------|------------------------------|------------------|------------------------|--|--|
| | | Teaching Fello | ows | Teaching Fellows | | | | |
| Academic Year | Total Students Awarded | Average Award | Total Funds Awarded | Total Students Awarded | Average Award | Total Funds Awarded | | |
| 2020 | 47 | \$ 14,910 | \$ 700,769 | 9 | \$ 11,762 | \$ 105,861 | | |
| 2021 | 87 | \$ 17,501 | \$ 1,522,607 | 14 | \$ 13,425 | \$ 187,954 | | |
| 2022 | 91 | \$ 18,491 | \$ 1,682,681 | 10 | \$ 11,234 | \$ 112,339 | | |

Source: Data provided by the Maryland Higher Education Commission (MHEC) as reported by postsecondary institutions in the annual Financial Aid Information System (FAIS) data collection.

MHEC reports that the federal TEACH Grant provides up to \$4,000 per year (\$16,000 total for an undergraduate program; \$8,000 total for graduate studies) to full-time students who plan to become highly qualified teachers. Students attending less than full-time will receive reduced amounts. TEACH Grant recipients must agree to teach for at least four academic years as a highly qualified teacher in a high need field in a low-income school. The grant recipient must complete these four years of service within eight years of finishing the teacher preparation program. If the recipient does not meet the service requirements all TEACH Grant funds received are converted to Direct Unsubsidized Loans; and repayment must be made in full, with interest charged from the date of each TEACH Grant disbursement. Table 5 reports on the total number of students at Maryland colleges who were awarded the TEACH Grant annually (2013 to 2022), the average amount of the award and the total funds awarded.

Table 5 – TEACH Grant

| | Ī | Jnder | graduate Stu | ıdents | Graduate Students | | | | | |
|------------|---|-------|---------------------------|--------|-------------------|----------------------------------|-----|-------|------------------------|-----------|
| | | Т | EACH Gran | ıt | | TEACH Grant | | | | |
| Award Year | Total Students Average Total Funds Year Awarded Award Awarded | | Total Students Average | | | Total Students Awarde d | nts | | Total Funds Awarded | |
| 2013 | 110 | \$ | 3,511 | \$ | 386,180 | 99 | \$ | 2,826 | \$ | 279,798 |
| 2014 | 108 | \$ | 3,252 | \$ | 351,217 | 76 | \$ | 2,403 | \$ | 182,613 |
| 2015 | 88 | \$ | 4,056 | \$ | 356,907 | 61 | \$ | 2,745 | \$ | 167,452 |
| 2016 | 85 | \$ | 3,491 | \$ | 226,884 | 69 | \$ | 2,638 | \$ | 182,011 |
| 2017 | 61 | \$ | 3,404 | \$ | 207,674 | 128 | \$ | 2,933 | \$ | 375,384 |
| 2018 | 54 | \$ | 3,430 | \$ | 185,214 | 163 | \$ | 2,780 | \$ | 453,214 |
| 2019 | 68 | \$ | 3,104 | \$ | 211,100 | 141 | \$ | 2,465 | \$ | 347,542 |
| 2020 | 56 | \$ | 3,536 | \$ | 198,015 | 132 | \$ | 2,715 | \$ | 358,380 |
| 2021 | 44 | \$ | 3,314 | \$ | 145,813 | 212 | \$ | 2,946 | \$ | 624,621 |
| 2022 | 46 | \$ | 3,254 | \$ | 149,663 | 241 | \$ | 2,863 | \$ | 689,877 |
| Total | 700 | \$ | 3,455 | \$ | 2,418,667 | 1,322 | \$ | 2,769 | \$ | 3,660,892 |

Source: Data provided by the Maryland Higher Education Commission (MHEC) as reported by postsecondary institutions in the annual Financial Aid Information System (FAIS) data collection.

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⁷ https://studentaid.gov/understand-aid/types/grants/teach

In 2023, the *Maryland Educator Shortage Act* was enacted. This bill establishes the *Teacher Development and Retention Program* as a pilot. This program provides initial stipends, annual stipends, and internship stipends to eligible individuals interested in pursuing a career in the teaching profession. The program is effective July 1, 2023. Additionally, this bill mandates the establishment of a Maryland Educator, Recruitment, Retention, and Diversity Dashboard to be developed by MSDE.

(9) Trends in the rates at which teachers are acquiring the credentials needed to advance up the career ladder, established under Title 6, Subtitle 10 of this article, including National Board Certification and higher steps on the ladder;

The Blueprint for Maryland's Future builds a teacher career ladder that provides teachers with opportunities for advancement within their role as teachers and to earn additional compensation. According to MSDE, to advance within the career ladder, teachers may demonstrate greater expertise and leadership by earning an advanced degree or a National Board Certification. This allows teachers to remain in the classroom where they are most effective and also to increase their impact and expand their reach by spending more of their working time leading their peers in professional development, identifying and tutoring the students who need the most support, and improving instruction for all students at their school. As teachers move up the career ladder, their salary can increase between \$5,000 and \$15,000 for each level. By earning a National Board Certification, teachers earn a salary increase of \$10,000. Additionally, NBC teachers who teach at an identified low-performing school earn an additional salary increase of \$7,000, for a total increase of \$17,000. Depending on a teacher's position within the career ladder, a teacher can earn a six-figure salary.

A trend analysis cannot be provided until the career ladder is fully developed and implemented. MSDE reports that Local Education Agencies will implement a career ladder system by July 1, 2024. A key criterion to move up the career ladder will be to earn a National Board Certification. As of December 2021, the total count of National Board Certified teachers who were actively teaching in Maryland was 1,708. The map below (*Chart 4*) shows how many National Board Certified teachers were teaching in each local education agency.

⁸ HB 1219, Chapter 627, 2023 https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/HB1219?ys=2023RS

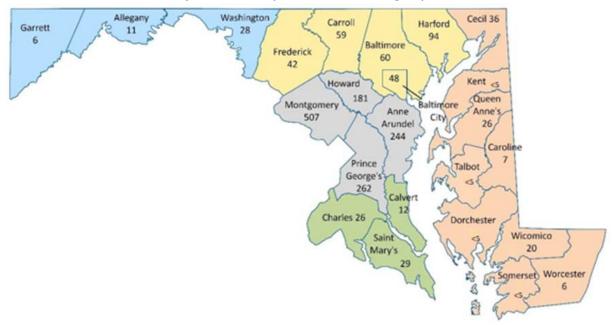


Chart 4 - National Board Certified teachers by Local Education Agency

A National Board Certification flag for teachers was added to the 2022-2023 Staff data collection in anticipation of collecting these data. The flag is a Y/N indicator that the teacher has an active National Board Certificate. The data collected will be shared with the MLDS Center.

(10) Trends in the distribution of teachers along the steps of the career ladder;

As noted in item 9, this item cannot be answered until the career ladder is fully developed and implemented. Local Education Agencies will implement a career ladder system by July 1, 2024.

(11) Trends in longevity in teaching in Maryland schools and, in particular, schools serving high proportions of historically underserved students;

Table 6 provides two metrics for evaluating trends in longevity. First is the overall number of Maryland public school teachers (staffing code 11) employed in a given year and the average number of years of teaching experience of those teachers. Second is the total number of Maryland public school teachers (staffing code 11) employed in a given year at schools designated as having a disadvantaged student population or at a school designated as low performing, and the average number of years of teaching experience of those teachers.

Table 6 – Average Years of Teaching

| | | atewide, l Schools | Statewide, Disadvantaged or Low Performing Schools [2] | | | |
|--------------------|-----------------------|--|--|---|--|--|
| Employment Year | Total Teachers [1] | Average Number of Years of Teaching Experience | Total Teachers | Average Number of Years of Teaching Experience, | | |
| AY2019 | 65,419 | 11.9 | 32,171 | 10.7 | | |
| AY2020 | 66,992 | 11.9 | 54,044 | 11.5 | | |
| AY2021 | 66,126 | 12.2 | 33,759 | 11.0 | | |
| AY2022 | 66,983 | 12.2 | 34,454 | 11.1 | | |

Notes

(12) Trends in the number of teacher candidates of color hired by local school systems disaggregated by higher education institution and alternative teacher preparation program and the systems in which those new teachers were hired; and

In Maryland, application and hiring for teaching positions is managed exclusively by each local school system and is not reported to MSDE. Data on job applications for prospective teacher candidates as well as data on which teacher candidates are hired is not currently reported to MLDSC or MSDE. However, MSDE reports that as part of the development of the Maryland Educator Recruitment, Retention, and Diversity Dashboard, MSDE is working to establish a mechanism to collect this data to build a better understanding of new and prospective teachers in Maryland, their demographics, and their teacher preparation experience.

While not directly responsive to the question, the next two tables provide the demographic composition of the current teaching population. Specifically, the tables report the total number of teachers (staffing code 11) employed in a given year in Maryland public schools and the average number of years of teaching experience as a teacher (staffing code 11) overall, and by gender (*Table 7*), and by race and ethnicity (*Table 8*).

^[1] Teachers with Staffing Code 11 assigned as a floating teacher or assigned to the Central Office were excluded from analysis.

^[2] For purposes of this report, disadvantaged has been operationalized as a school classified in a given year as having Title I status (either Target Assistance or School Wide Program) or as qualifying for the Community Eligibility Provision status (schools with high proportion of students in poverty). Low performing, for the purposes of this report, has been operationalized as a school classified in a given year as a Comprehensive Support and Improvement School, a Targeted Support and Improvement School, or a consistently underperforming school according to the Federal TSI definition.

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⁹ Due to small cell sizes, teachers identifying as other races, multiple races or an unknown race are not included in the analysis.

Table 7 – Teachers by Gender

| | | Statewide, All Schools | | | | | | | | | |
|--------------------|--------------------|------------------------|--------|------------------|--------|------------------|--|--|--|--|--|
| | Total Teachers | | Female | | Male | | | | | | |
| Employment Year | Average n Years | | N | Average Years | n | Average Years | | | | | |
| AY2019 | 65,419 | 11.9 | 51,121 | 11.7 | 14,297 | 12.1 | | | | | |
| AY2020 | 66,992 | 11.9 | 52,278 | 11.9 | 14,713 | 12.1 | | | | | |
| AY2021 | 66,126 | 12.2 | 51,596 | 12.2 | 14,529 | 12.3 | | | | | |
| AY2022 | 66,983 | 12.2 | 52,211 | 12.2 | 14,769 | 12.4 | | | | | |

Table 8 – Teachers by Race and Ethnicity

| | | Statewide, All Schools | | | | | | | | | |
|--------------------|----------------|------------------------|------------------------|------------------|--|------------------|------------------------|------------------|------------------------|------------------|--|
| | Total Teachers | | Hispanic, All Races | | African-American/ Black, Not Hispanic | | Asian, Not Hispanic | | White, Not Hispanic | | |
| Employment Year | n | Average Years | n | Average Years | n | Average Years | n | Average Years | n | Average Years | |
| AY2019 | 65,419 | 11.9 | 2,362 | 8.7 | 11,997 | 10.6 | 2,538 | 10.3 | 46,967 | 12.6 | |
| AY2020 | 66,992 | 11.9 | 2,572 | 8.6 | 12,880 | 10.4 | 2,683 | 10.4 | 47,214 | 12.8 | |
| AY2021 | 66,126 | 12.2 | 2,699 | 8.5 | 12,570 | 10.5 | 2,695 | 10.7 | 46,475 | 13.0 | |
| AY2022 | 66,983 | 12.2 | 2,909 | 8.4 | 12,861 | 10.5 | 2,796 | 10.9 | 46,614 | 13.2 | |

In *Chart 5*, MSDE reports ¹⁰ on the percentage of new teachers ¹¹ at the start of the given school year, by race/ethnicity.

¹⁰ The chart is from MSDE's *Maryland's Teacher Workforce: Supply, Demand and Diversity* (July 26, 2022). https://www.marylandpublicschools.org/stateboard/Documents/2022/0726/TabGBlueprintAndDataDeepDiveTeacher-PipelineAndDiversity.pdf

¹¹ A new teacher is defined as one with less than one year of experience at the start of the given school year.

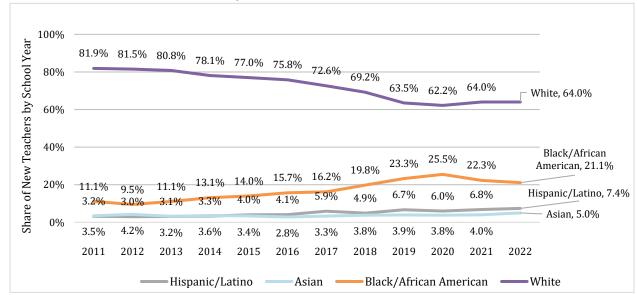


Chart 5 - New Teachers Race/Ethnicity, 2011 to 2022

Finally, as part of Title II of the Higher Education Opportunity Act, the United States Department of Education provides reports from teacher education preparation programs on the pass rates of assessments necessary for an initial teaching credential. These data are available on the Department of Education's website 12 for academic year 2011-2012 to present.

Trends in the number of teachers certified through alternative preparation programs that meet the requirements of the Blueprint for Maryland's Future related to a longer practicum by school system.

According to MSDE, the requirement for alternative preparation programs to increase the practicum to 100 days became effective on July 1, 2022, per Education Article §6-120(c)(2), Annotated Code of Maryland. The law states that Maryland programs may provide this experience consecutively or over the course of the program. MSDE reports that, since 2006, it has required alternative programs to provide an internship and residency that is no less than one year. In *Table 9* MSDE provides trends in the number of teachers certified through Maryland approved alternative preparation programs over the past three years are as follows:

| Table 9 - Number of Teacher Certified through Maryland Alternative Progra | | | | | | | | |
|---|---------------|------------------------------|--|--|--|--|--|--|
| Number of Teacher Certified | | | | | | | | |
| | Academic Year | through Maryland Alternative | | | | | | |

| Academic Year | Number of Teacher Certified through Maryland Alternative Programs |
|---------------|---|
| 2019-2020 | 305 |
| 2020-2021 | 312 |
| 2021-2022 | 305 |

¹² https://title2.ed.gov/Public/Home.aspx

Beginning on July 1, 2025, alternative preparation programs will be required to have teacher training practicums that are at least one full school year long. As part of the development of the Maryland Educator Recruitment, Retention, and Diversity Dashboard, MSDE is working to establish a mechanism to collect this data to build a better understanding of new and prospective teachers in Maryland, their demographics, and their teacher preparation experience.

As part of Title II of the Higher Education Opportunity Act, the United States Department of Education provides reports from teacher education preparation programs on the pass rates on assessments necessary for an initial teaching credential. These data are available on the Department of Education's website ¹³ for academic year 2011-2012 to present.

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¹³ https://title2.ed.gov/Public/Home.aspx

Appendices

Appendix A – Overview of State Agencies

Appendix B – Overview of MLDS Data

Appendix C – Overview of Relevant MLDS Center Research on Teaching

Appendix D – Education Preparation Programs

Appendix A: Overview of State Agencies

Maryland Longitudinal Data System Center

The MLDS is the State's central repository for student and workforce data. In recent years, student data has expanded to include data on juvenile delinquency and child welfare. The MLDS Center develops and maintains the System in order to provide analyses, produce relevant information, and inform choices to improve student and workforce outcomes in the State of Maryland. The MLDS Center has an ongoing partnership, established through an interagency agreement, with the University of Maryland, Baltimore, School of Social Work (SSW) to serve as the Center's Research Branch. The agreement allows SSW to bring in researchers from other Maryland public colleges and universities to conduct research related to their expertise. Currently the following institutions/ departments are working with the Center's Research Branch:

- 1. University of Maryland, College Park College of Education; Department of Criminology and Criminal Justice; and Department of Economics
- 2. University of Maryland, Baltimore County School of Public Policy
- 3. Morgan State University School of Education and Urban Studies

Maryland State Department of Education

MSDE has a dedicated team of educators, specialists, administrators, communicators, and collaborators—fused together by a single vision: to provide Maryland learners with a strong foundation for their future.

MSDE's mission to ensure a bright future for every student requires MSDE to be bold with urgency. MSDE is seizing this once-in-generation opportunity to transform Maryland education to ensure that every Maryland student has access to excellent and equitable educational opportunities to realize their full potential. MSDE is implementing the Blueprint for Maryland's Future, a once-in-a-generation opportunity, that provides the policy and investment needed to realize MSDE's mission. Through a new multi-year strategic plan, the State Board of Education and MSDE will anchor the Blueprint and operationalize best-in-class practices with the full participation of all stakeholders.

Maryland Higher Education Commission

The Maryland Higher Education Commission (MHEC) is the State of Maryland's higher education coordinating board for public and private colleges and universities and private career schools. MHEC coordinates the overall growth and development of postsecondary education in Maryland through its state plan for postsecondary education. MHEC is committed to supporting initiatives that advance the State of Maryland toward its goal that at least 55% of Marylander's between the ages of 25 and 64 hold at least an Associate's degree. MHEC serves both students and postsecondary institutions. The Office of Academic Affairs reviews and recommends new postsecondary institutions and the approval of academic and non-degree programs and works with accrediting agencies and institutions to support initiatives on student access, retention and completion. Through the Office of Student Financial Assistance, MHEC administers tens of millions of dollars in scholarship funds and state financial aid to over 60,000 students every year to want to further their education beyond high school. This includes the state's need-based financial aid programs, the Guaranteed Access Grant and the Educational Assistance Grant.

Appendix B: MLDS Center Data

Overview

The MLDS connects individual-level data about Maryland students through all stages of education to their workforce outcomes. These data are subject to strict data management, security, and privacy requirements. All research and reporting conducted by the MLDS Center focuses on what happens to students before and after critical transitions in education to workforce pathways. All research and analysis using the MLDS are cross-sector¹⁴ and the MLDS may only report aggregate, de-identified data. This report focuses on the pipeline of students from high school to college, through graduation and certification, and then into the teaching profession. Below is an overview of the available data within the System to support this analysis (to understand the full scope of MLDS data, please see Appendix A).

Maryland Higher Education Commission

MHEC collects data on the full spectrum of the student lifecycle. These include enrollment, course-taking, degree conferral, and financial aid data on students enrolled in credit-based courses at community colleges, four-year public institutions, and state-aided independent institutions. In 2021 MHEC expanded its data collection scope to include completion data on students pursuing noncredit workforce sequences and will continue to grow data collections on this segment of postsecondary education.

In 2018, MHEC launched a new data collection system focused on students who pursue educator preparation programs. The Maryland Approved Program Completion System (MAPCS) collects data on any student (degree-seeking or non-degree seeking) who completes an educator preparation program approved by the Maryland State Department of Education. This collection centralizes data collected and aims to help answer questions of interest to institutions and the State regarding teacher preparation.

Maryland State Department of Education

Maryland Course Catalog: The Maryland Course Catalog (MCC) is a course classification and data collection that contains all courses offered in Maryland Public Schools. The MCC is based on the School Codes for the Exchange of Data (CED), which is the national model developed by the National Center for Education Statistics.

Student-Course-Grade-Teacher: The Student-Course-Grade-Teacher (SCGT) data collection gathers student- and classroom-related data on all Maryland public school students, prekindergarten through 12th grade. The data collected is intended to provide a record of each course taken by every student during the school year. The data includes the course taken, final grade, and information on the teacher(s) associated with the course.

Staff File: The Maryland State Department of Education collects staff information from each Local Education Agency. The Staff file contains information on staff members actively employed, and staff who separated during the reporting period.

 $^{^{14}}$ Cross-sector data means data from two or more of the following sectors: Early Childhood; K-12 Education; Adult Education; Juvenile Delinquency; Postsecondary; and Workforce.

Unique Student Identification System: The Unique Student Identification System (USIS) is an internet-based application used within the Maryland State Department of Education's longitudinal data system to assign State Assigned Student Identification numbers (SASIDs). Every public school student is assigned a SASID upon entry into Maryland's public school system. The use of the SASID provides the ability to identify each student uniquely and manage student information as students move between schools within the State of Maryland.

Unique Teacher Identification System: The Unique Teacher Identification System (UTIS) is used to assign a unique ten-digit number to each staff member in the State of Maryland and maintain demographic information associated with the State Assigned Teacher Identification numbers (SATIDs). The SATID is used in the longitudinal data system, similar to the State Assigned Student Identification number (SASID).

Teacher Certification Data – At this time, the MLDS Center does not have teacher certification data. However, MSDE has recently adopted a new teacher certification system and has stated that it will provide the Center with data from the system once it is fully implemented and tested.

Department of Labor

The MLDS workforce data include quarterly Unemployment Insurance (UI) wages from 2008 through the fourth quarter of 2022 from the Department of Labor. Unemployment Insurance (UI) filings are only available for employees who work for a business required to file UI. The federal government (including the military), certain non-profits, self-employed and independent contractors, and out-of-state employees do not file Maryland UI. Unemployment insurance is filed for all Maryland public school teachers and private school teachers, unless they are teaching for an exempt non-profit.

Workforce data includes the North American Industry Classification System (NAICS) codes for employers. This system classifies employers by sector rather than identifying the specific jobs performed by employees. The industry sector codes can provide information about an individual's employment in a teaching-related industry.

Appendix C: Related MLDS Research and Reporting

Maryland Public School Teachers Working Secondary Jobs: Predicting Wages and Attrition from the Teaching Profession¹⁵

This report, by the MLDS Center Research Branch, used MLDS data to better understand the characteristics of public school teachers prepared for the teaching profession in Maryland, their employment patterns, and the relationship between their employment patterns and attrition from teaching. This analysis offers a first step in identifying the types of teachers and the employment characteristics associated with attrition from teaching, so that initial levers for policy, prevention, and intervention can be identified to ultimately retain teachers in the profession and mitigate attrition.

Teacher and Peer Characteristics in Maryland Public Schools: Changes Over Time and Links to College and Career Outcomes¹⁶

This Research Branch *Research Series* presentation examines changes in teacher and student characteristics in Maryland over the last decade, implications of these changes for the measurement of teacher and student/peer characteristics, and links to longitudinal student outcomes. The presentation includes two related analyses: one focused on teachers and the other on students/peers. For teachers, the researchers examine shifts in the Maryland teacher labor force since the Great Recession, focusing in particular on career and technical education teachers (CTE) whose industry experience may make them more likely to be susceptible to alternative labor market options. The researchers also examine who teaches CTE classes, finding that teachers without specific CTE credentials often take on this role. For students, the researchers examine how within-school changes in student demographics and peer diversity over time relate to changes in short- and long-term outcomes, including college and career outcomes, as well as how these relationships change depending on the operationalization of peer characteristics and diversity. Preliminary results show that discrete changes in school diversity (rather than linear increments of diversity or concentration of same race/ethnicity peers) are associated with college and career benefits for students.

Professional Staff Diversity and Student Outcomes: Extending Our Understanding of Race/Ethnicity-Matching in Education¹⁷

This Research Branch *Research Series* presentation begins by reviewing the large body of research that shows that access to same-race/ethnicity teachers have substantively meaningful impacts on students' test score performance, suspensions and expulsions, absences, and longer-run outcomes in college. Theory suggests that a primary lever for these effects is role modeling, meaning that students of color benefit from seeing individuals like them in positions of power, particularly those who exemplify academic success. If role modeling is a main mechanism through which effects of same-race/ethnicity teachers

¹⁵Register, B., Meyer, C., Sweet, T.M., & Henneberger, A.K. (2020). *Maryland Public School Teachers Working Secondary Jobs: Predicting Wages and Attrition from the Teaching Profession*. Baltimore, MD: Maryland Longitudinal Data System Center. The full report is available on the MLDS website.

¹⁶Blazar, D. & Lagos, F. (Research Series, March 2022). *Teacher and Peer Characteristics in Maryland Public Schools: Changes Over Time and Links to College and Career Outcomes*. The presentation is available on the MLDS website.

¹⁷Blazar, D. & Lagos F. (Research Series April 2021) *Professional Staff Diversity and Student Outcomes: Extending Our Understanding of Race/Ethnicity-Matching in Education.* The presentation is available on the MLDS website.

occur, then it would be reasonable to expect to see similar effects from other role models in the school, including administrators, nurses and health professionals, guidance counselors, and other teachers that students do not work with directly. The current study tests this hypothesis using MLDS data. To account for non-random sorting of students to schools and to teachers, we specify models that include student, school, year, and principal fixed effects. The findings from this study show benefits of access to same-race/ethnicity teachers and professional staff to student outcomes, and results differ by student race/ethnicity. Overall, the findings provide justification for the role modeling hypothesis, and point to a need to hire and support diverse school-based staff, not just amongst teachers, but also amongst professionals who contribute to student success.

Bachelor's Degree Graduates Employed as Public School Teachers within 1 Year of Graduation Time to Employment for Bachelor's Degree Graduates Employed as Public School Teachers Geographic Employment Patterns for Maryland Novice Teachers

The MLDS Center maintains a series of dashboards that report the number of Bachelor's degree graduates from Maryland's 4-year public postsecondary institutions who become novice teachers within Maryland public schools within 1 year of graduation. Novice teachers are "teachers . . . in their first three years of teaching elementary or secondary public school students." This definition is part of Title II of the Higher Education Act of 1965, as amended, and the U.S Department of Education's guidance for teacher preparation program reporting. The dashboards also report the number of novice teachers who: attended a Maryland public school; are teaching in the county of the public school they attended; or are teaching in the county of the college they attended.

Appendix D: Education Preparation Programs

<u>Approved Programs</u> – According to MSDE, an approved or traditional educator preparation program is one that prepares teachers, specialists or administrators and which results in initial or additional Maryland licensure. MSDE must approve the content of the program and convey its approval in writing in order for programs to advertise and to matriculate candidates into the proposed area(s) leading to Maryland licensure. The guidelines provide step-by-step directions for educator preparation programs to prepare their submissions for a new program or a major modification to an existing program. If there is uncertainty as to what constitutes a "major modification," the institution should contact the MSDE for clarification. There are 23 colleges and universities in Maryland approved to provide more than 300 professional educator certification programs.¹⁸

Approved Alternative Programs – According to MSDE, Maryland's alternative preparation programs are tailored to meet the staffing needs of Maryland school districts, while providing the convenience necessary to attract experienced, diverse individuals to the classroom. Many school districts offer alternative preparation, some in partnership with two-year or four-year colleges or other private providers. Alternative preparation programs differ from traditional programs in that alternative preparation leads to teacher certification, but not necessarily to a degree. Alternative preparation programs allow participants to begin teaching and receiving a salary much earlier in the program, and they usually cost much less than traditional routes. Because of the modified timeframe, alternative preparation programs are considered intensive and very challenging. MSDE provides a directory of approved alternative programs. ¹⁹

 $^{^{18}\}mbox{Maryland State Department of Education (September 2021)}$ Maryland Approved Programs Traditional Preparation Director

¹⁹Maryland State Department of Education (July 2021) *Maryland Approved Program Directory: Alternative Preparation*