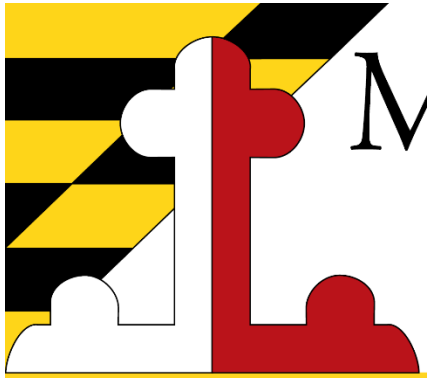

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Disparate Pathways: Understanding Racial Disparities in Teaching

Presenter: Seth Gershenson, American University

Coauthors: David Blazar, Max Anthenelli, Wenjing Gao, Ramon Goings

The research reported here was supported by the Institute of Education Sciences, US Dept of Education, through Grant R305S240013 to the University of Maryland, Baltimore County. The opinions expressed are those of the authors and do not represent the view of the Institute or US Dept of Education.

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Motivation

- Many benefits of a representative teaching force (Gershenson et al. 2021, 2022)
  - 10% increase in HS graduation & college enrollment
  - 10 to 20% reduction in chronic absence rate
  - 2 to 5% of test-score SD gains
- Yet the teaching force is not representative, nationally or in MD
  - Nationally: ~ 50% white enrollment, 80% white teaching force
  - Maryland: ~ 30% white enrollment, 70% white teaching force

- Reason: barriers to entry/progress on pathway to teaching?

Research Questions

1. At what stages along the teacher pathway does Maryland lose potential teachers of color?

2. How might interventions (public policy) reduce this differential attrition and yield a more representative teaching force?

    At what stage(s) should we intervene?

    How should interventions be targeted?

Methods

Admin data: Maryland Longitudinal Data System (MLDS) Center

- 3 cohorts of first-time 9th graders starting in 2008-09 school year
- Follow these students over 14 years (~ 28 years old)
- HS course-taking data, college enrollment/graduation/major, employment

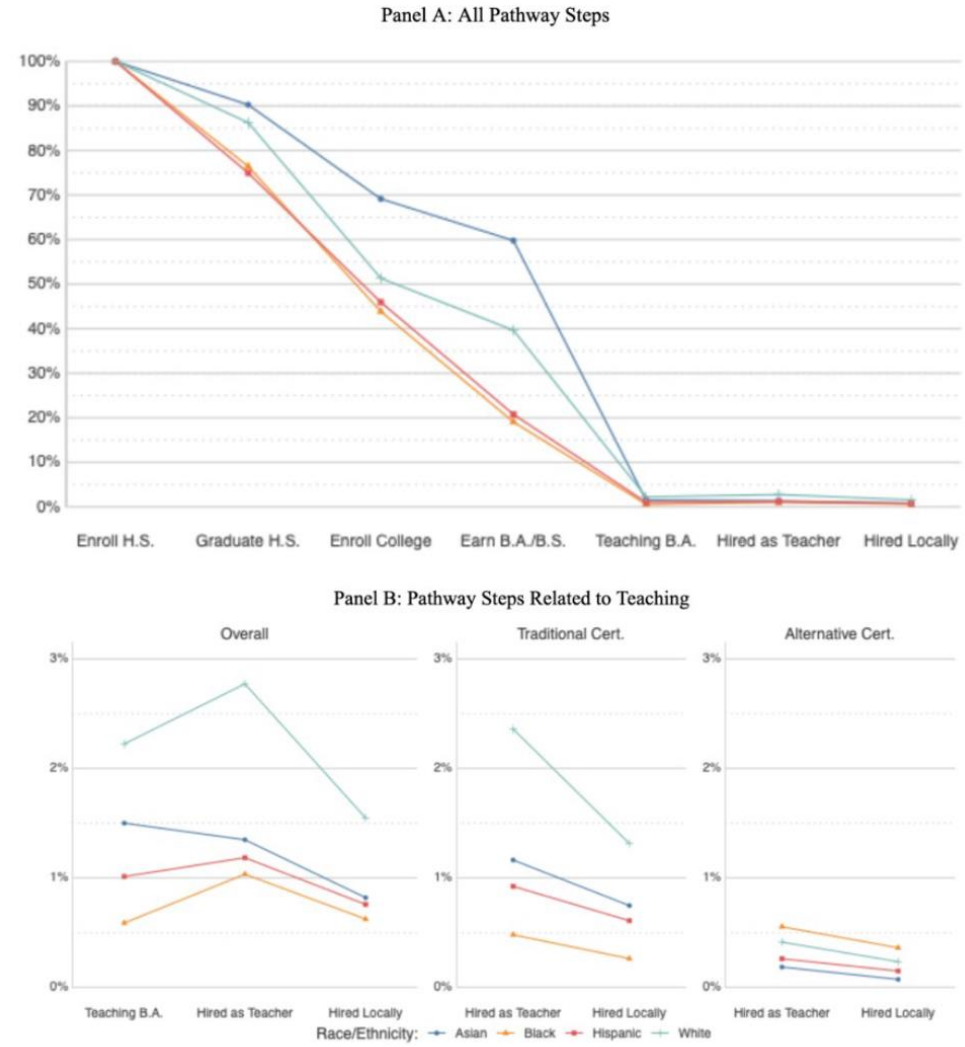
Describe persistence on pathway to teaching by race/ethnicity group

Simulation (thought experiment):

- How would interventions change the composition of the teaching force?
- What sort of policy would generate a (more) representative teaching force?

Results: Teacher Pathways in MD

Figure 2. *Share of 9th Graders at Each Stage on the Pathway into Teaching within 12 Years, by Race/Ethnicity*

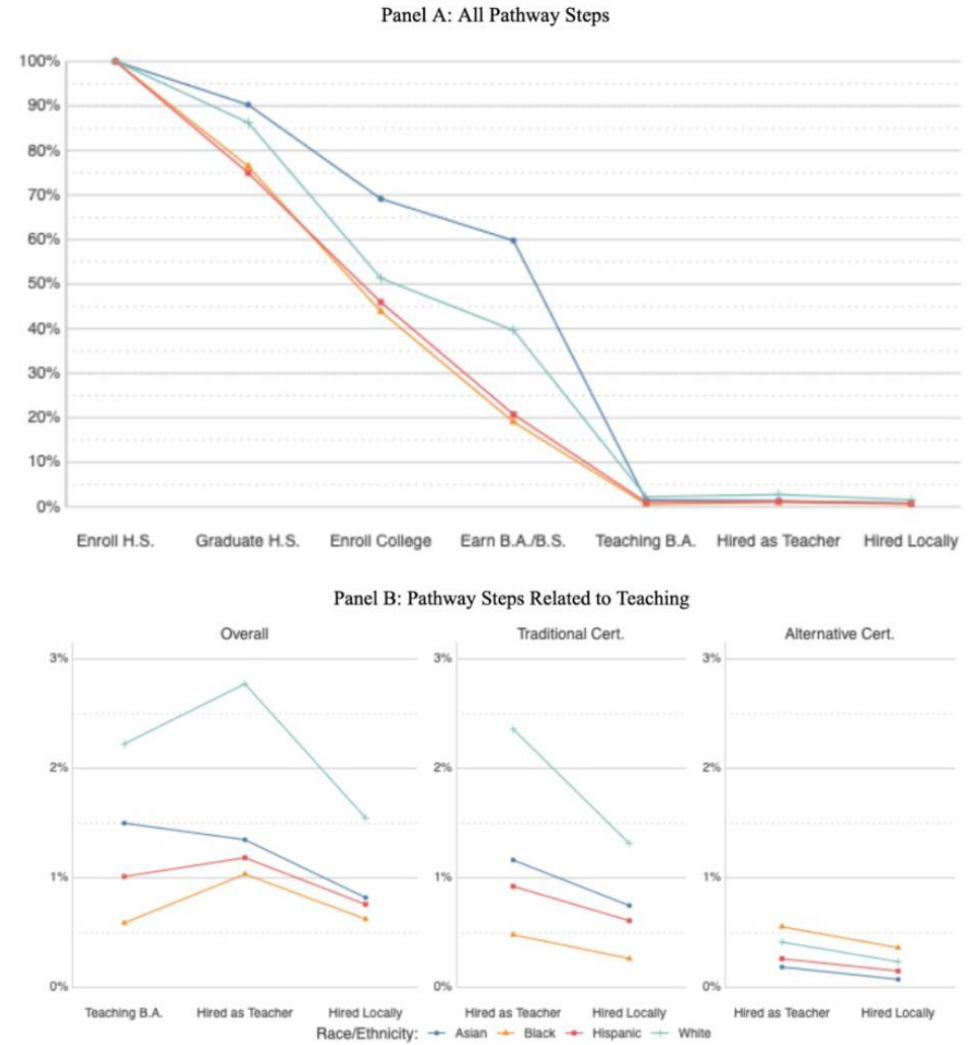


Panel A

- Black and Hispanic students exit pathway at higher rates than white and Asian students at each transition point

Results: Teacher Pathways in MD

Figure 2. *Share of 9th Graders at Each Stage on the Pathway into Teaching within 12 Years, by Race/Ethnicity*



Panel B

- Zoom in on those last few transitions
- ***Overall***, white students twice as likely as other groups to teach in MD
  - Largely driven by Traditional Certifications

- Black students are ***more likely*** than other groups to enter teacher via alternative certifications
  - i.e., no BA in teaching
  - Conditional or resident teaching license

Results: Simulation-based Thought Experiment

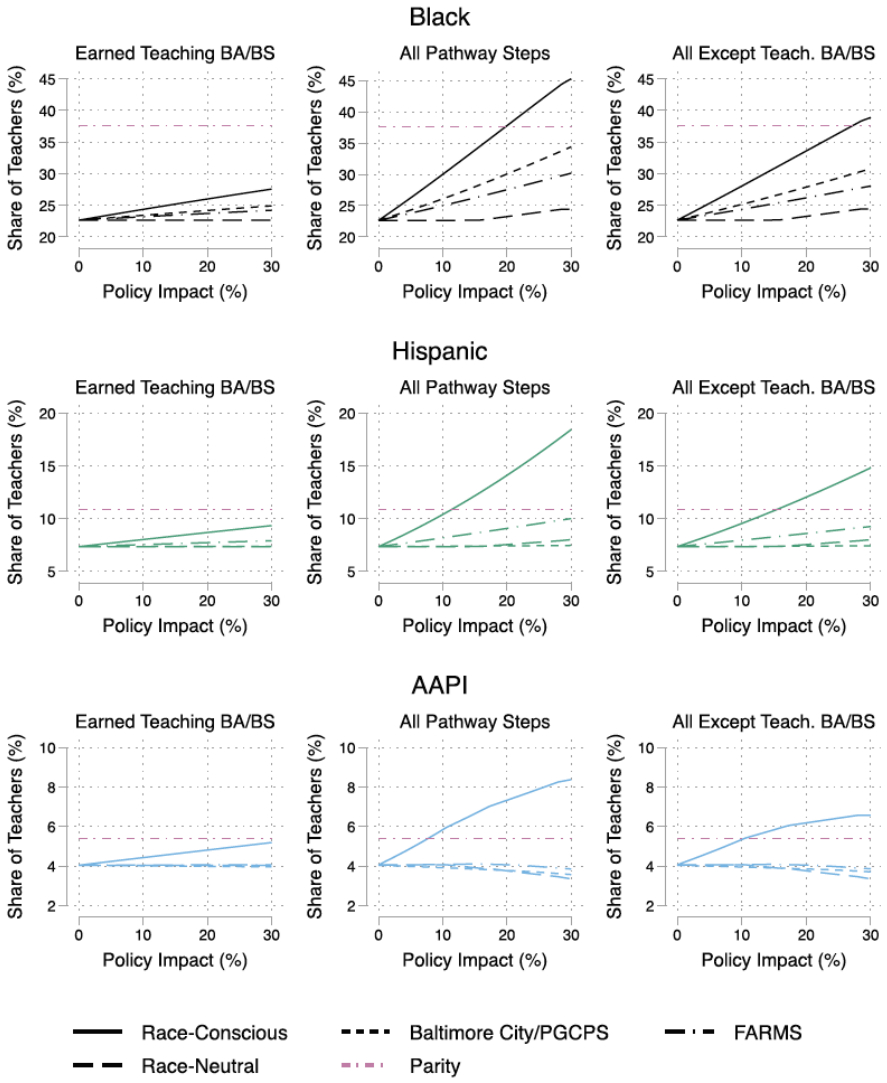


FIGURE 5. *Projected effects of policy shocks on shifting teacher demographics.*
Note. AAPI = Asian American and Pacific Islander; FARMS = free or reduced-price meals.

- X-axis considers different effect sizes
  - 30% achieves 100% HS graduation rates
  - 30% effects are (perhaps) unrealistic
  - 15% effects are more reasonable
- Race-conscious targeting is necessary to achieve parity, but FARMS or geographical targeting gets close
  - At each stage

Policy Implications

To truly achieve parity, race-conscious policy targeting is necessary

- Impractical
- No silver bullets

Interventions could be deployed at each stage of pathway

- To make serious headway (get 50% to 75% of the way to parity)
- Geographic targeting of Baltimore & PG County is a good idea
- E.g., CTE Programs like Teacher Academy of Maryland (TAM); Financial Aid

Alternative certification & licensing should be considered as a serious onramp (or alternative pathway) to teaching careers for Black students

Teacher Preparation, Localness, and Student Outcomes

Presenter: Wesley Morris, University of Maryland, College Park

Coauthors: Nicolas Mominguez-Mel, Sarah Montana, & David Blazar

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Motivation

- Local teachers may build deeper connections with students and families, increase workforce diversity, and improve retention (Gist et al., 2019; Reininger, 2012).

- **Empirical evidence linking teacher localness to student achievement remains remarkably thin (Boyd et al., 2005; Hinrichs 2021).**

- We examining **three dimensions of localness** — growing up locally, being trained locally, and having worked locally — and their associations with student test scores in Maryland.

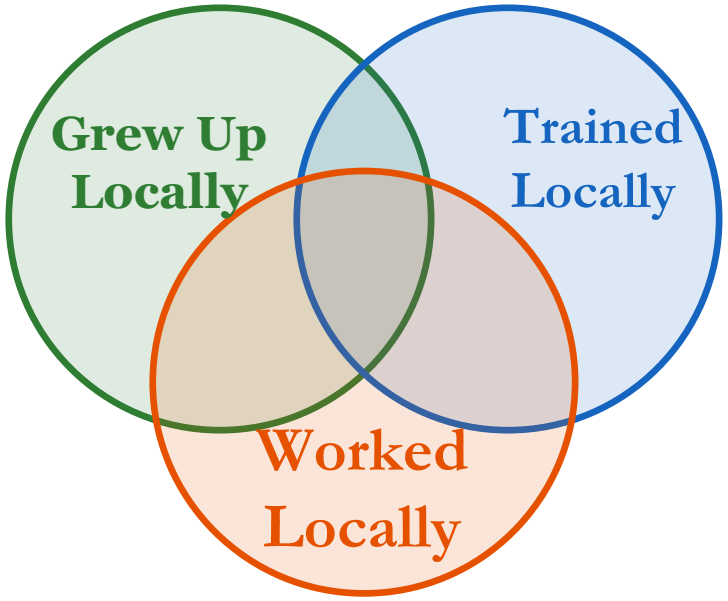
Research Questions

1. How does the Maryland novice teacher workforce display different dimensions of localness?

2. **Are these dimensions of localness associated with student achievement gains?**

What is Localness?

The extent to which a teacher has experiences in the community in which they teach



Why might localness matter?

Retention & Stability: Local teachers may be more likely to stay

Diversifying the Pipeline: Local recruitment may increase diversity

Stronger Relationships: Shared community ties may deepen connections

Improving Instruction: Local knowledge may help connect instruction to students' experiences

How Do We Define Localness?

	Grew Up Locally	Trained Locally	Worked Locally
Attended a MD High school	X		
Teaches in Same District	X		
Initial license: TAM	X	X	
Initial license: Traditional cert - In MD		X	
Initial license: Traditional cert - Out MD			
Initial license: Resident cert		X	
Prior Aide Experience			X

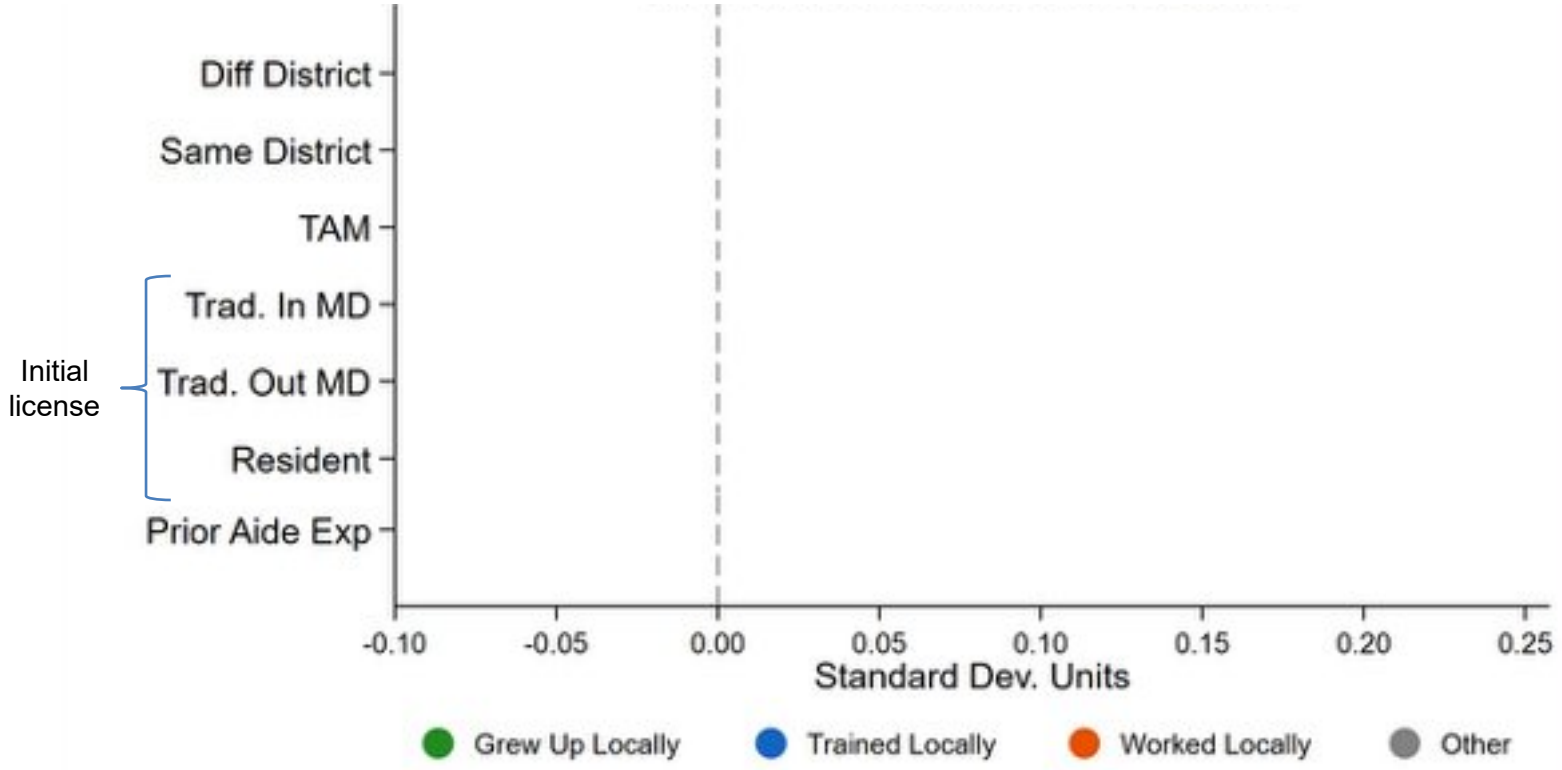
Data Sources (MLDS)

HS enrollment records
→ grew up locally

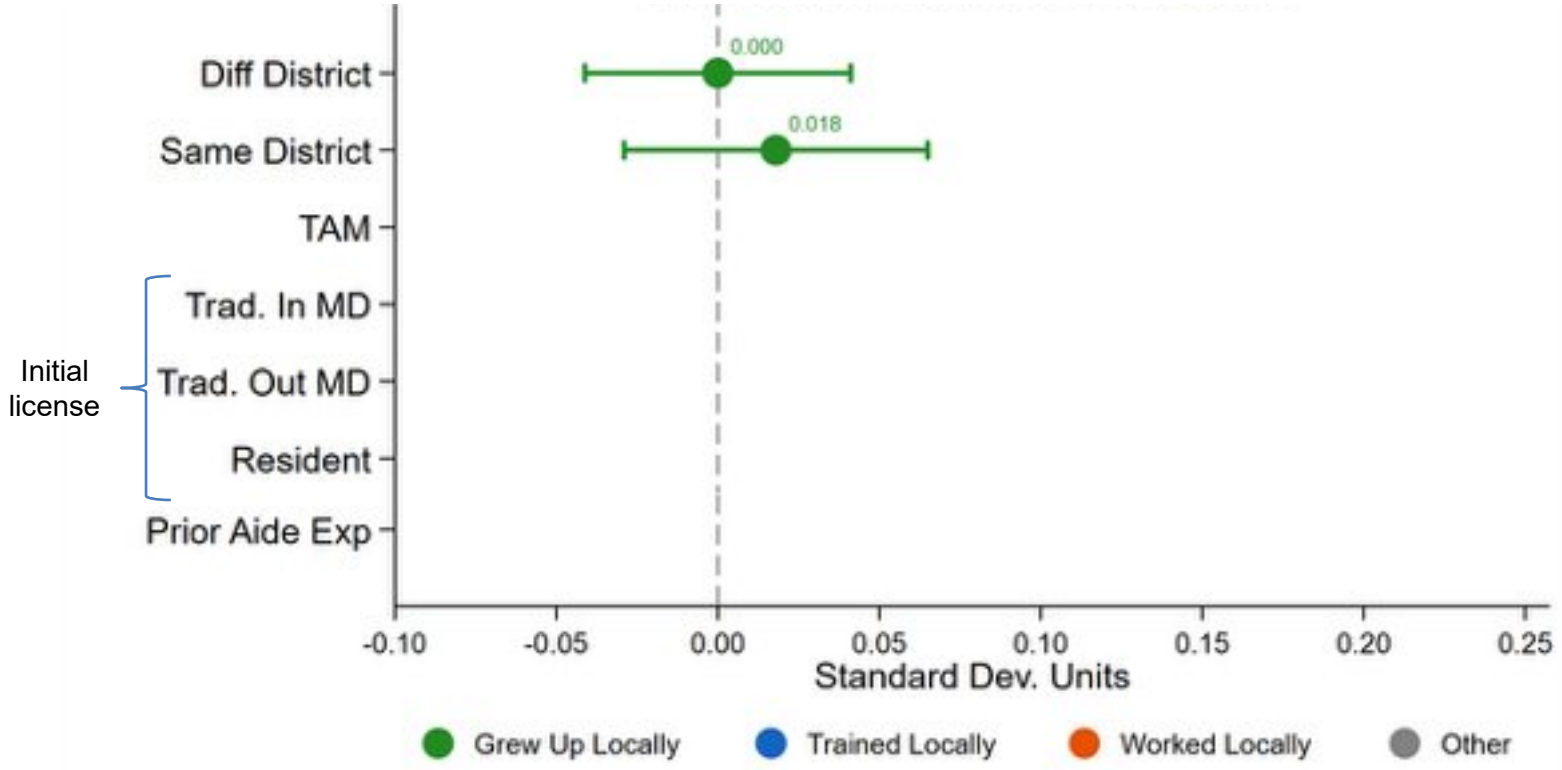
Postsecondary & cert records
→ trained locally

K-12 staff position records
→ worked locally (aide exp.)

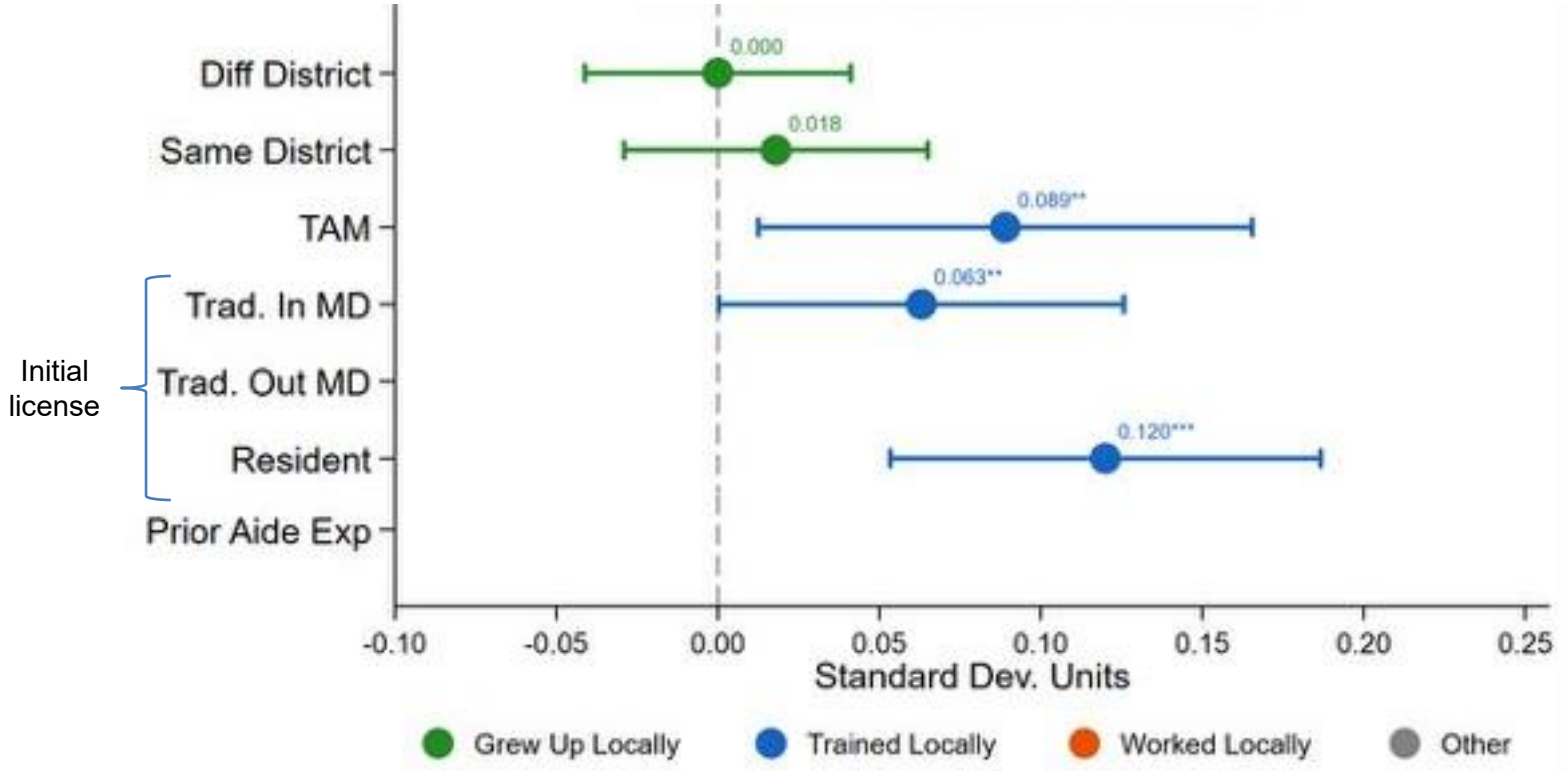
Teacher Localness and Student Test Scores



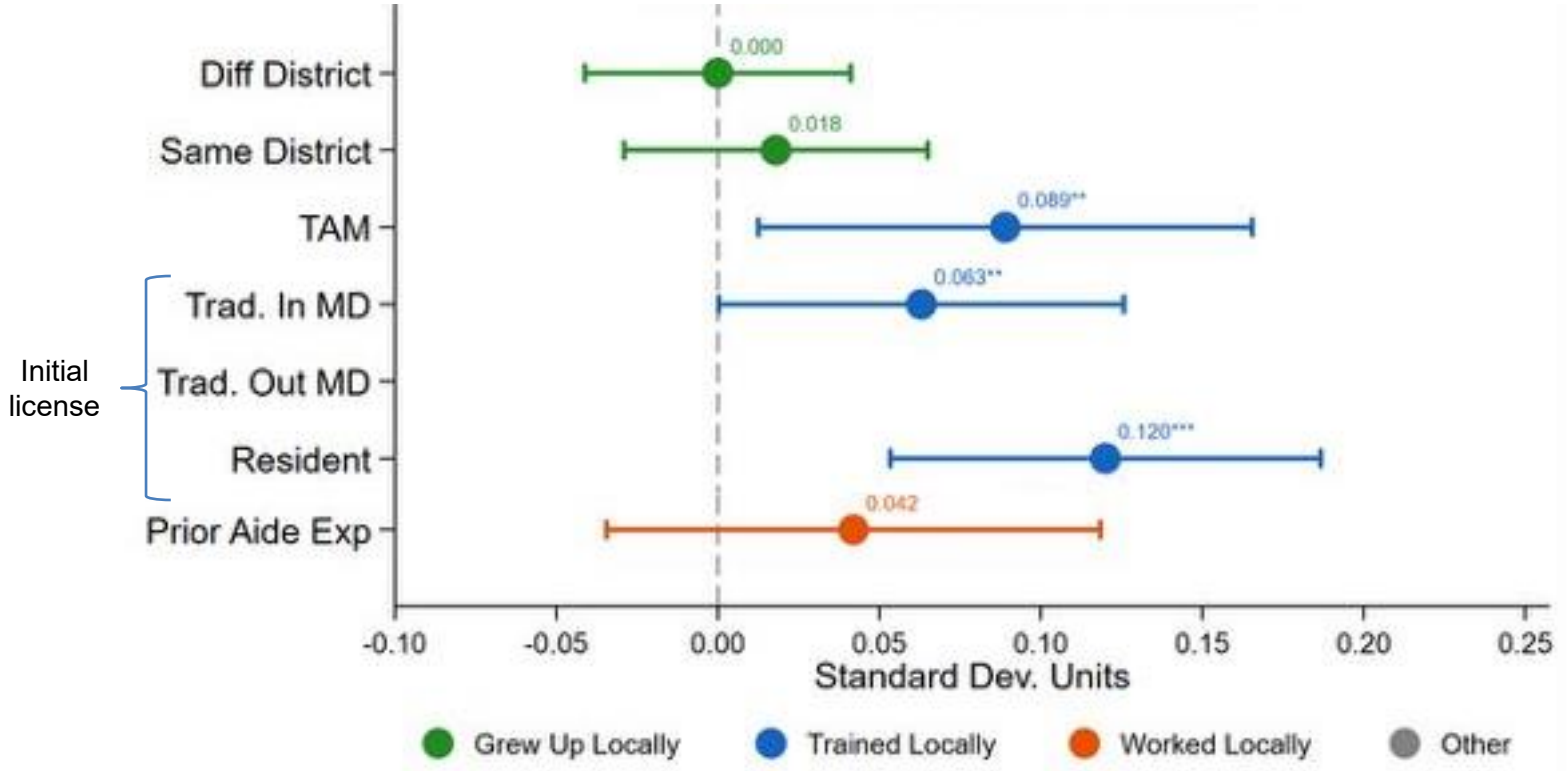
Teacher Localness and Student Test Scores



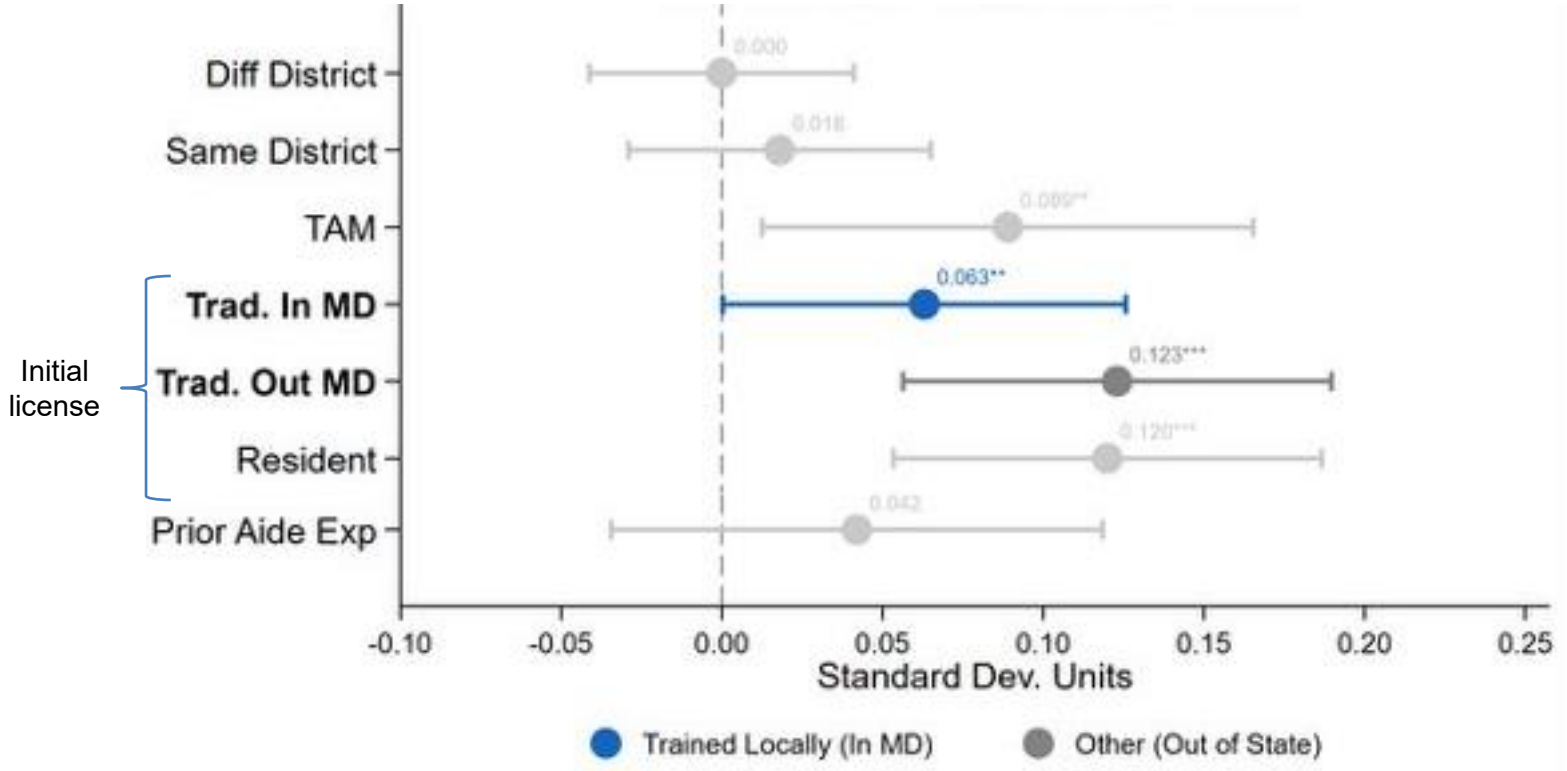
Teacher Localness and Student Test Scores



Teacher Localness and Student Test Scores



Teacher Localness and Student Test Scores



Implications for GYO Policy

Local recruitment is a complement to — not a substitute for — quality preparation.

Local ties serve workforce goals

Filling vacancies, increasing diversity, building a workforce that reflects its communities — but local ties alone should not be expected to improve achievement.

Channel local recruits into preparation

GYO programs that pair local recruitment with formal preparation (TAM, Resident) show the most promise for student outcomes.

Attend to hiring selection

The strong performance of out-of-state teachers underscores that selection mechanisms in hiring deserve attention alongside recruitment strategies.

Matching ESL Students with ESL teachers in K-12 schools in Maryland

Presenter: Fadel Ugarte, UMBC

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Motivation

- Evidence suggests that English Language Learners benefit from teachers with extra training in teaching English as a Second Language (ESL).

- Maryland's proportion of ELL students increased rapidly over the past years from 8.5% in 2017 to 11.2% in 2021 (98,567 students).

- By 2021, only 3% of Maryland teachers had an ESL endorsement.

Research Question

With an undersupply of ESL teachers in Maryland, how are ESL teachers distributed across schools relative to the growing ELL student population?

Method: Two-Stage Estimation

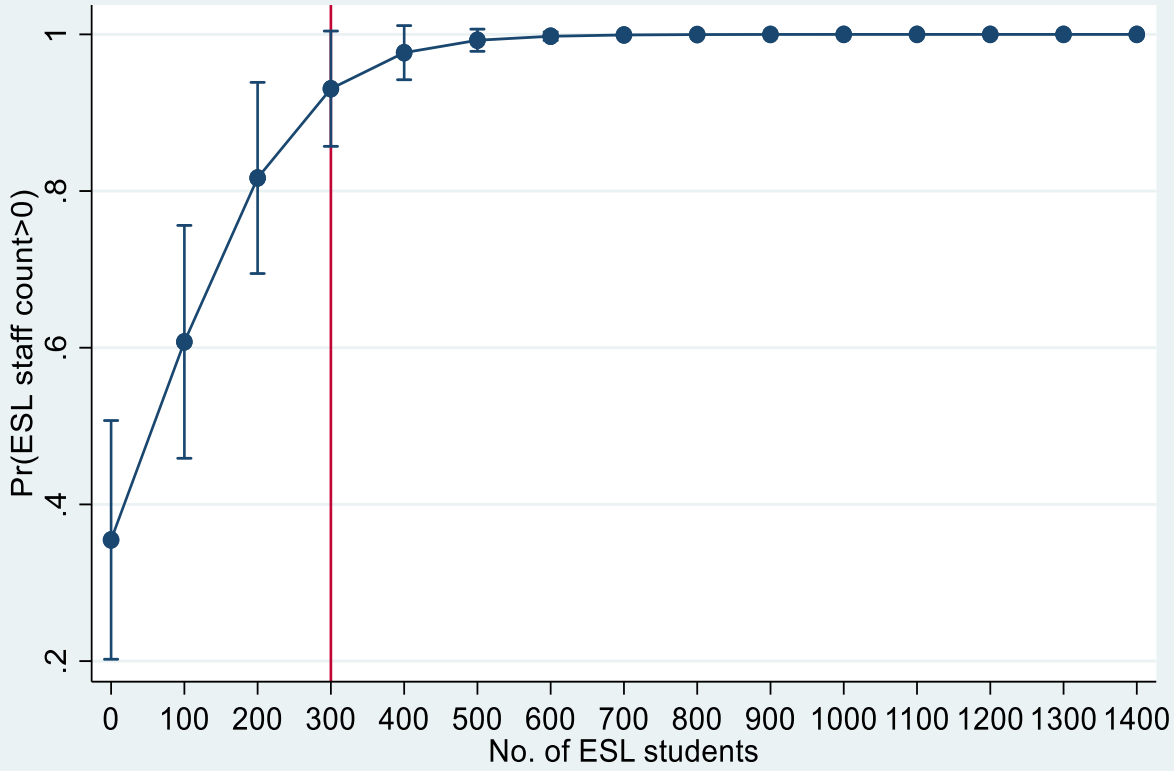
Students and teachers' data from 2008-2025, aggregated at the school level.

1. Based on the number of ELL students, estimate the probability that a school will hire at least one ESL teacher,

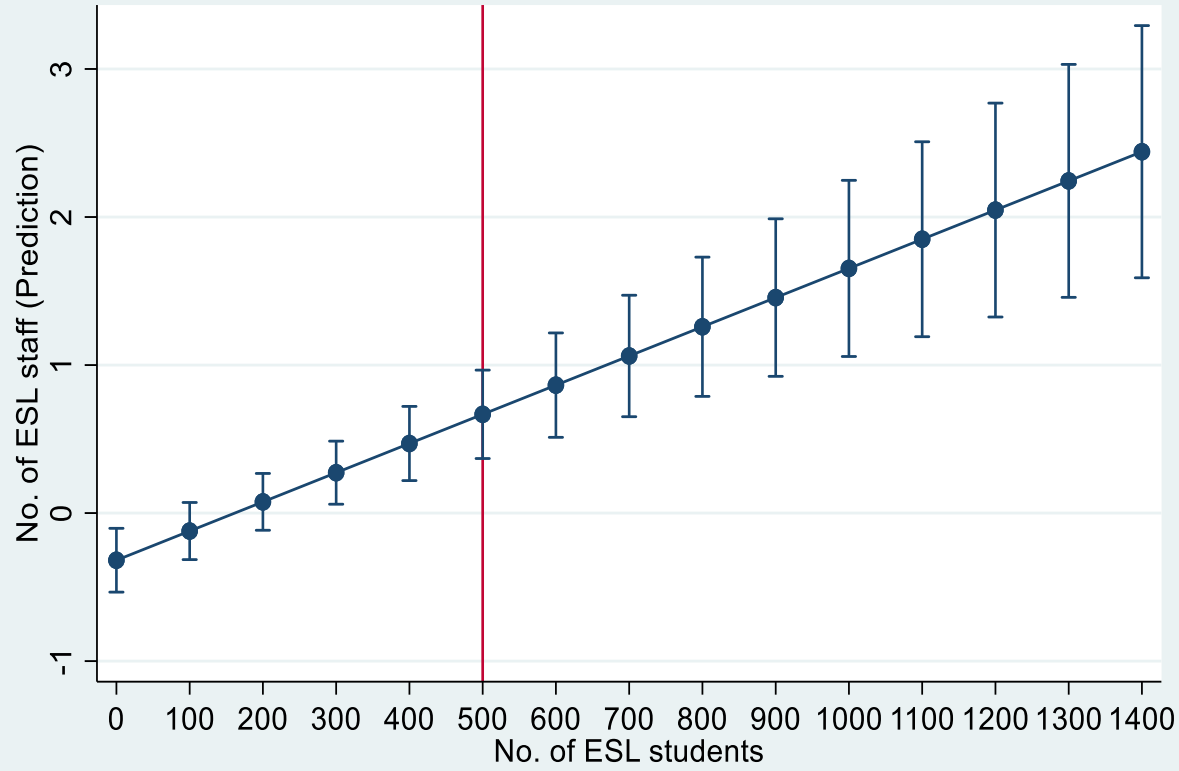
2. After the first teacher is hired, estimate growth in the number of ESL teachers as more ELL students enroll

Results. Probability and Counts of ESL Teachers

1. Probability of Staffing at Least One ESL Teacher



2. Number of ESL Teachers

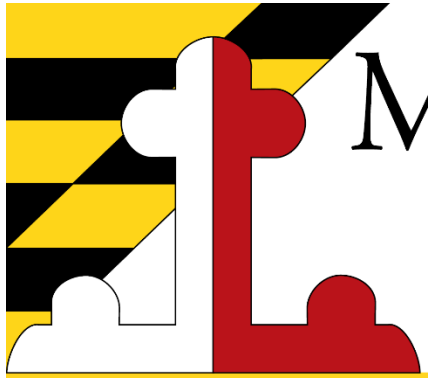


Policy Implications

- Hiring of ESL teachers in Maryland is sensitive to the growth of the ELL student population, but many ELL students either have no access to an ESL teacher or share access with hundreds of other ELL students.

- Schools with 300 ELL students have a 100% probability of having one ESL teacher. However, 600 additional students are required before a second ESL teacher is hired.

- Future policies should seek not only to increase the number of ESL teachers but also to achieve a more even distribution of teachers across the state, as around 30% of schools with ELL students lack an ESL teacher.



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Teacher Preparation and Quality Across Maryland

Presenter: Alex J Moran, University of Maryland, Baltimore

Coauthors: Jane Arnold Lincove, Fadel Ugarte, & Danielle Barefoot

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Motivation

- Teacher quality is important for student outcomes (Blazar & Kraft, 2017; Chetty et al., 2014a, 2014b)
- Concerns about teacher shortages and inequitable distribution of effective teachers
- States reduced/removed barriers to entry to the teacher profession

Research Questions

- What are the training pathways of Maryland teachers with a sustained record of success?
- How is teacher quality distributed across Maryland students?

Methods

Administrative data provided by Maryland Longitudinal Data System

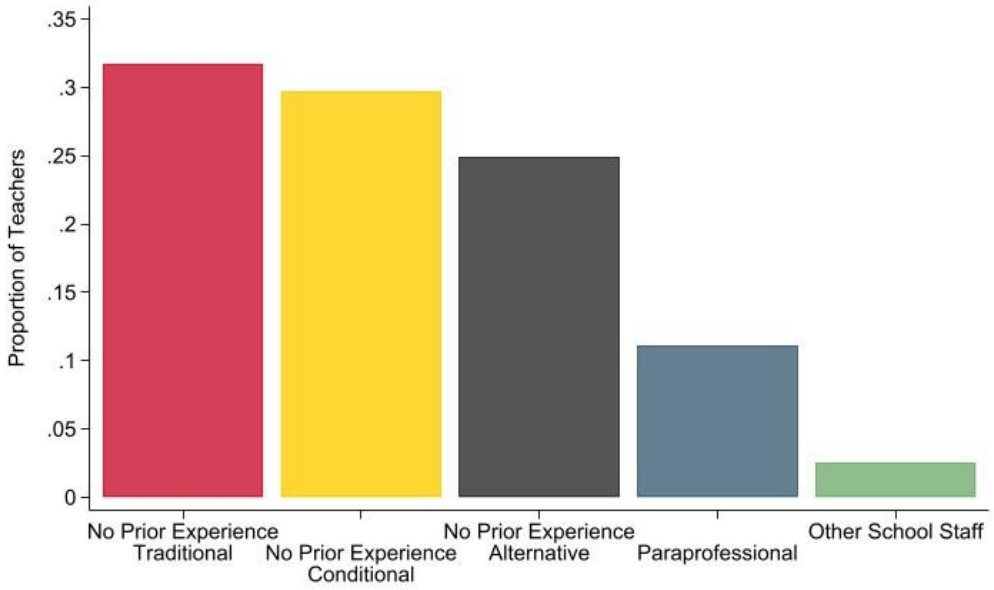
- All public school teachers (including charter schools)
- Snapshot of 2023-2024 school year
- Teachers, certification info, degree completion, links to students/test scores

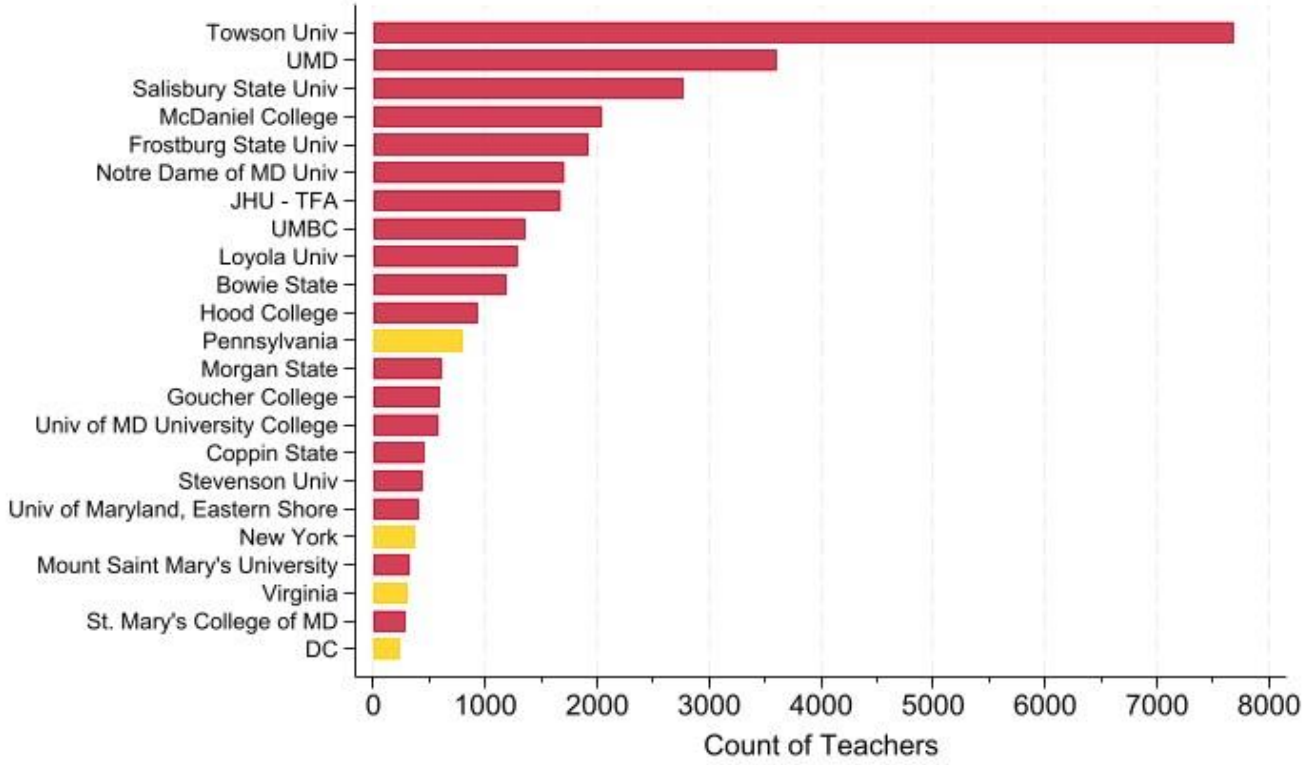
Value-added models

- Grades 3-8 Math and ELA Scores
  - High school outcomes
  - Non-test score outcomes
- Estimated contribution of an individual teacher to their students' outcomes, beyond what we would predict given a student's background and prior year score

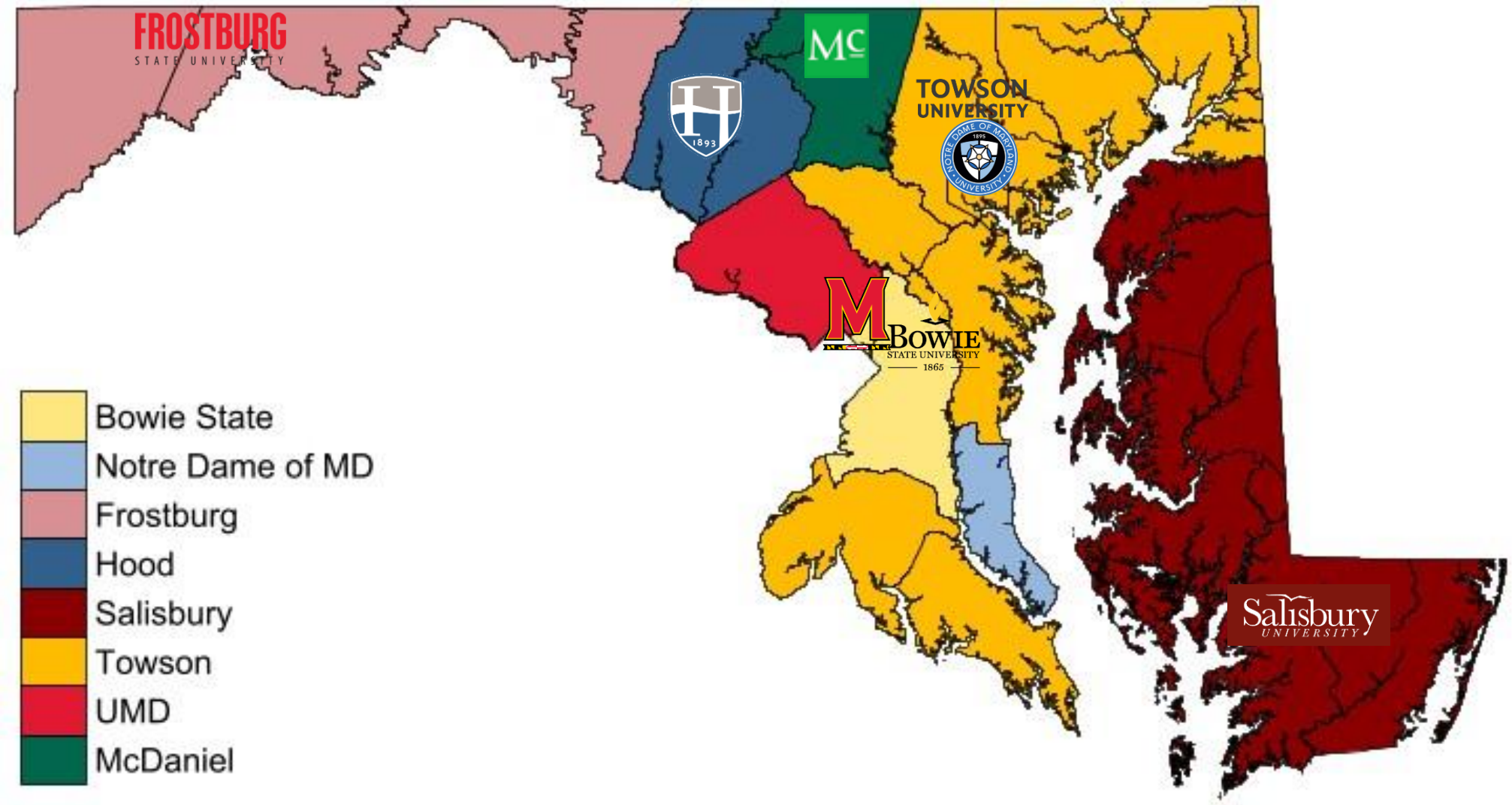
Descriptive statistics to examine state of preparation pathways and teacher quality distribution

Pathways of Entry for Maryland Teachers





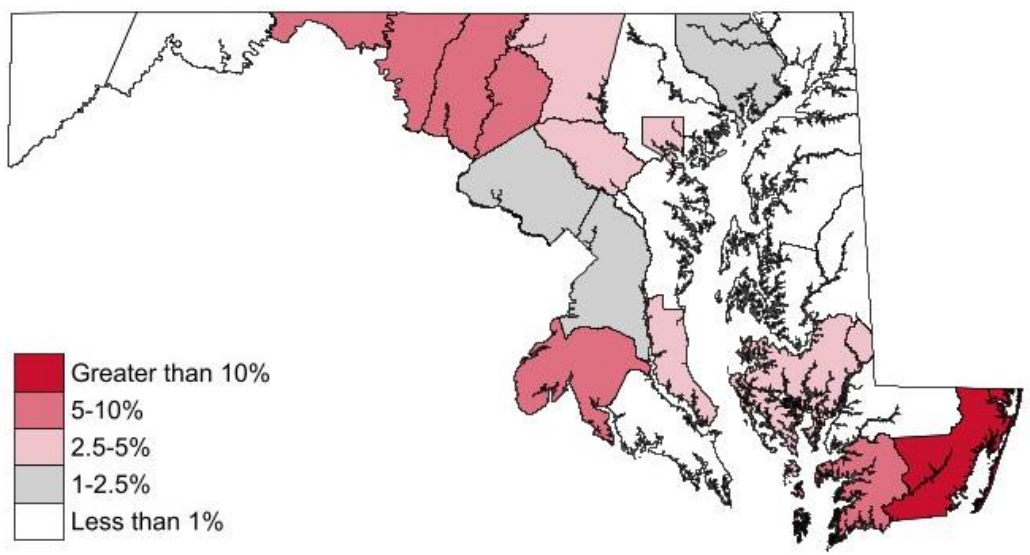
Largest Supplier of Licensed Teachers



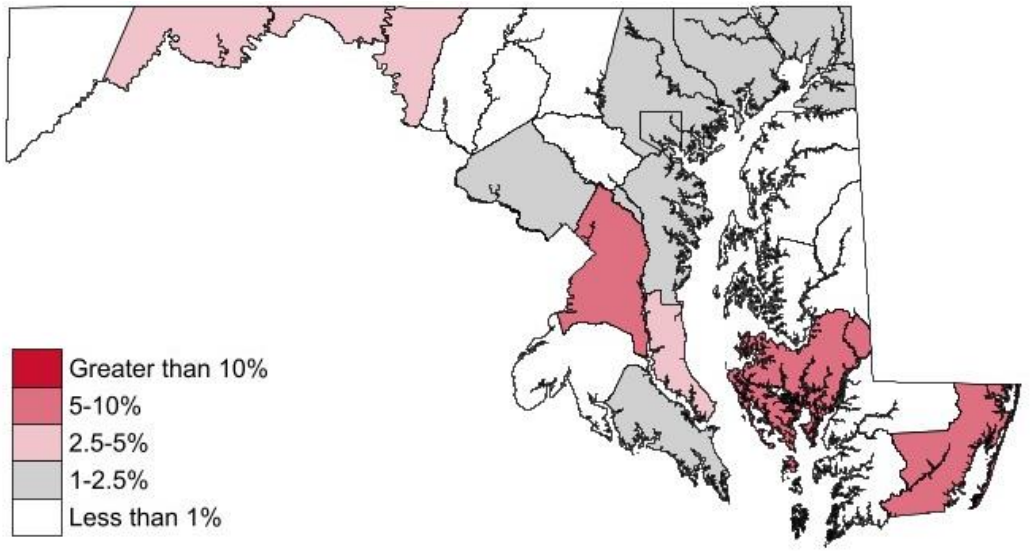
Mapping High Value-Added Teachers

A value-added score of 0.20 means that a teacher improved their students' math scores by 0.20 standard deviations above expectations based on students with similar backgrounds and prior test scores.

Approximately **5% of teachers statewide** achieved this level of value-added in 2023-24.



Math



ELA

Next Steps

- Examining teacher certification pathways
  - ✓ Teachers with longevity
  - ✓ Teachers with consistently high VAM
  - ✓ Teachers at hard-to-staff schools
- Value-added for student subgroups
- Geographic distribution of value added by poverty, EL, etc.