



RECOGNIZING GROUNDBREAKING RESEARCH

Who Becomes a Teacher?


Racial Diversity in the K-12 to Teacher Pipeline

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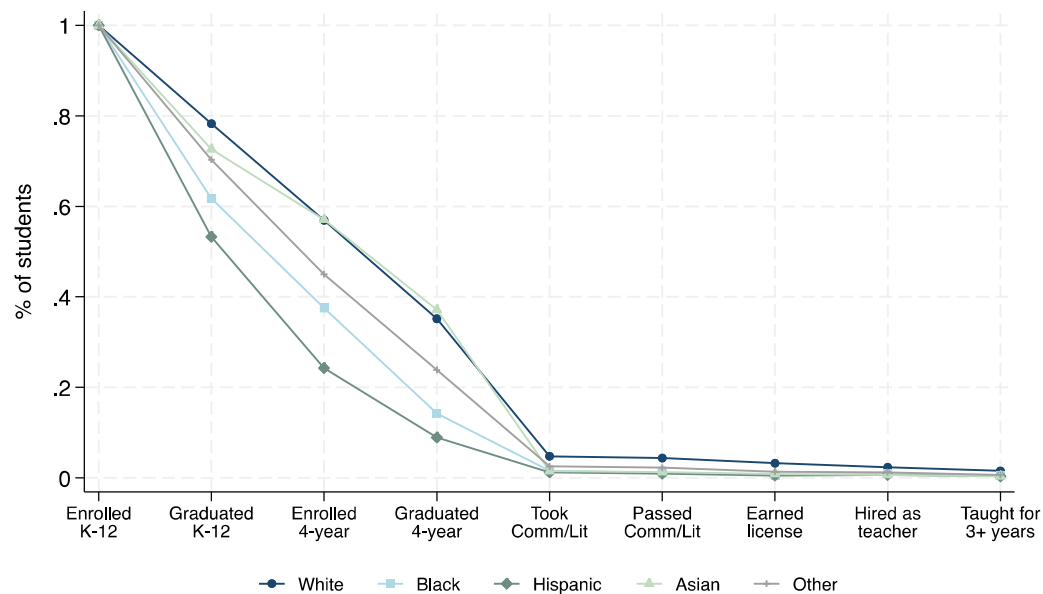
Background

- Prior work: followed teaching candidates from taking the certification test through hiring and early retention
 - Gaps emerge early on: candidates of color are less likely to pass the certification test and earn a license than White candidates, but about as likely (if not more likely) to be hired once licensed
 - 80+% of teaching candidates are White
 - New data: follow K-12 students through higher education and into the teacher pipeline
 - What explains the racial gap between college students and certification test-takers?
 - How important are gaps in educational attainment vs. choosing to become a teacher/persistence through the teacher pipeline in driving the diversity gap between students and teachers?
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K-12 to Teacher Pipeline

- Black and Hispanic K-12 students are 32% as likely as White students to earn a college degree, but Black and Hispanic college graduates are 70% as likely as White college graduates to take the CLST.
- Asian K-12 students are as likely as White students to earn a college degree, but Asian college graduates are only 30% as likely as White college graduates to take the CLST.

Persistence through the K-12 to Teacher Pipeline




Longitudinal Data in MA

- Successes
 - First state where this kind of analysis has been possible (now happening in other states as well)
 - Longer coverage of students/teachers provides more nuanced understanding of a policy problem
 - Data spanning K-12 to career informs policy spanning K-12 to career (e.g., early college programs)
- Challenges
 - Identifiers available for linking between datasets
 - Cross-agency data availability/data request processes

Thank you!

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Using Data in Education Research

How Data Informs Policy

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Center for Analysis of Longitudinal
Data in Education Research

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Student Outcomes

- How we measure student learning
 - Changes in test administered: do we learn the same information from different statewide tests?
 - As the state transitions to computer-based testing, do the results from online and paper tests give similar information about student learning?
- Beyond test scores
 - Being present in school
 - Student perceptions of school climate
 - Takeaway: teachers matter in a lot of different ways!

Pipelines into Teaching Workforce

- Licensure and the Massachusetts Tests for Educator Licensure (MTEL)
 - To what extent are measures such as the MTEL and Candidate Assessment of Performance (CAP) predictive of teacher performance in the classroom?
 - Emergency Licenses made necessary by pandemic: who earned them, how many are still in teaching workforce, how many have not yet been converted to another license?
 - Alternatives to the MTEL
- How each of these policies shapes demographics of new teachers

Impact of attending four-year public colleges in Massachusetts on degree completion and earnings

Whitney Kozakowski

Researcher

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Key questions

/ **Four-year public colleges are intended to provide an accessible path to a bachelor's degree**

/ **Question:**

- How does being admitted to a four-year public college in Massachusetts affect **bachelor's degree completion** and **earnings** 8-14 years after applying?

/ **Why does this matter?**

- Students want information to inform their decisions
- State invests resources in these colleges and plays a role in determining who can attend (admissions policies and aid)



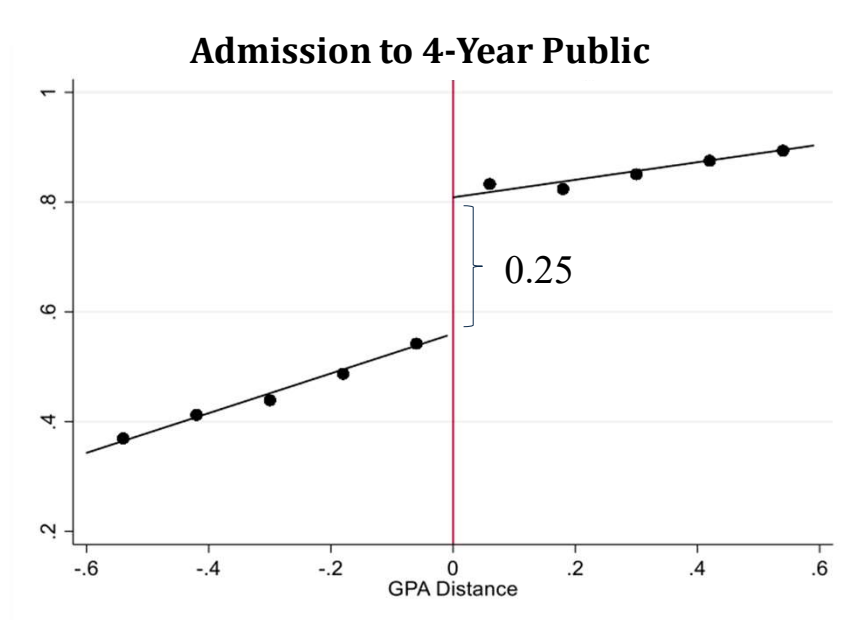
Data sources

Data source	Data
Dept. of Higher Education (DHE)	<ul style="list-style-type: none">• Applications to state universities in MA from 2004-05 to 2010-11, including SAT and GPA• Student costs of attending college and financial aid packages
Dept. of Elementary and Secondary Education (DESE)	<ul style="list-style-type: none">• K-12 data (such as 10th grade MCAS scores)• National Student Clearinghouse data (college enrollment and degree completion)
Dept of Unemployment Assistance (DUA)	<ul style="list-style-type: none">• Quarterly earnings 2010 to 2018



Methods

- / **Regression discontinuity design:**
 - Uses SAT and GPA thresholds for admission set by Board of Higher Education
- / **Effect of being admitted to 4-year public colleges in MA compared to where they would have otherwise gone (includes mostly no college, 2-year colleges, 4-year private colleges)**
- / **Analysis focuses on low-income students and Black, Hispanic, or Native American students who are close to qualifying for admission**





Findings

- / **For these students, being admitted to a 4-year public college in MA:**
 - **Increases BA attainment** by 15 pp
 - **Increases mean annual earnings** 8-14 years following application by about \$8,000, a 26% increase relative to the comparison group.
 - State earns additional tax revenue on these earnings that **pays off additional state costs** of admitting the student about 20 years later.
- / **Implies state universities in MA play an important role in increasing access to 4-year degrees and better earnings**

