



UNIVERSITY
of VIRGINIA

CURRY SCHOOL *and*
BATTEN SCHOOL
EdPolicyWorks

A First Look at Teacher Retention in Virginia

Luke C. Miller, Ph.D.

Research Assistant Professor, EdPolicyWorks

2018 Teacher Retention Summit

23 October 2018

Purpose

- Goal: examine patterns in teacher retention since SY 2005-06
 - Inform today's conversations
 - Inform a future, deeper study into the patterns and causes of teacher retention so as to benefit state-, division-, and school-level policies
- Focus:
 - School-level retention as this is where the vacancy needs to be filled
 - Full-time teachers (FTE \geq .75)
 - 132 county, city, and town divisions

Why the Focus on Teacher Retention?

- Teacher turnover has negative effects
 - Student achievement (Boyd, Lankford, Loeb, & Wyckoff, 2005; Guin, 2004; Ronfeldt, Loeb, & Wyckoff, 2013)
 - Teacher morale and effectiveness (Jackson & Bruegmann, 2009)
 - Significant costs in hiring and training (Milanowski & Odden, 2007)
- How low should teacher turnover be?
 - 0% turnover is unrealistic even if exclude turnover caused by retirements
 - Ideal is:
 - 0% turnover of effective teachers
 - 100% turnover of ineffective teachers

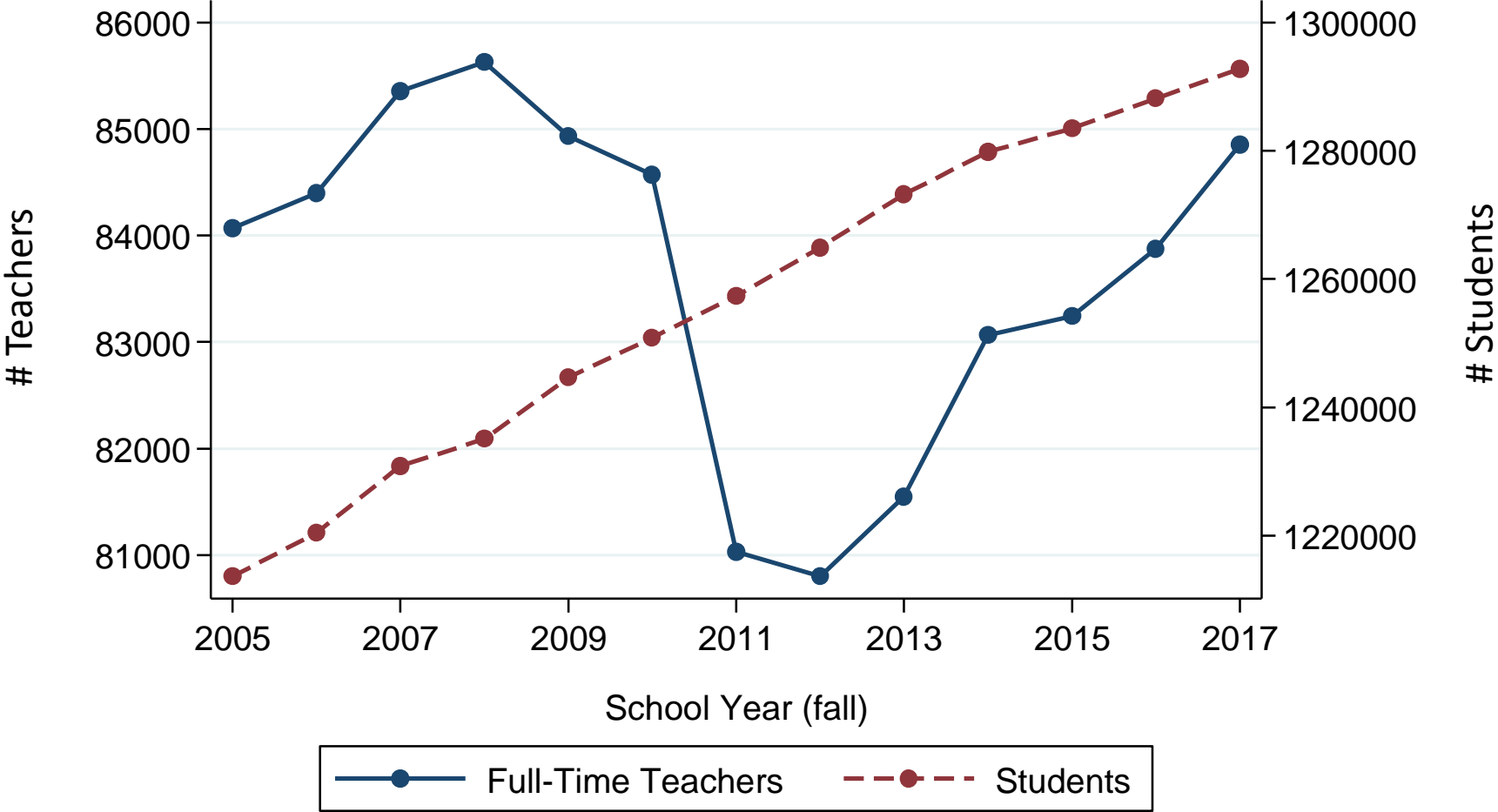
See brief by Veronica Katz (2018) for a summary of the literature on teacher retention.

Data from the Virginia Department of Education

- 13-year period: 2005-06 to 2017-18
 - Individuals linkable over years
- Assignment
 - Teaching assignments by course
 - Administrative assignments by position
 - Linked to a school
- Education
 - Degree type, year issued, degree granting institution if in-state (otherwise state/out-of-country)
- Licensure
 - License type, license issue and expiration date, endorsement area, endorsement date
 - Gender, race/ethnicity
 - Route to endorsement, in-state educator preparation program (name and year)
- School Characteristics
 - Student enrollment, free/reduced-price lunch eligibility, SOL pass rates

Size of Teacher Workforce & Student Population

Full-Time Teachers and Students by Year



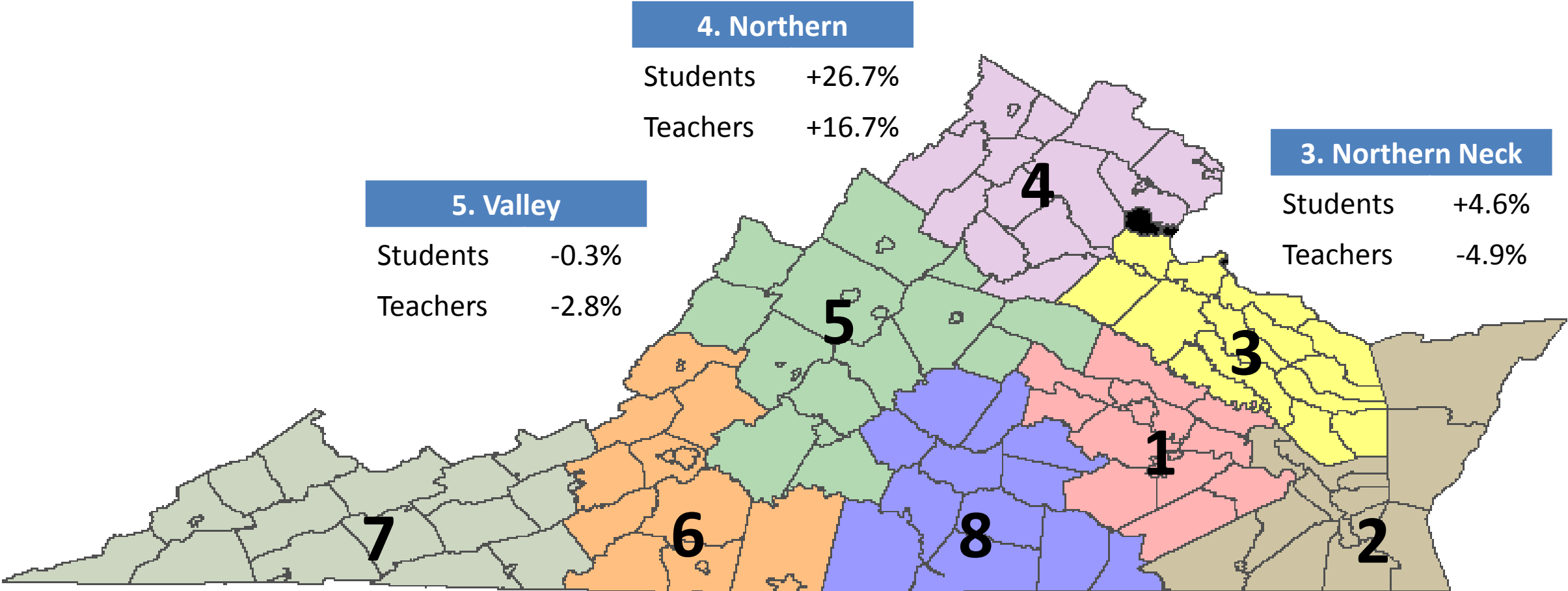
Teacher Workforce

- Grew by 788 (0.9%) teachers over the period
- Lost 4,830 (5.6%) teachers during Great Recession (2008-2012)

Student Population

- Grew by 79,210 (6.5%) students over the period
- Increased every year

Most Regions Shrank between 2005-06 and 2017-18



7. Southwest

Students -9.7%
Teachers -4.3%

6. Western

Students -3.8%
Teachers -4.1%

8. Southside

Students -13.3%
Teachers -14.7%

1. Central

Students +3.8%
Teachers -1.5%

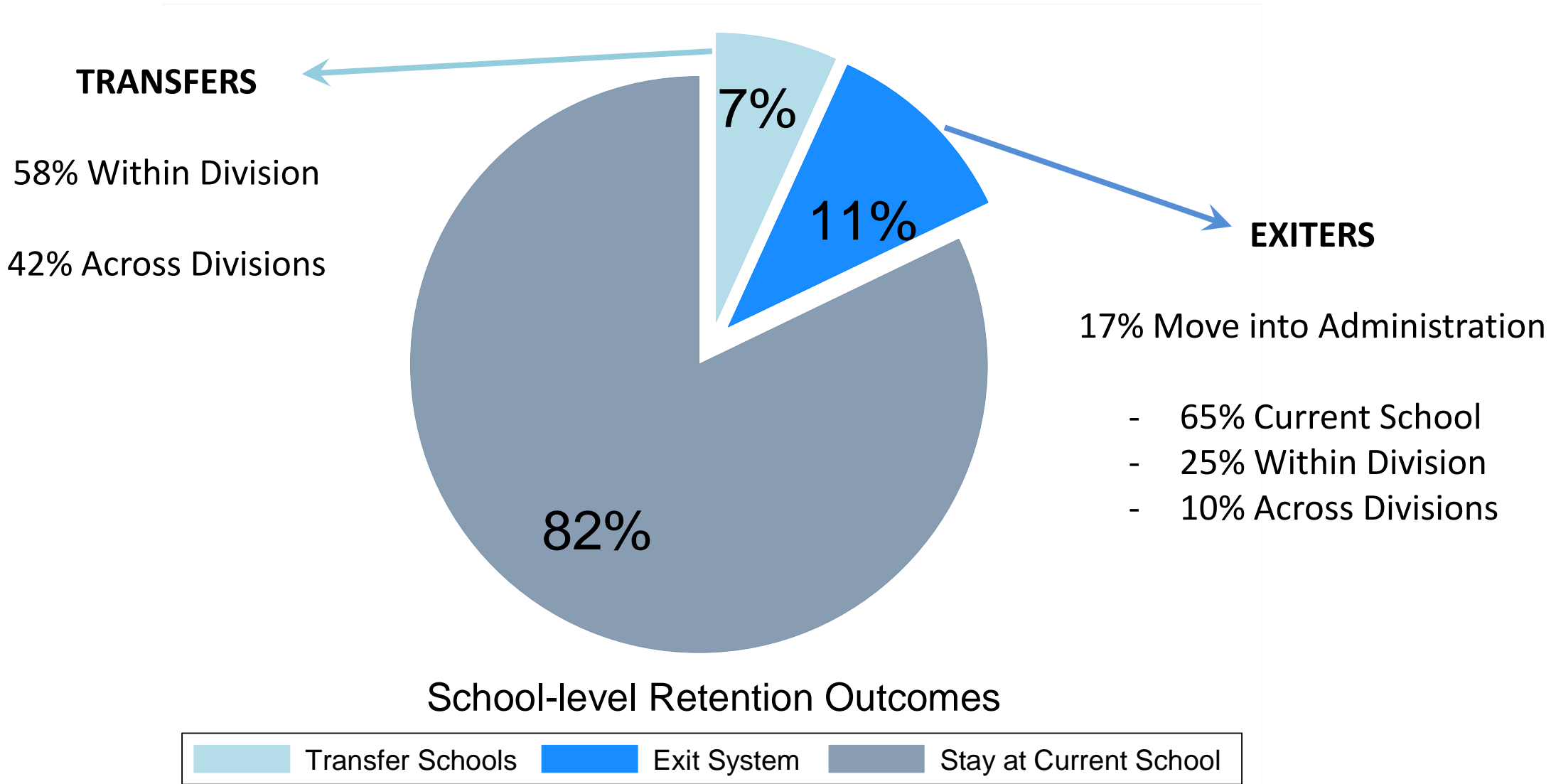
2. Tidewater

Students -6.3%
Teachers -11.6%

Retention Defined

- Forward-looking: where are this year's teachers next year?
 - **Stay** at Current School (i.e., retained)
 - **Transfer** Schools (within or across divisions)
 - **Exit** the Teacher Workforce at Virginia's 132 Divisions
- Defined only on full-time teachers (97% of all teachers)
 - Reduction to part-time is classified as stay or transfer, as applicable
 - Only 0.7% of full-time teachers who stay or transfer reduce to part-time
- Drop observations in the year a school closes (0.5% of all teacher-year obs)
 - 315 schools close, do not reopen; 41 schools close but reopen
- Allows for teachers to have assignments at more than one school within a division
 - 2.5% of full-time teachers in a year have assignments at more than 1 school

Virginia Teacher Retention, 2016-17



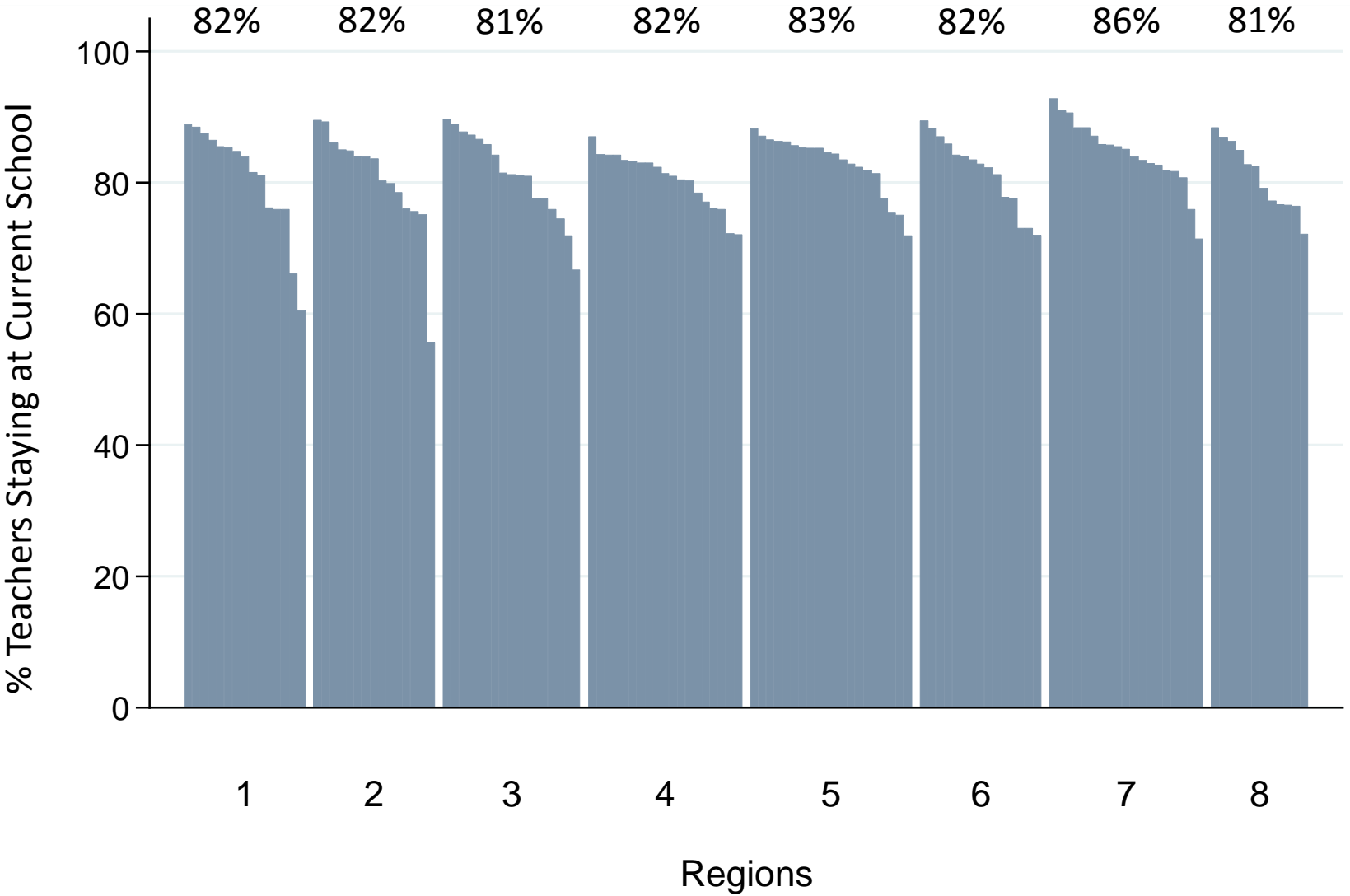
Variability in Retention Rate, 2016-17

**WITHIN
REGIONS**

Substantial
variability
within regions

**Largest
Difference:**
34 %age pts
Region 2

**Smallest
Difference:**
15 %age pts
Region 4



**ACROSS
DIVISIONS**

Highest:
93% Retained
Region 7

Lowest:
56% Retained
Region 2

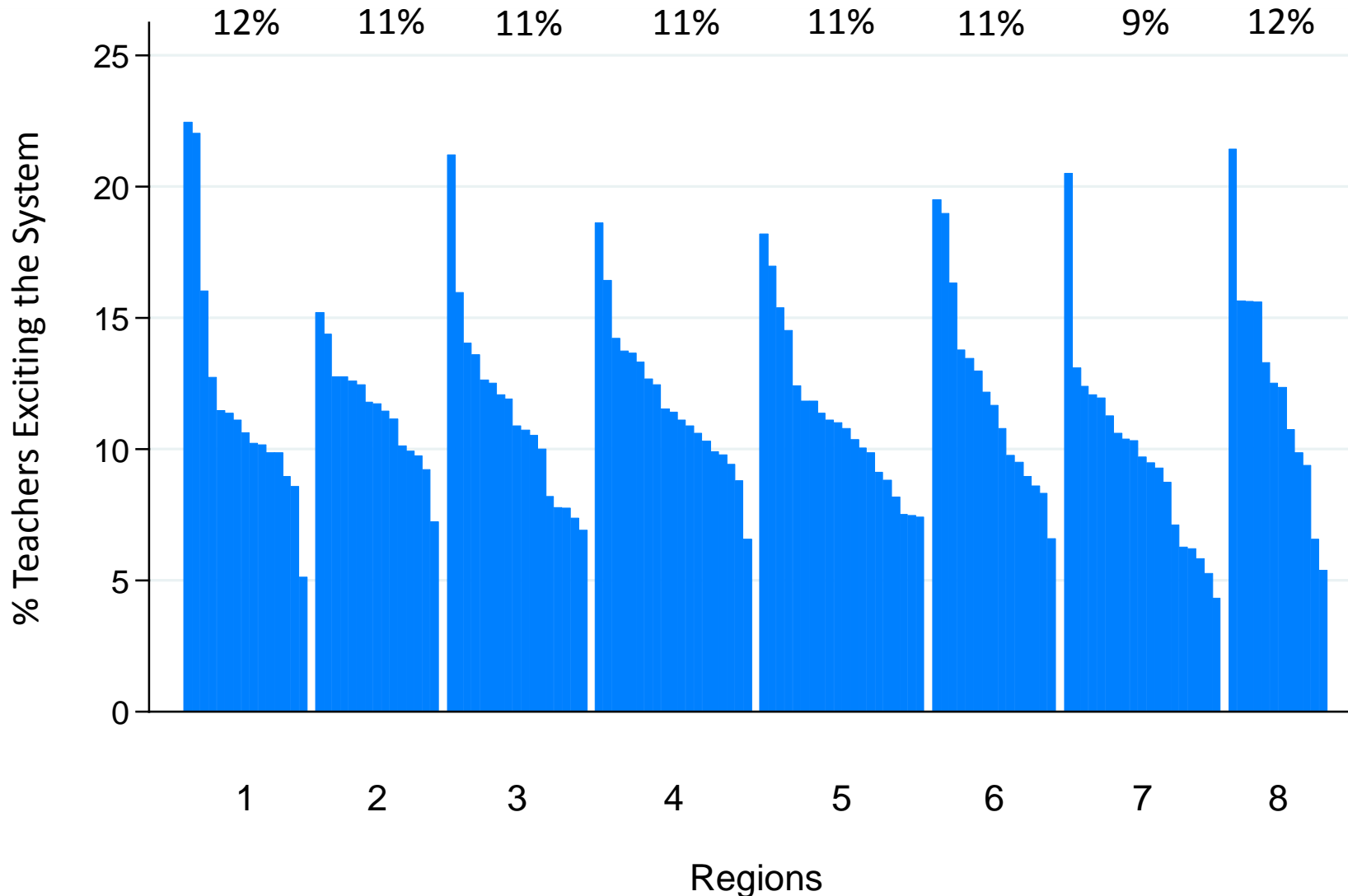
Variability in Exit Rate, 2016-17

WITHIN REGIONS

Less variability within regions for exiting than staying

Largest Difference:
17 %age pts
Region 1

Smallest Difference:
8 %age pts
Region 2



ACROSS DIVISIONS

Highest:
22% Exited
Region 1

Lowest:
4% Exited
Region 7

Some Exiting Teachers Return to the Classroom

Returning after a...	Pooled %	By Leaving Cohort	
		Minimum	Maximum
... 1-Year Break	10.1%	7.5%	14.3%
... 2-Year Break	4.4%	2.8%	6.3%
... 3-Year Break	2.8%	2.0%	4.2%
... 4-Year Break	2.0%	1.5%	2.6%
... 5-Year Break	1.6%	1.2%	2.6%

...80% of exiting teachers have not returned the classroom within 5 years

...78% of teachers who exited in 2005-06 had not returned the classroom after 11 years

Of those observed returning to the classroom:
34% return to same school, **29%** return to another school in same division,
and **37%** return to a different division

Teacher Retention: A Summary of the Literature

Primarily an issue for:

Evidence-based Policies

Proximal Outcomes

Distal Outcomes

Some endorsement areas:

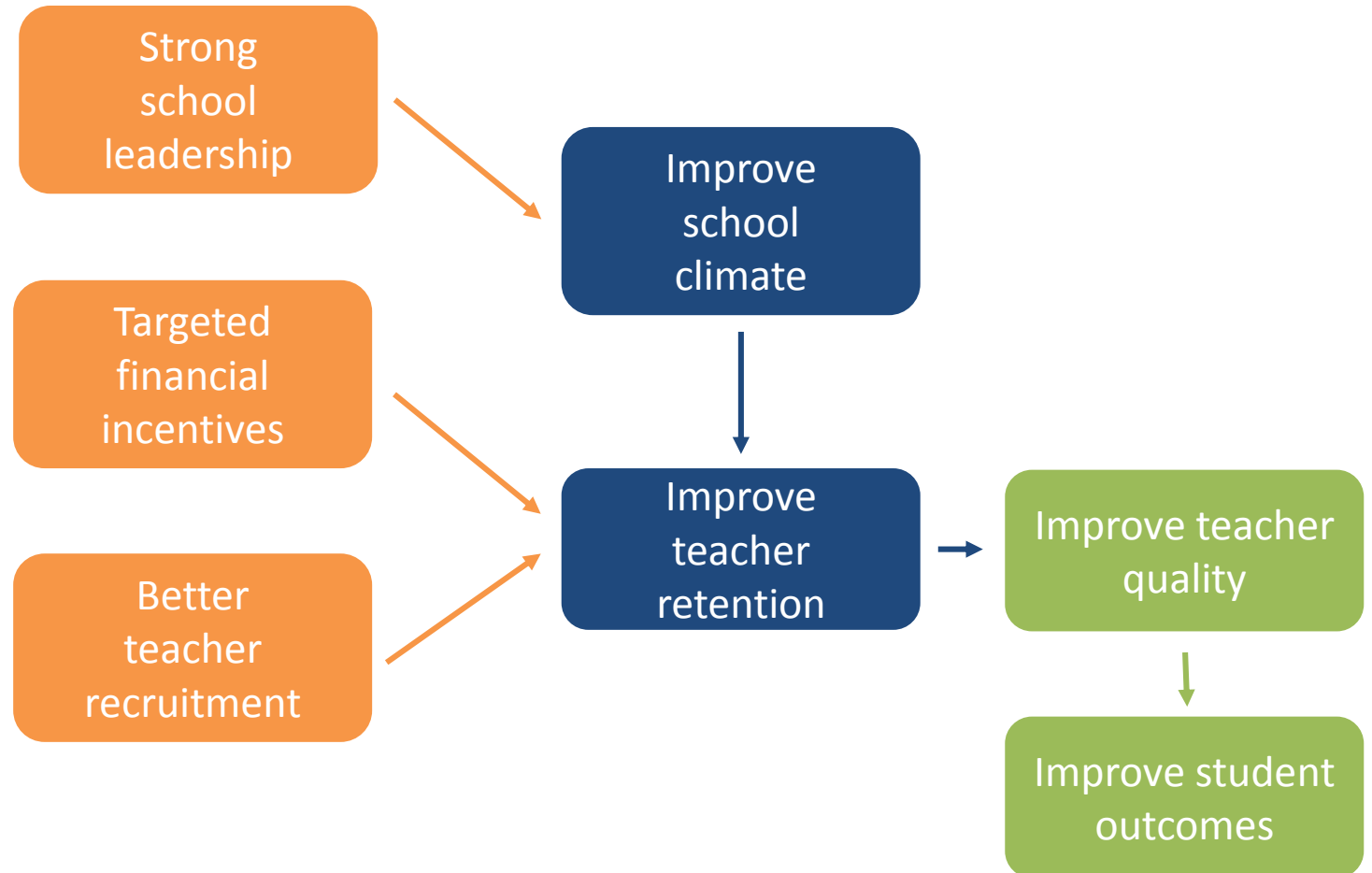
- STEM
- Special education
- English as a 2nd language

Some students:

- Low-income
- Low-performing
- Minority

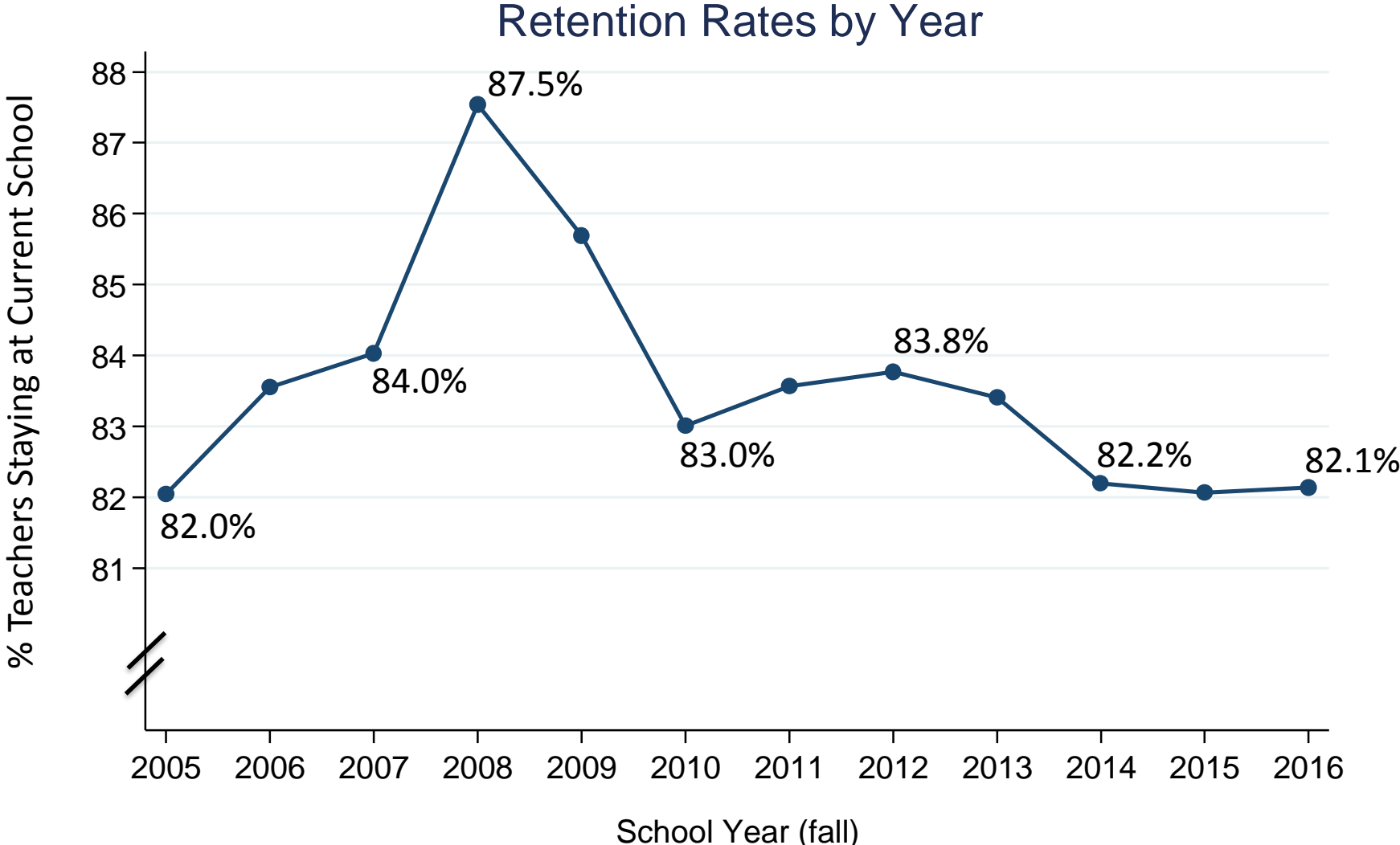
Some teachers:

- Early career
- Alternately licensed
- Late hires



SOURCE: Katz (2018)

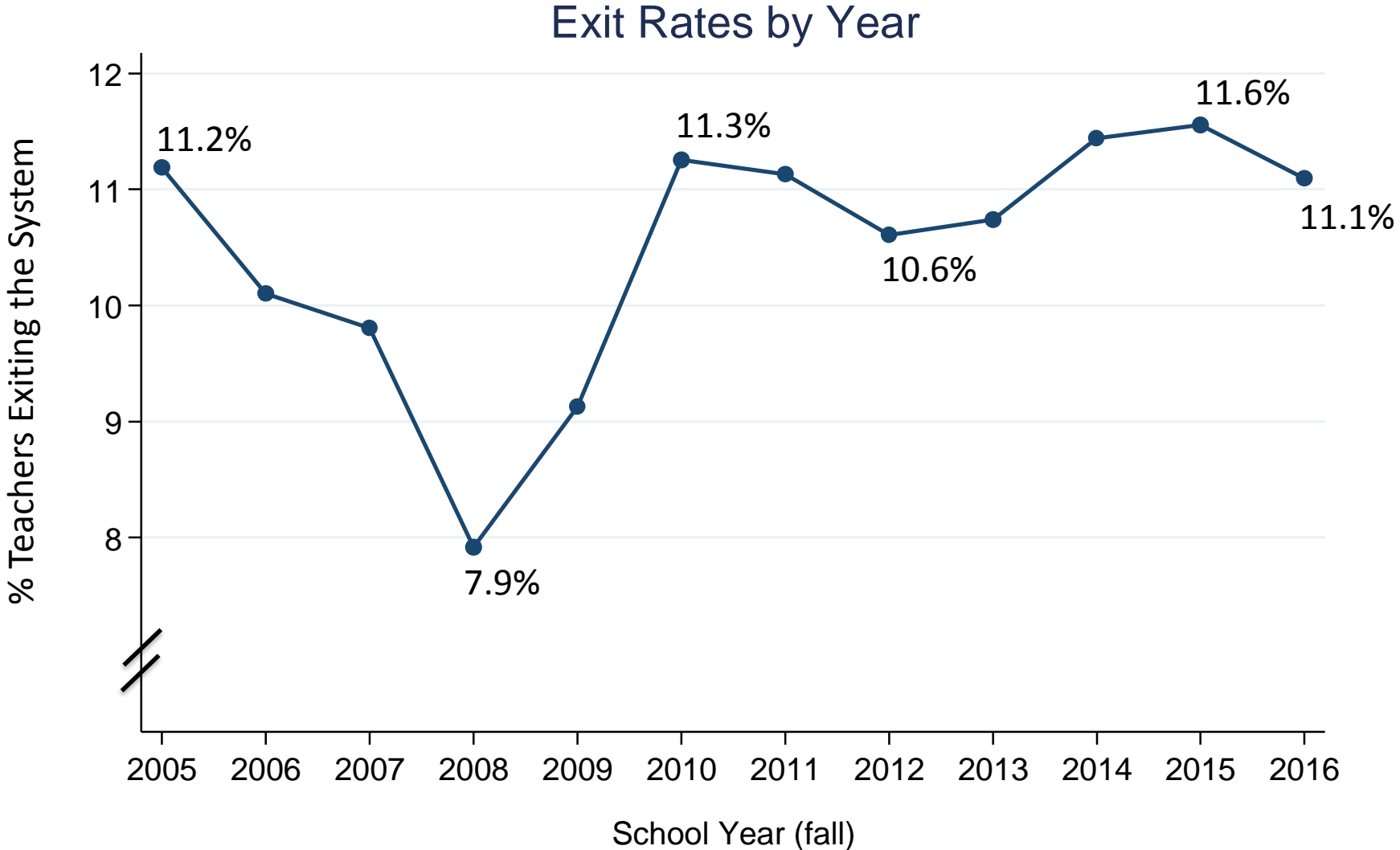
Statewide Trends in School-level Retention Rates



Statewide Trends in School Transfer Rates

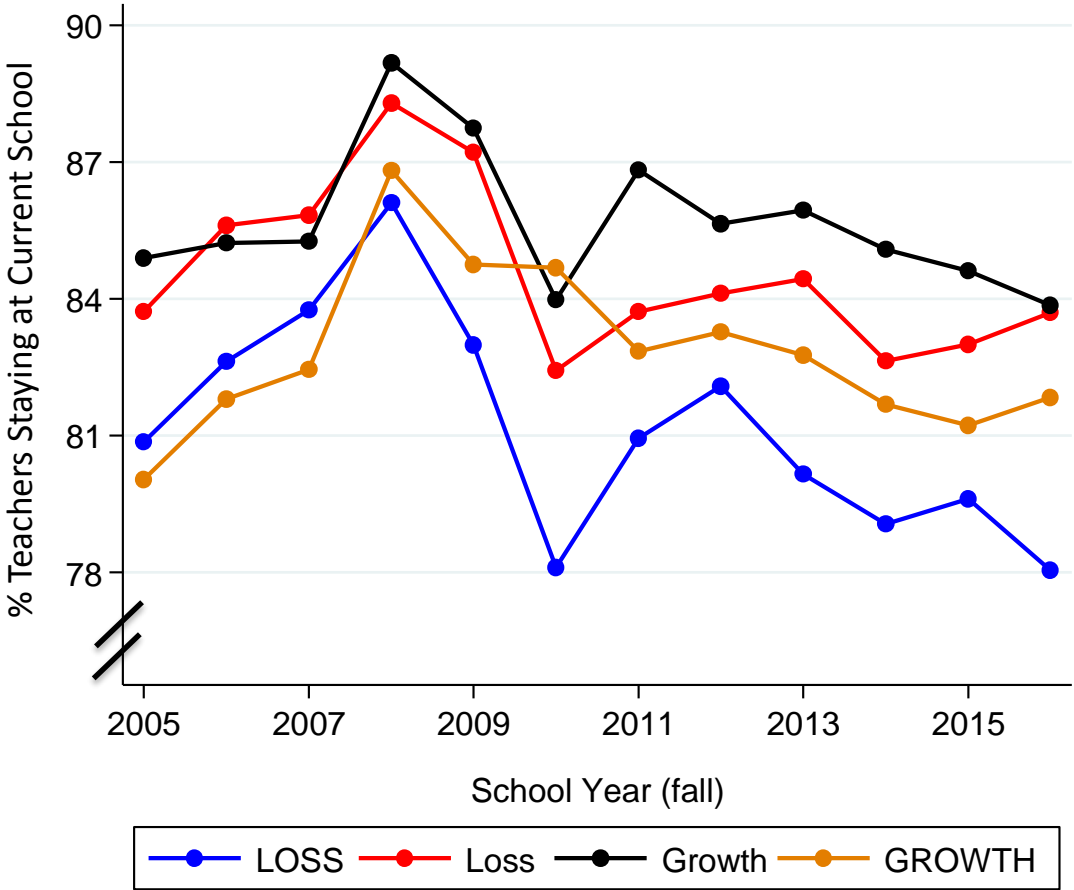


Statewide Trends in Exit Rates

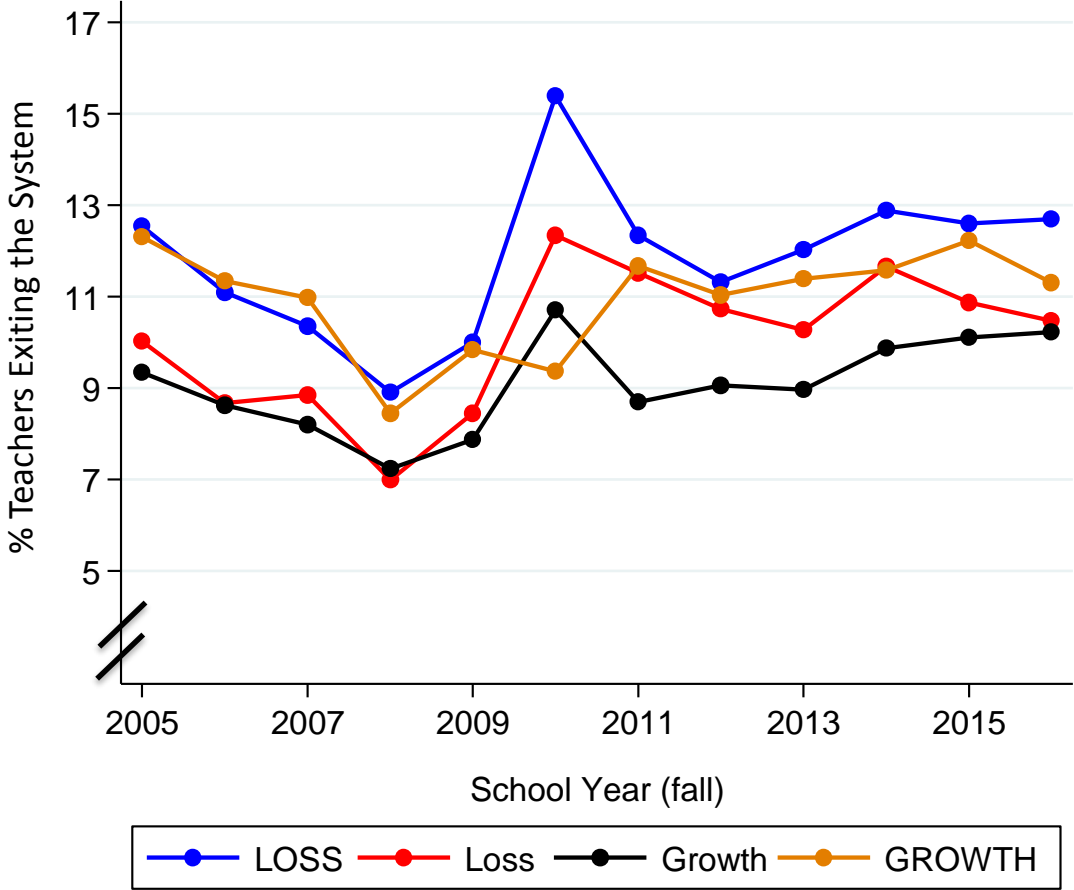


Change in Student Enrollment, 2005-06 to 2017-18

Retention Rates

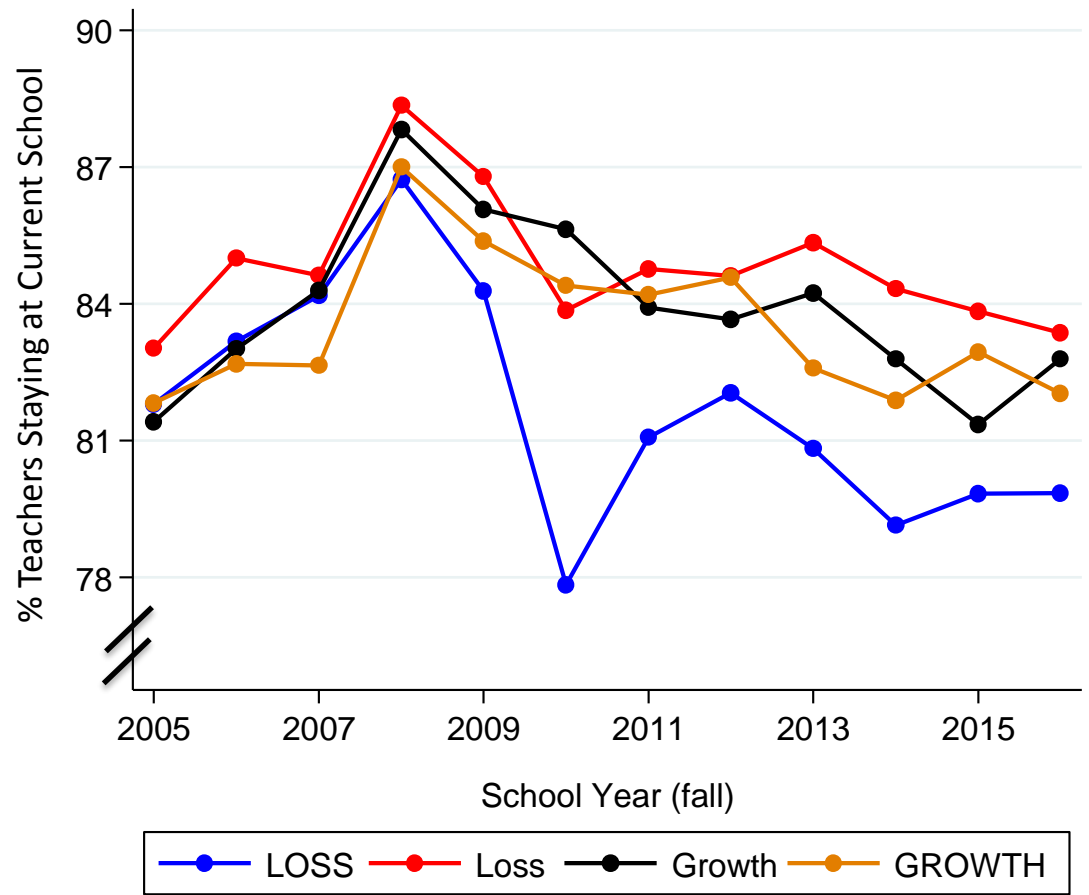


Exit Rates

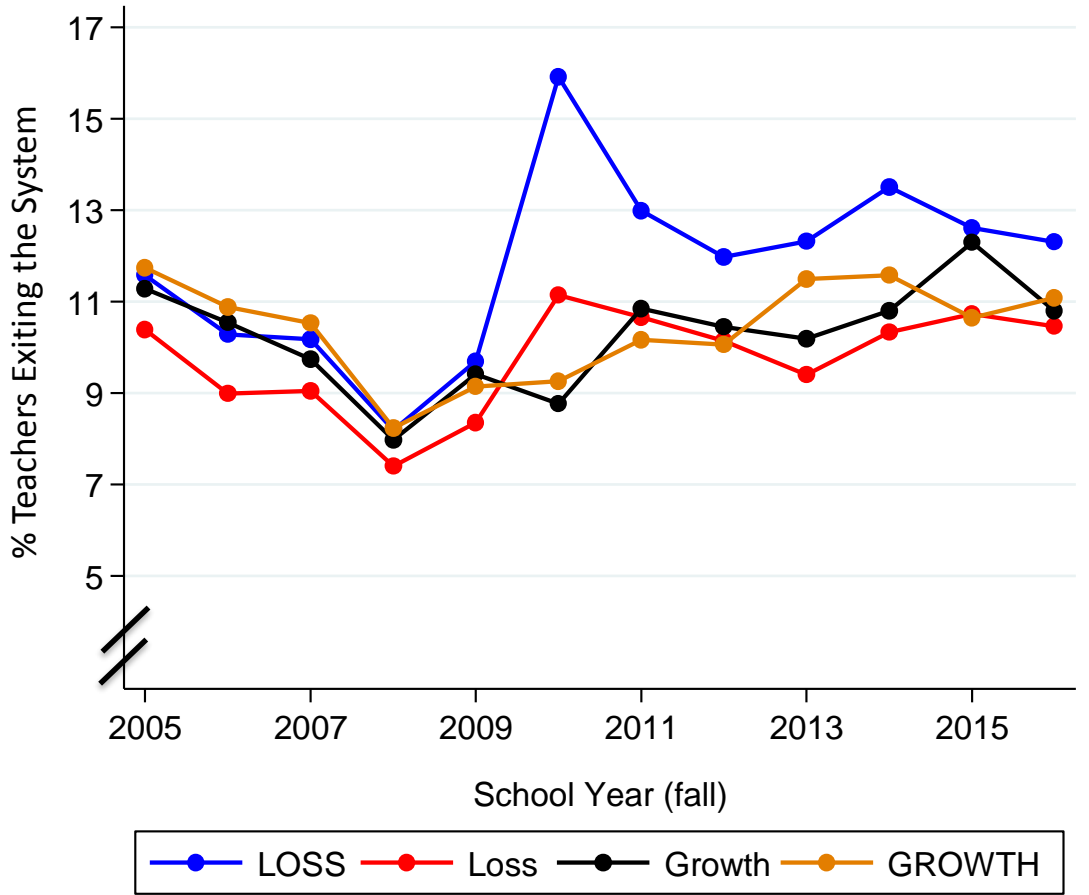


Change in Size of Teacher Workforce, 2005-06 to 2017-18

Retention Rates



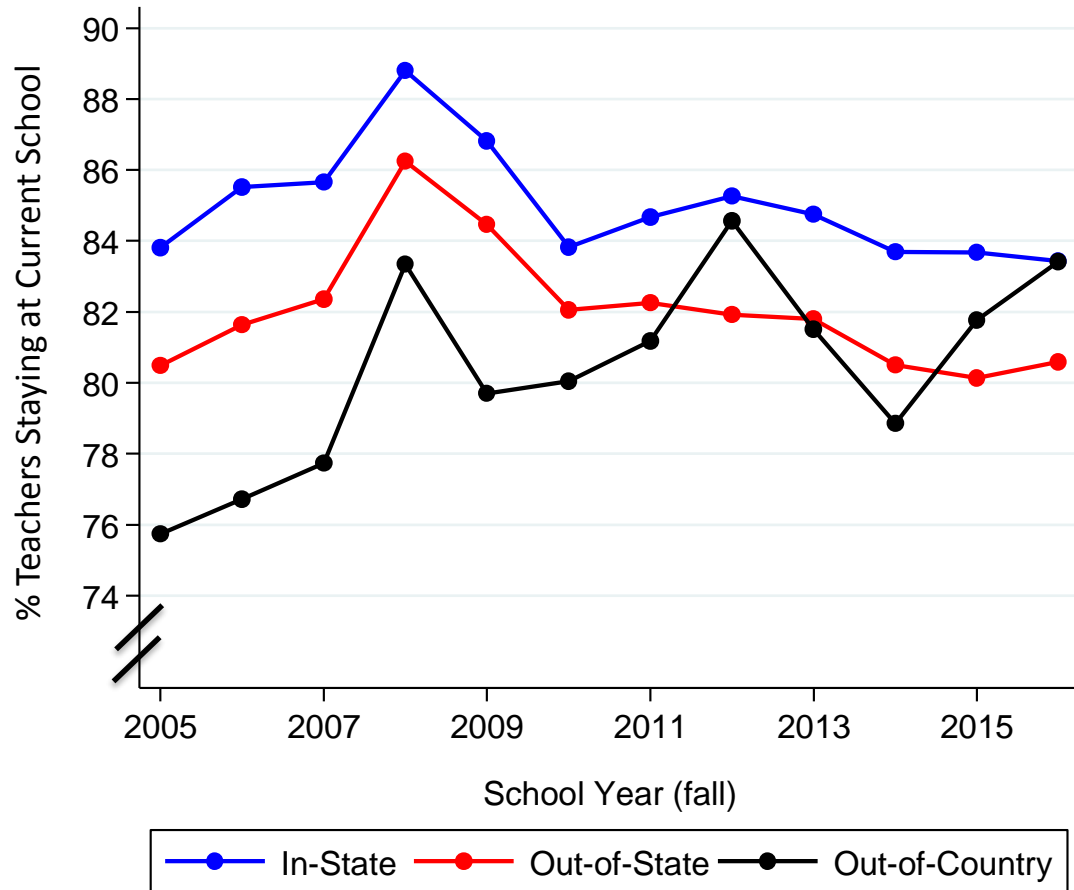
Exit Rates



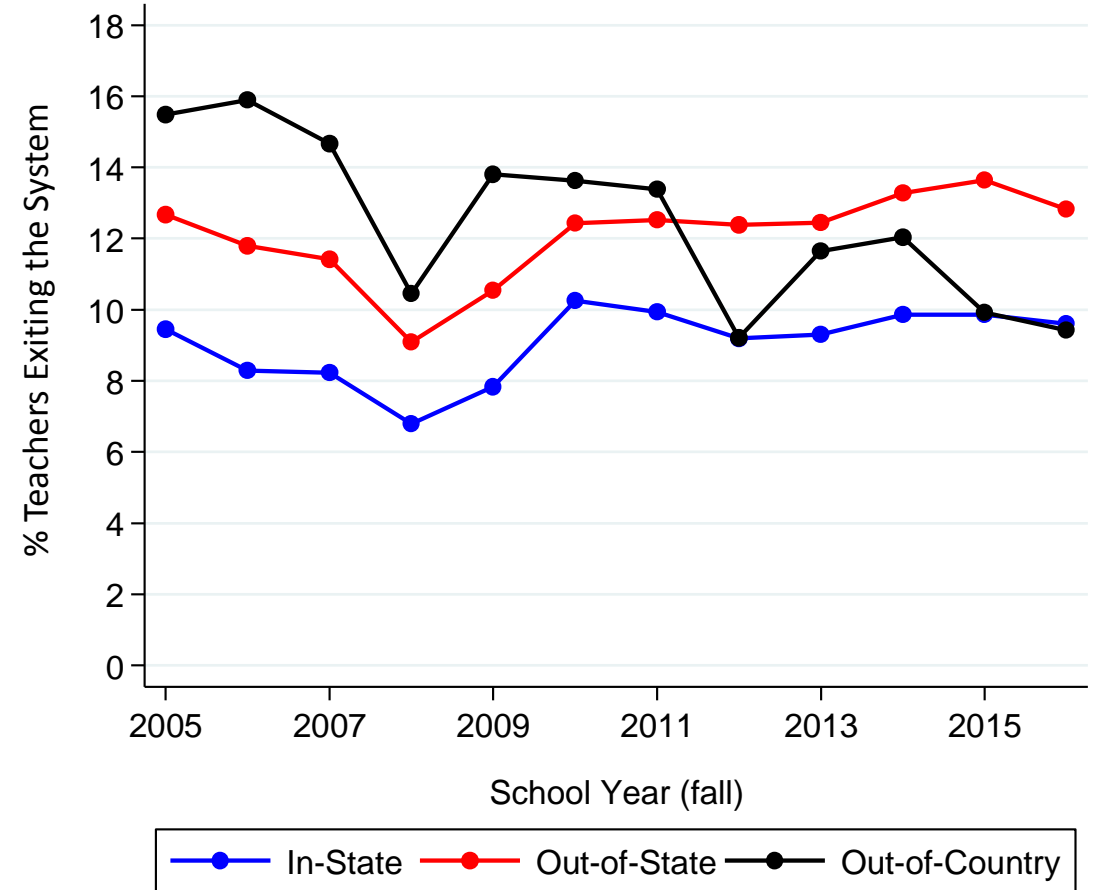
Location of Undergraduate Institution

In-state: **56%**
 Out-of-State: **42%**
 Out-of-Country: **2%**

Retention Rates



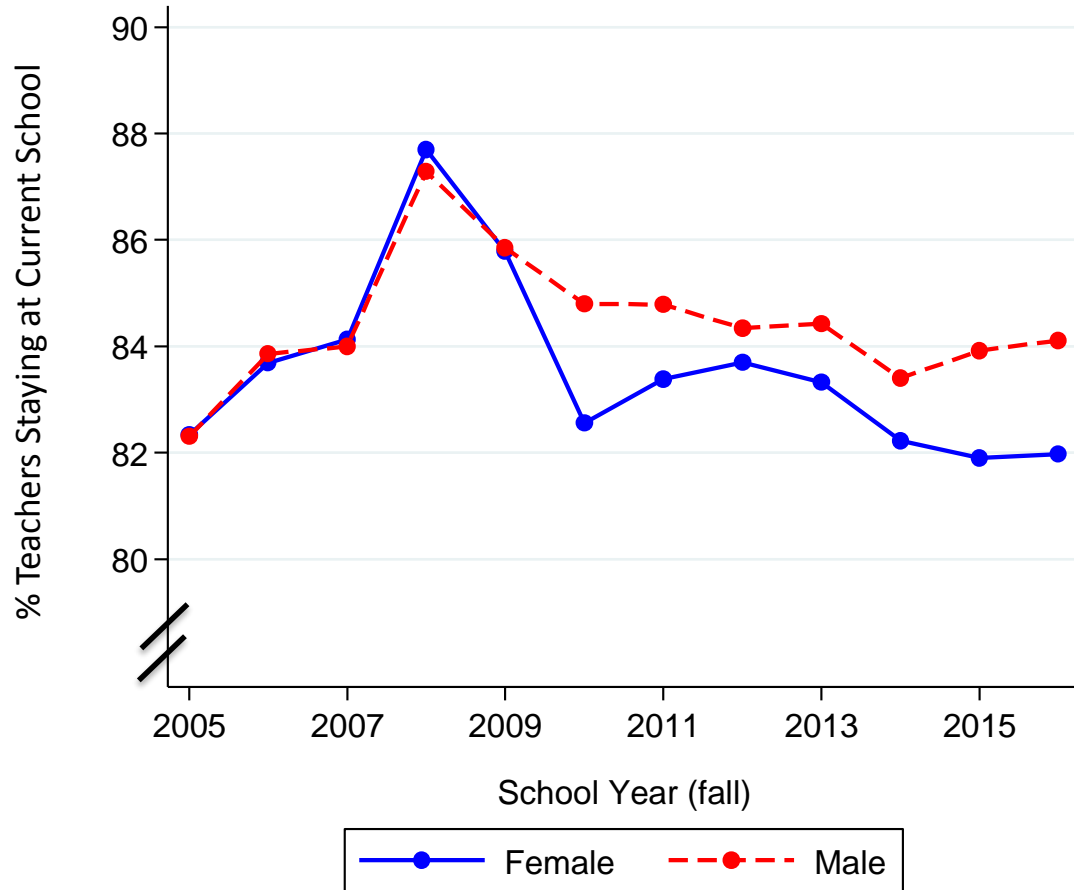
Exit Rates



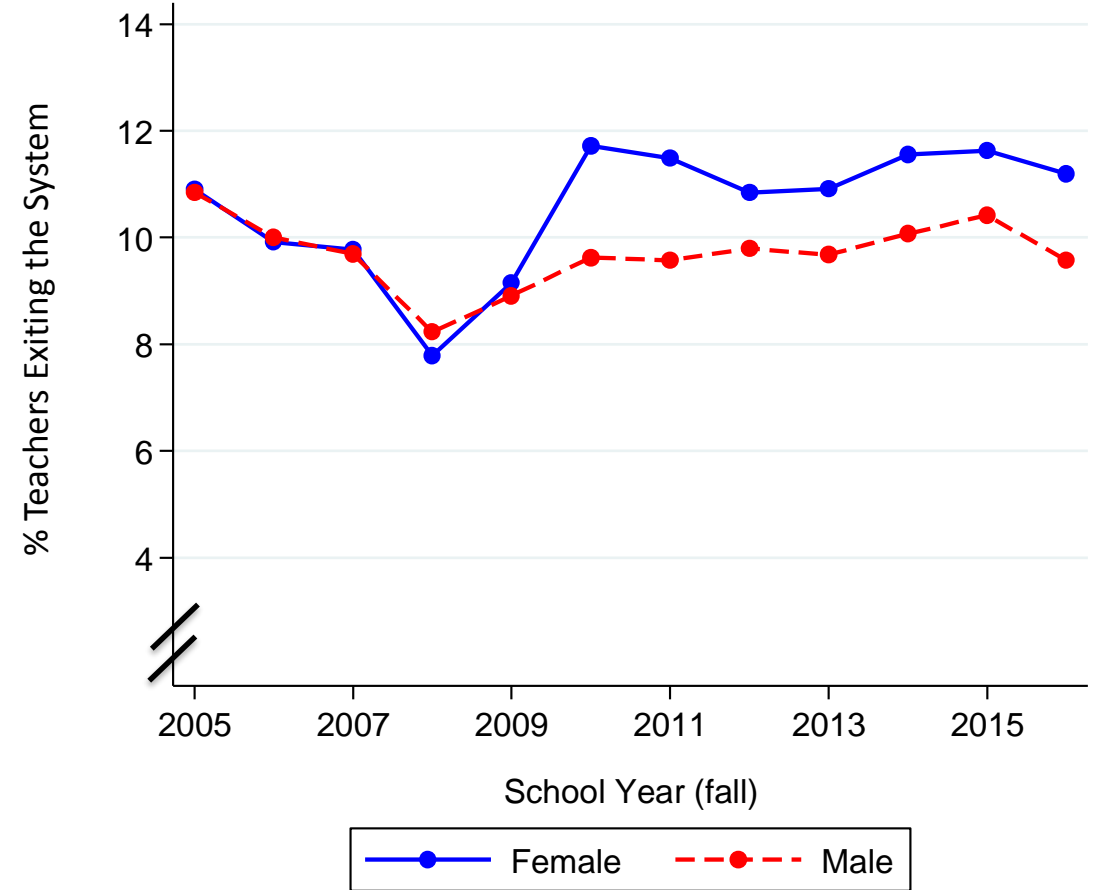
Gender

79% Female, 21% Male

Retention Rates

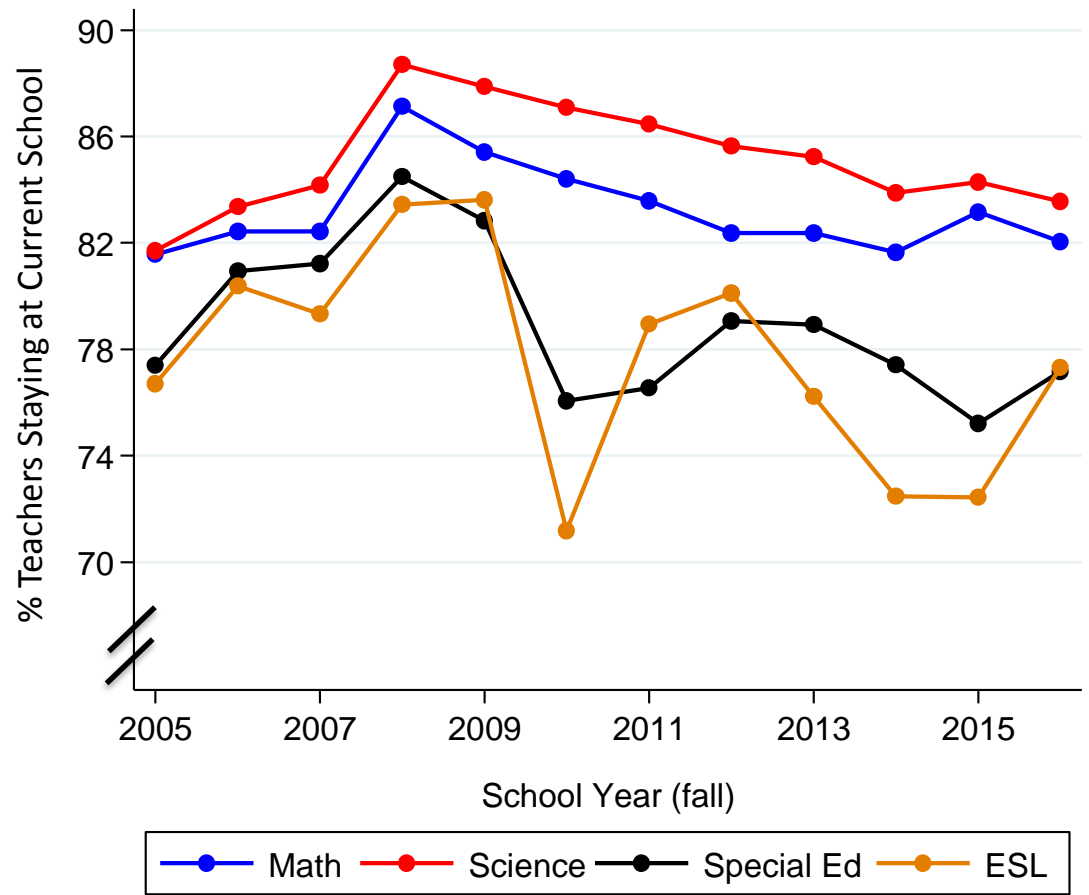


Exit Rates

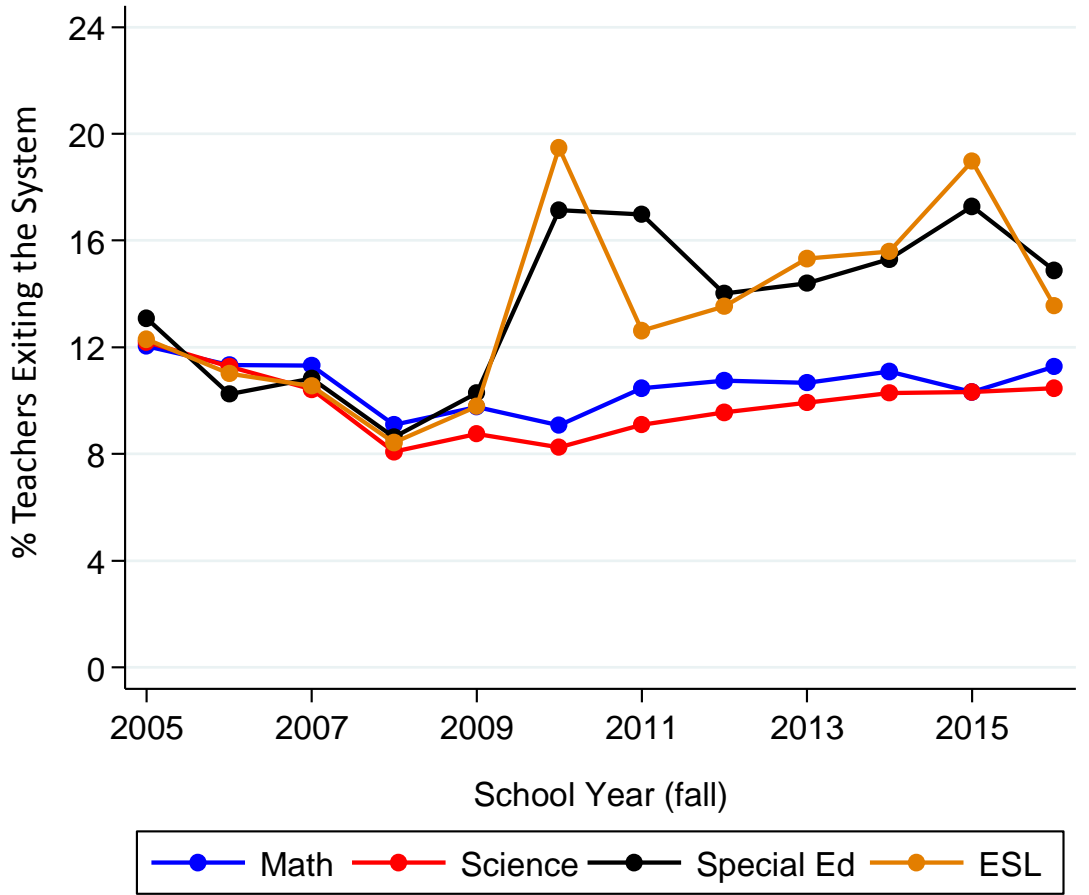


Subject Taught

Retention Rates

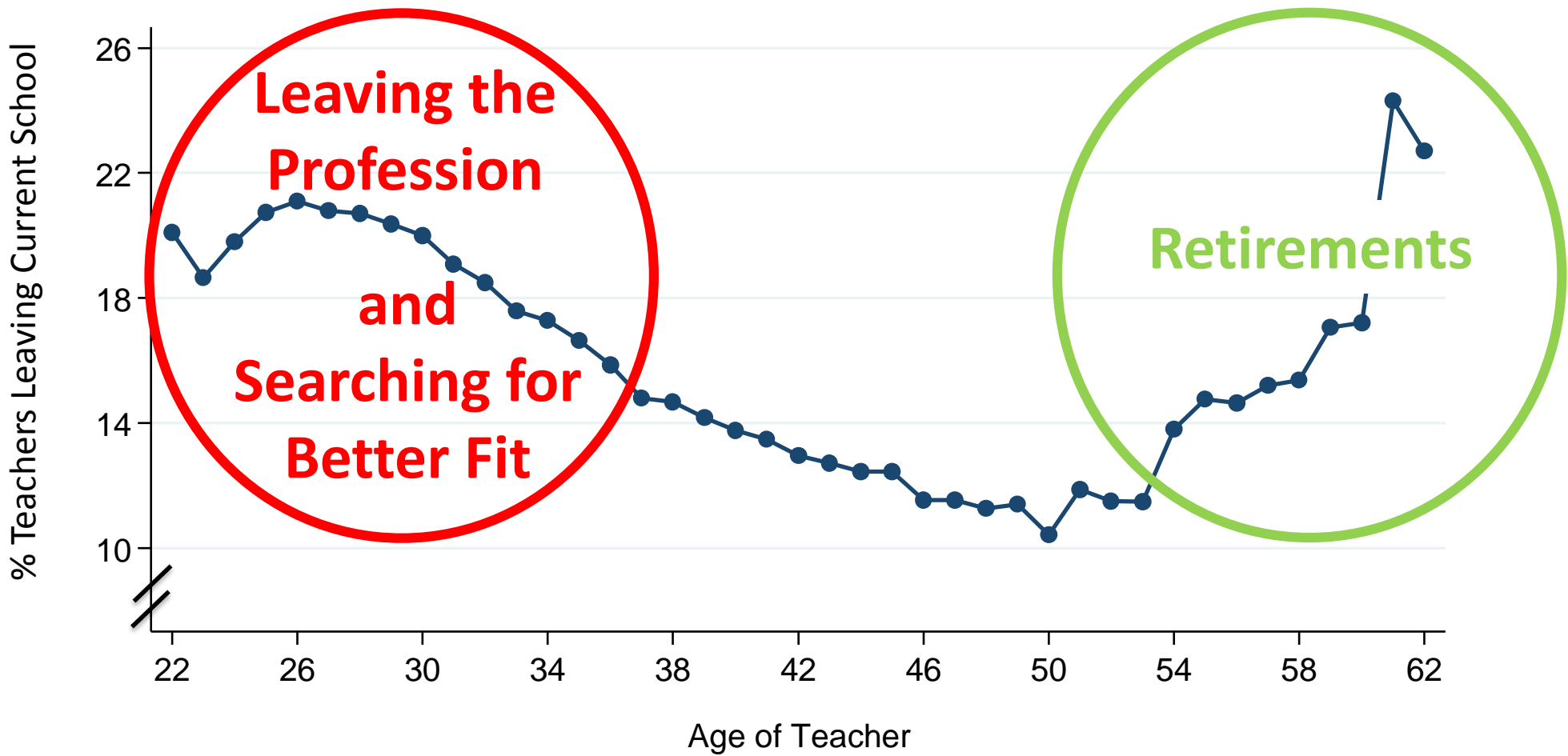


Exit Rates



Age: Attrition Rates Follow a U-Shape

% Teachers Leaving Current School by Age
(Transfers + Exits)

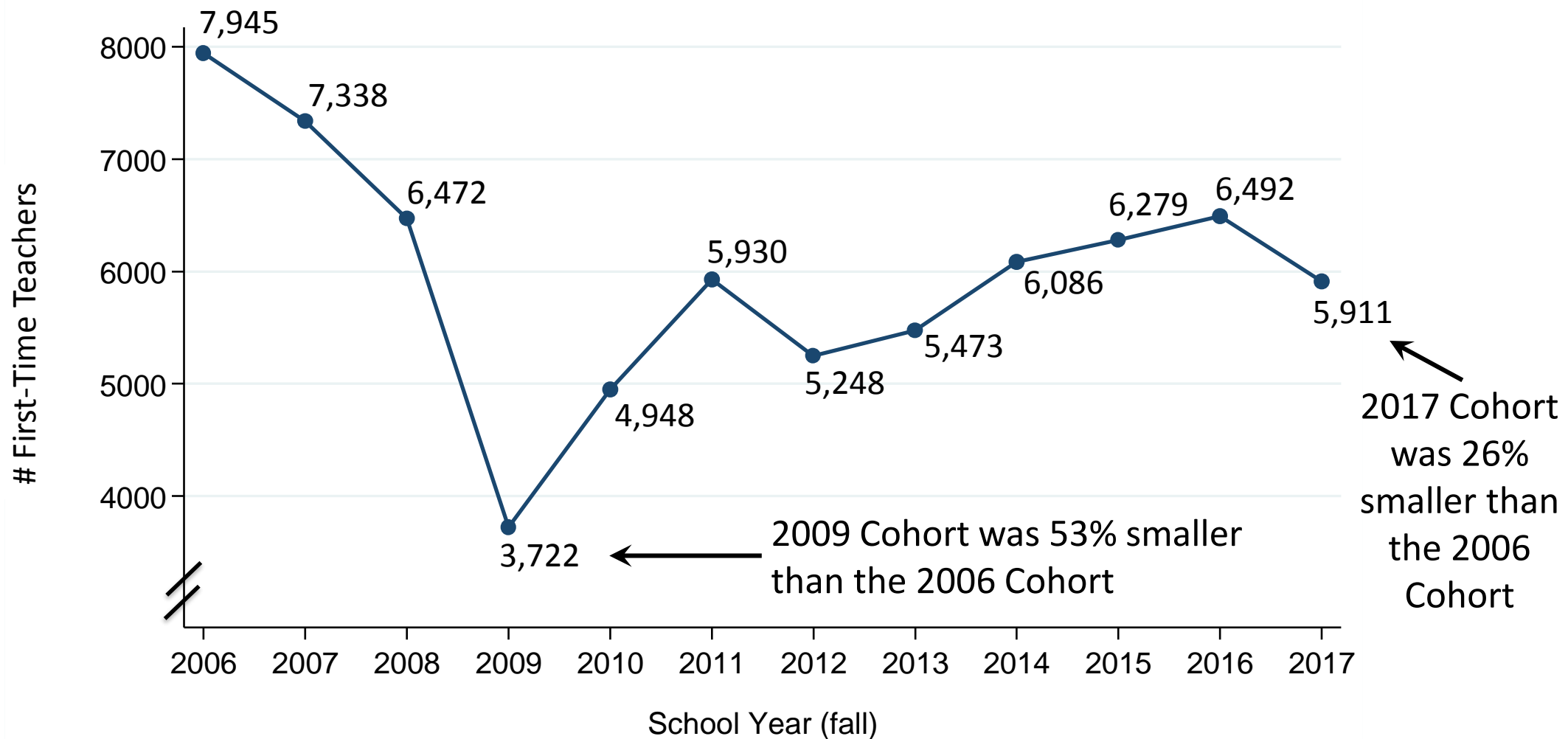


Identifying 1st Time Teacher Cohorts

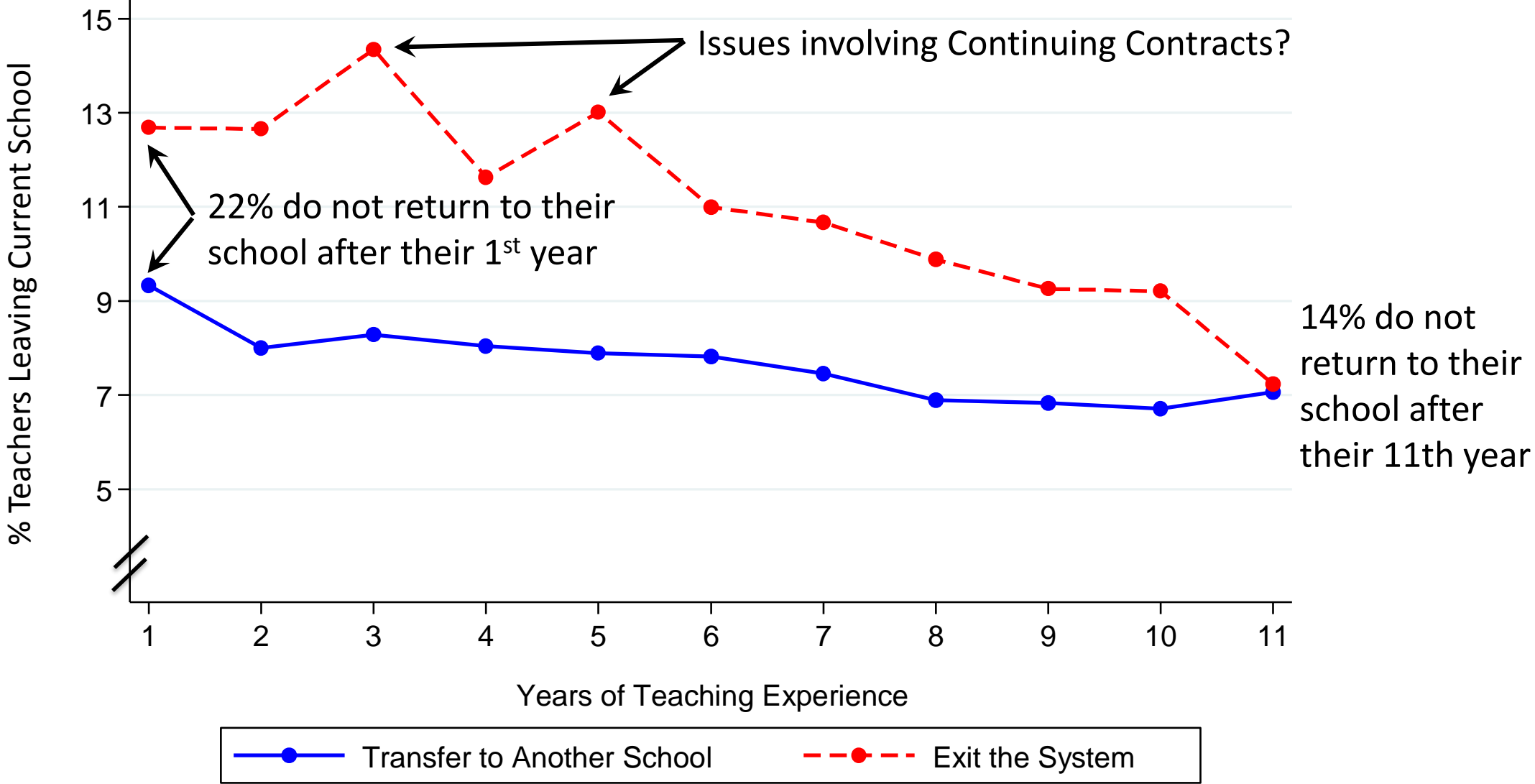
- Defined using all public schools
- Step 1: Assigned individuals to cohorts based on the year first observed
 - Dropped 2005-06
- Step 2: Applied restrictions to first observations
 - Must be a full-time teacher (no part-time teachers or administrators)
 - Must be teaching in a county, city, or town division
 - Must have license issued within the last two years

Cohort Sizes Varied Considerably

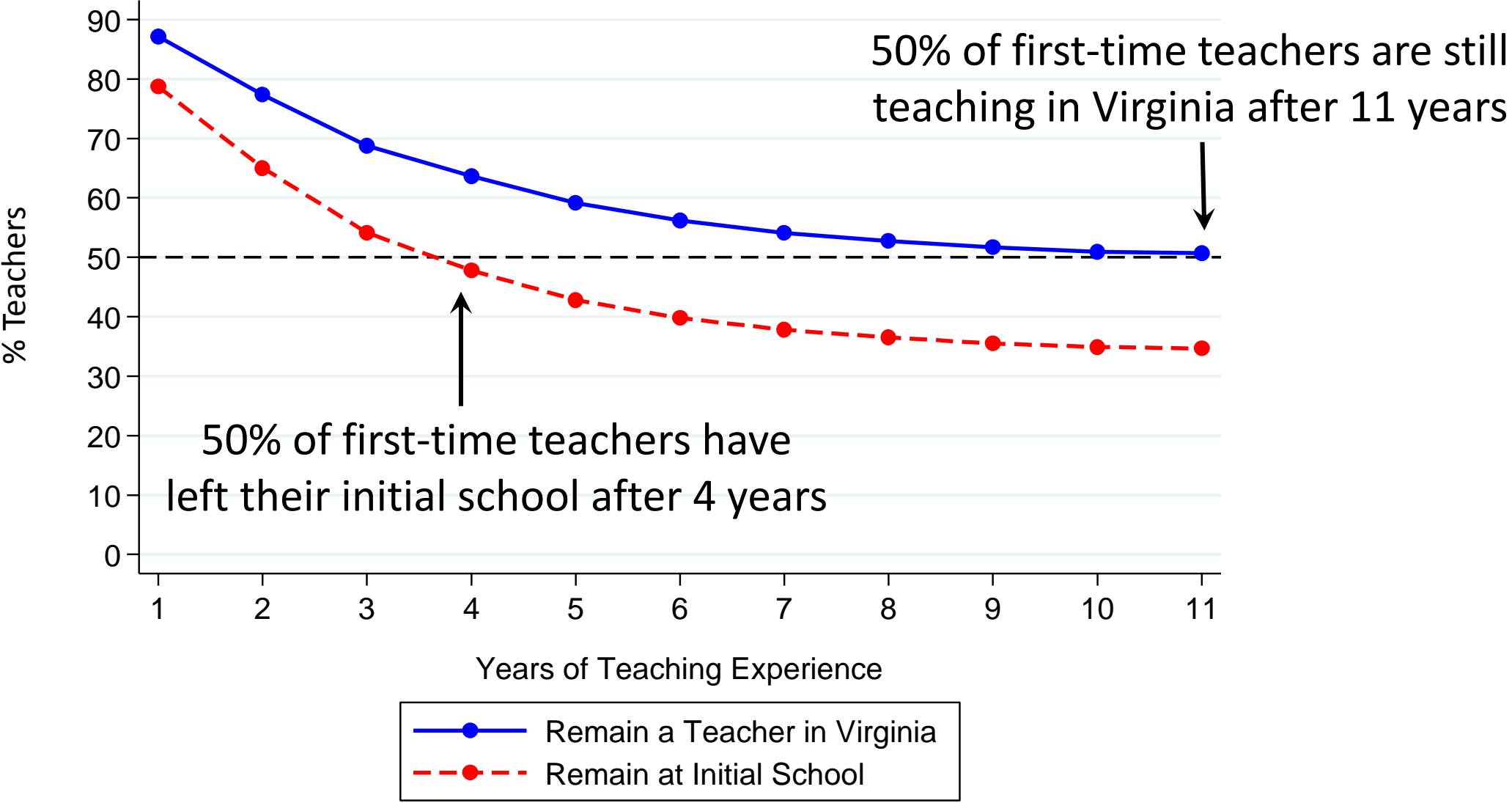
First-Time Teachers by Year



Attrition by Years of Teaching Experience

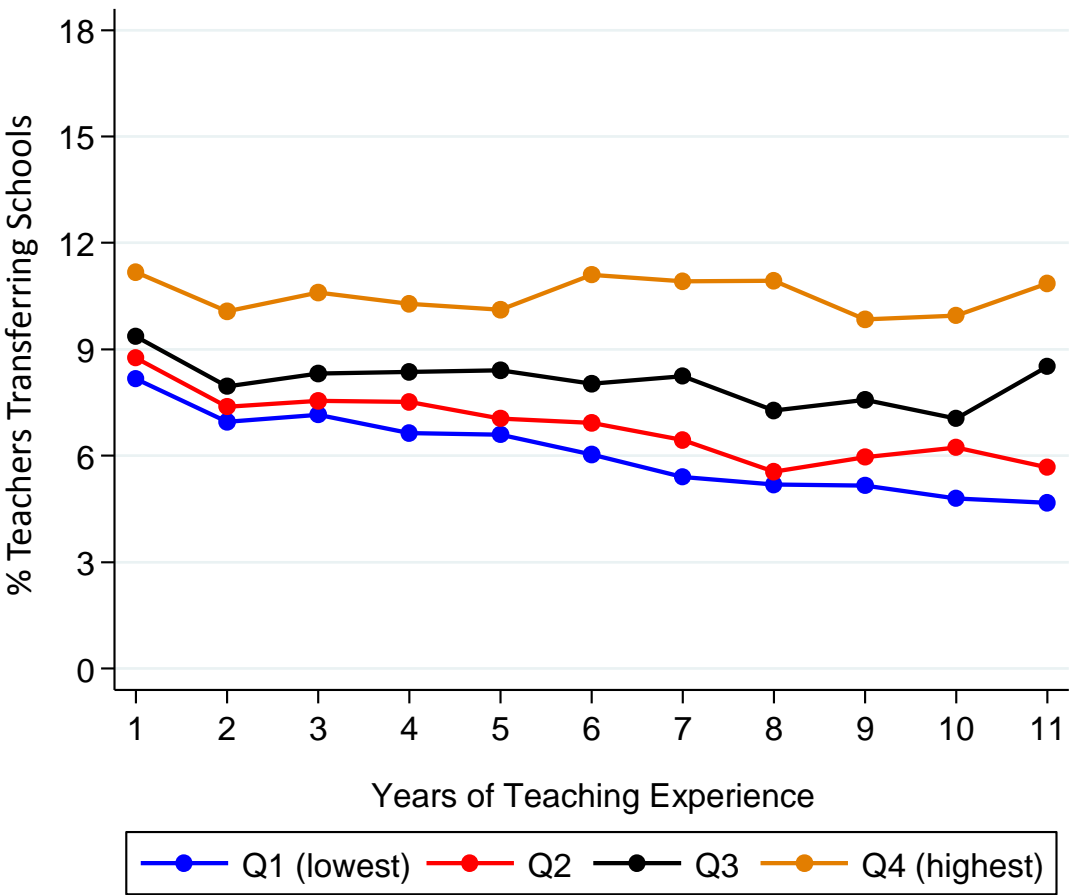


Time to First Separation: Initial School and System

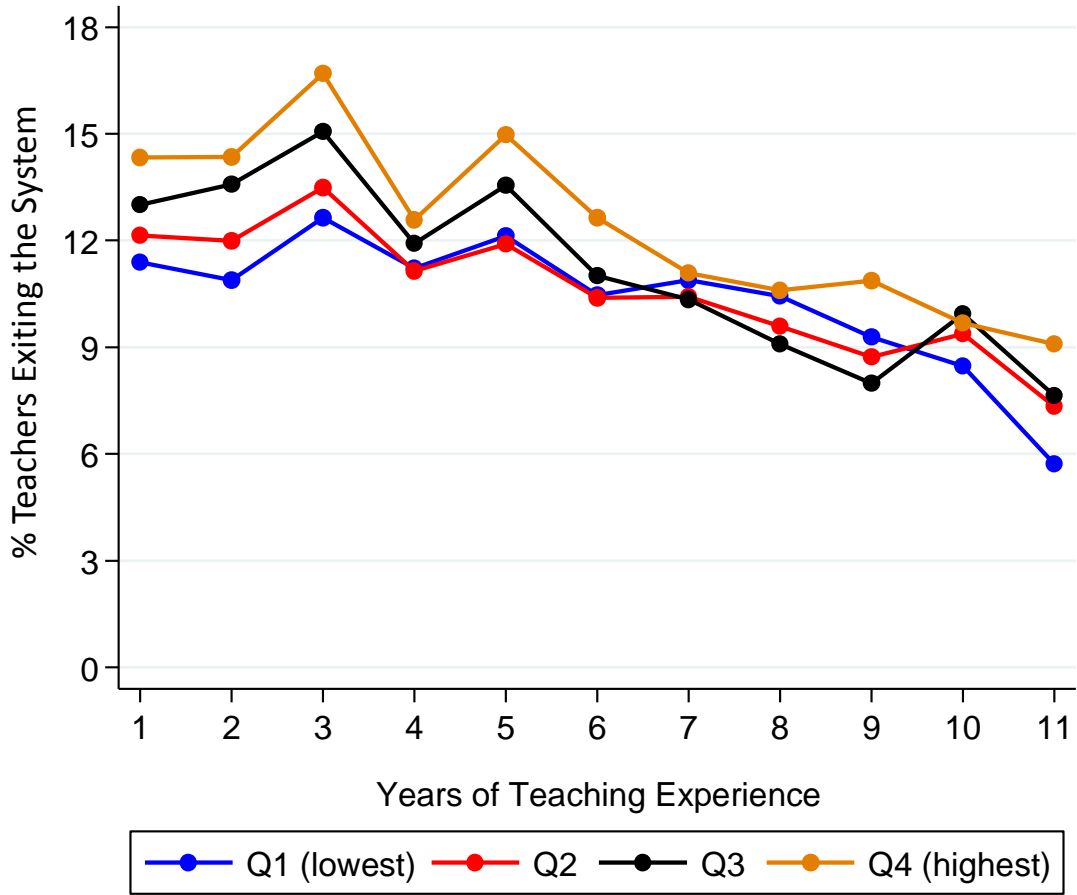


School Poverty ~ Free/Reduced-Price Lunch Eligibility

Transfer Rates

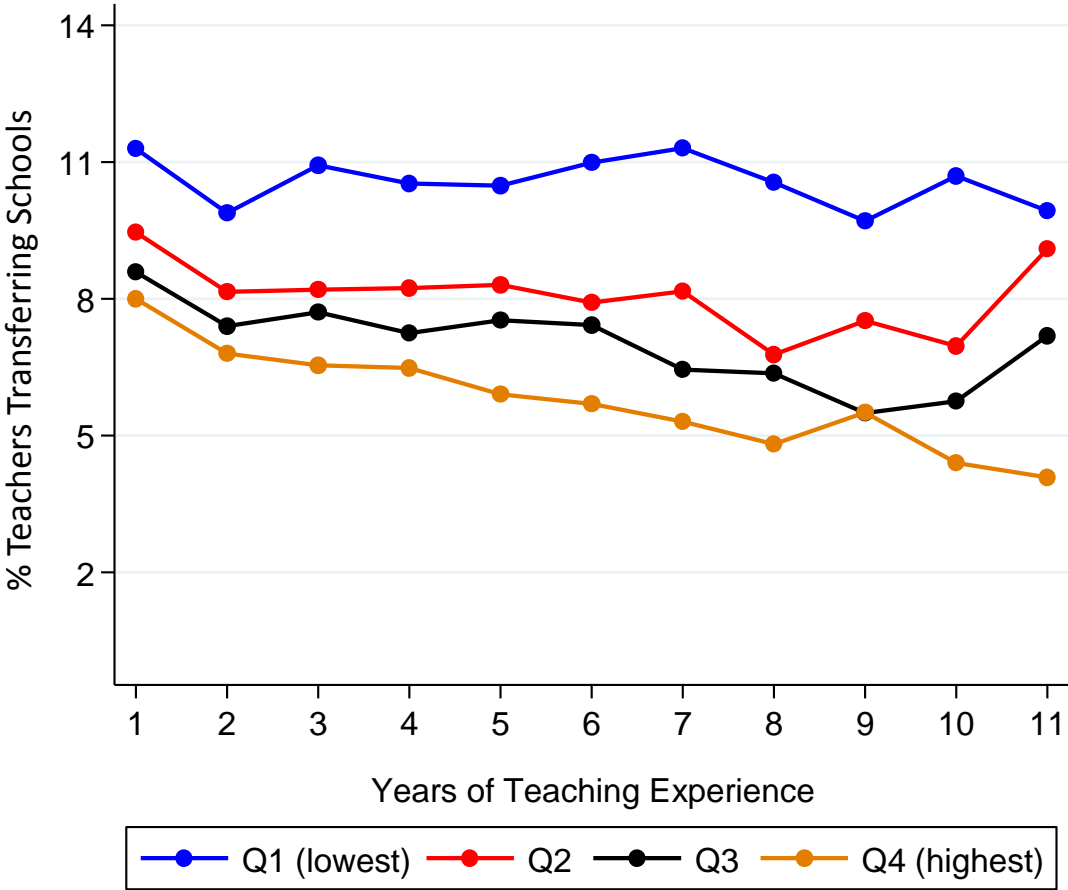


Exit Rates

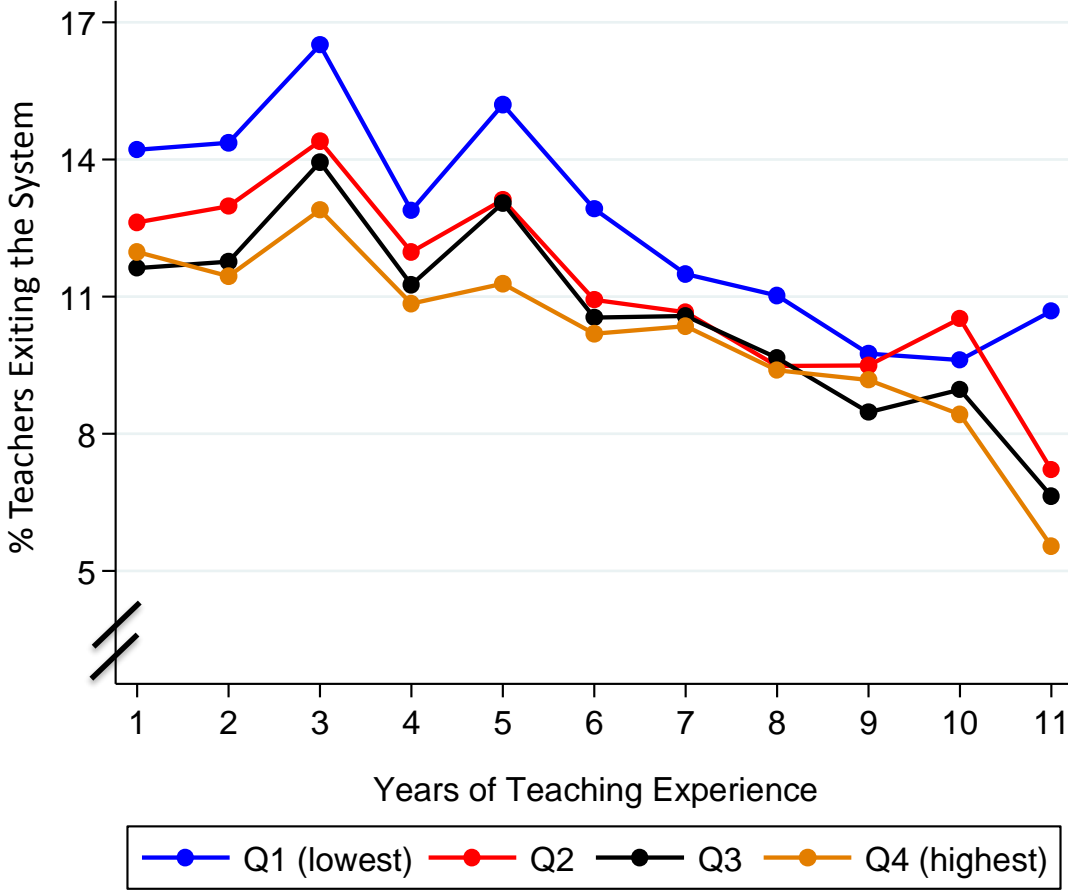


Academic Performance ~ SOL Reading Pass Rates

Transfer Rates

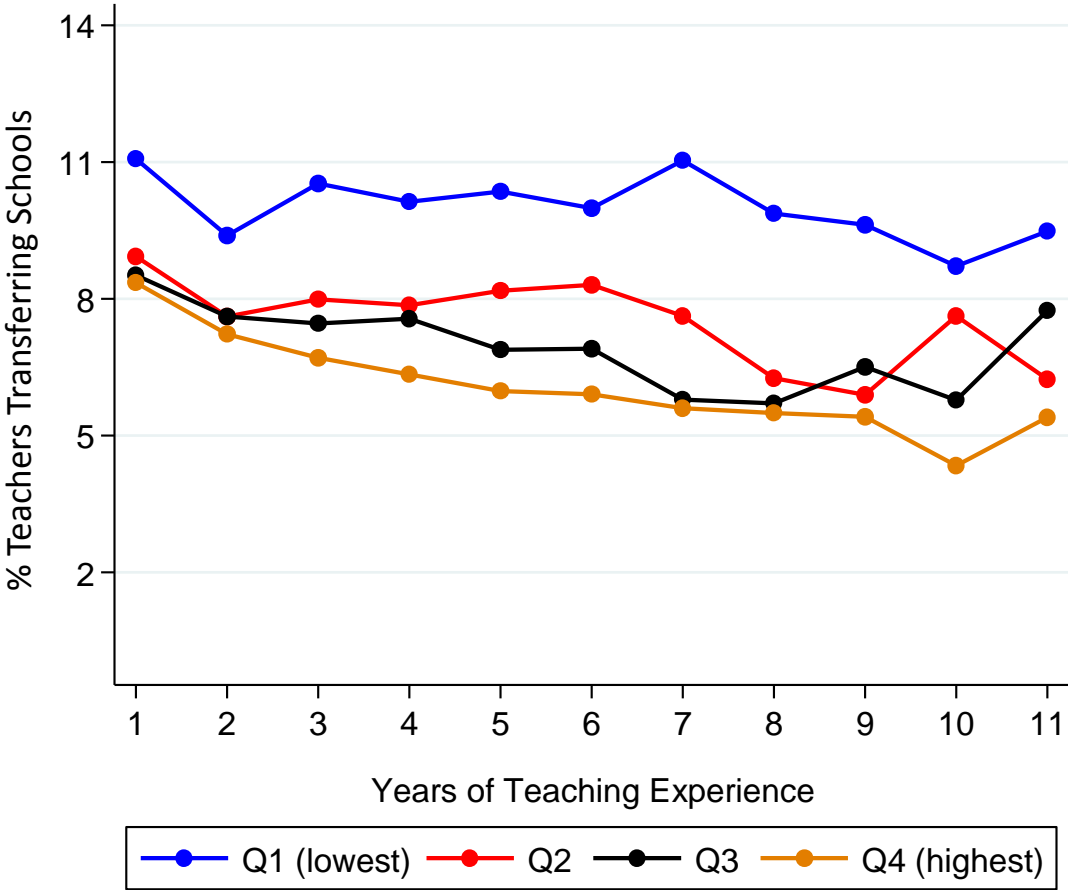


Exit Rates

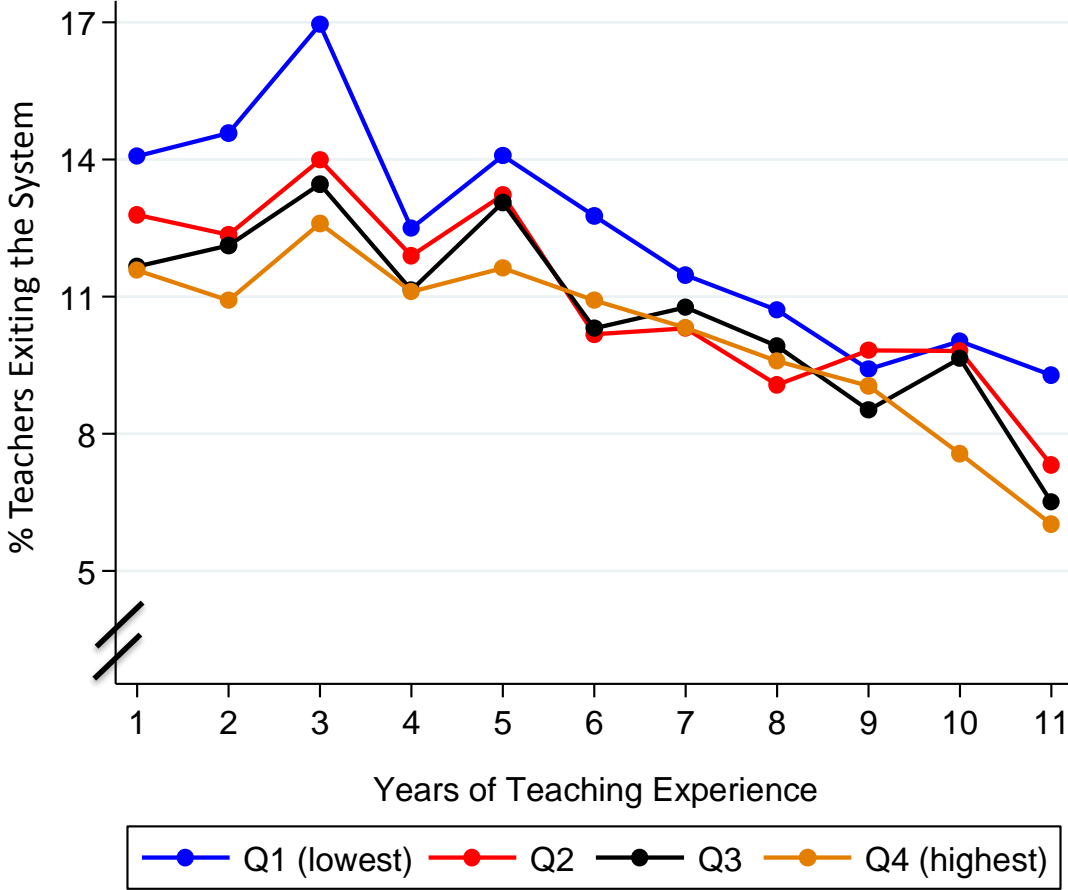


Academic Performance ~ SOL Math Pass Rates

Transfer Rates

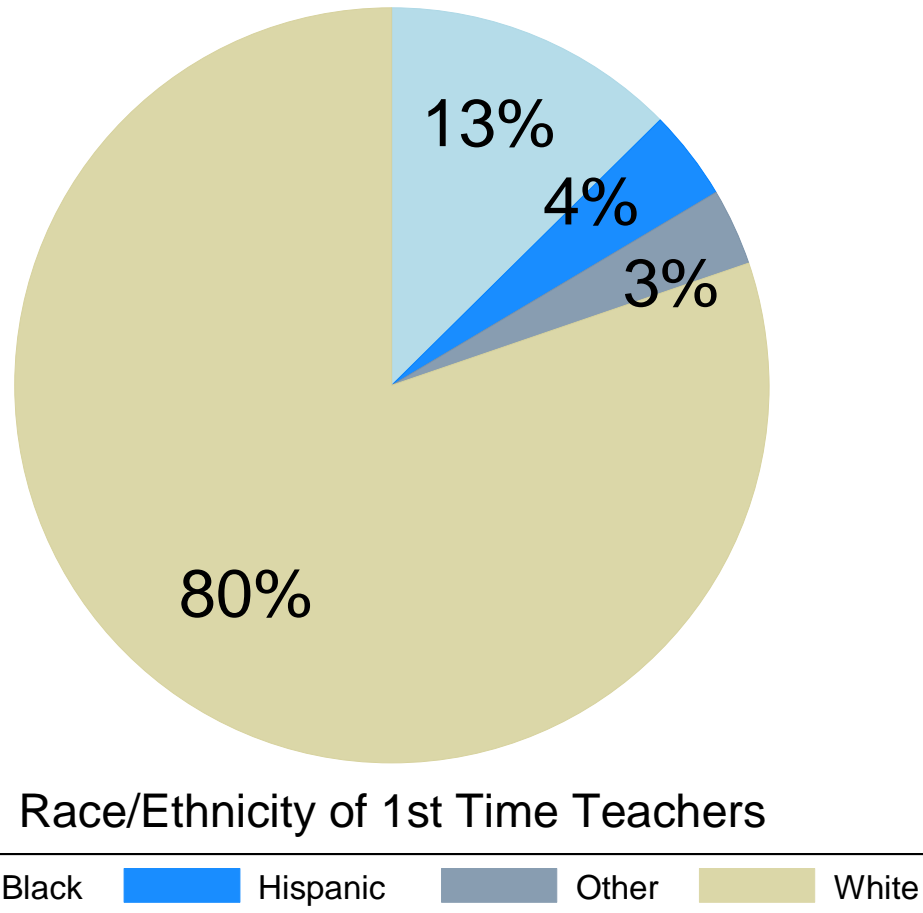


Exit Rates

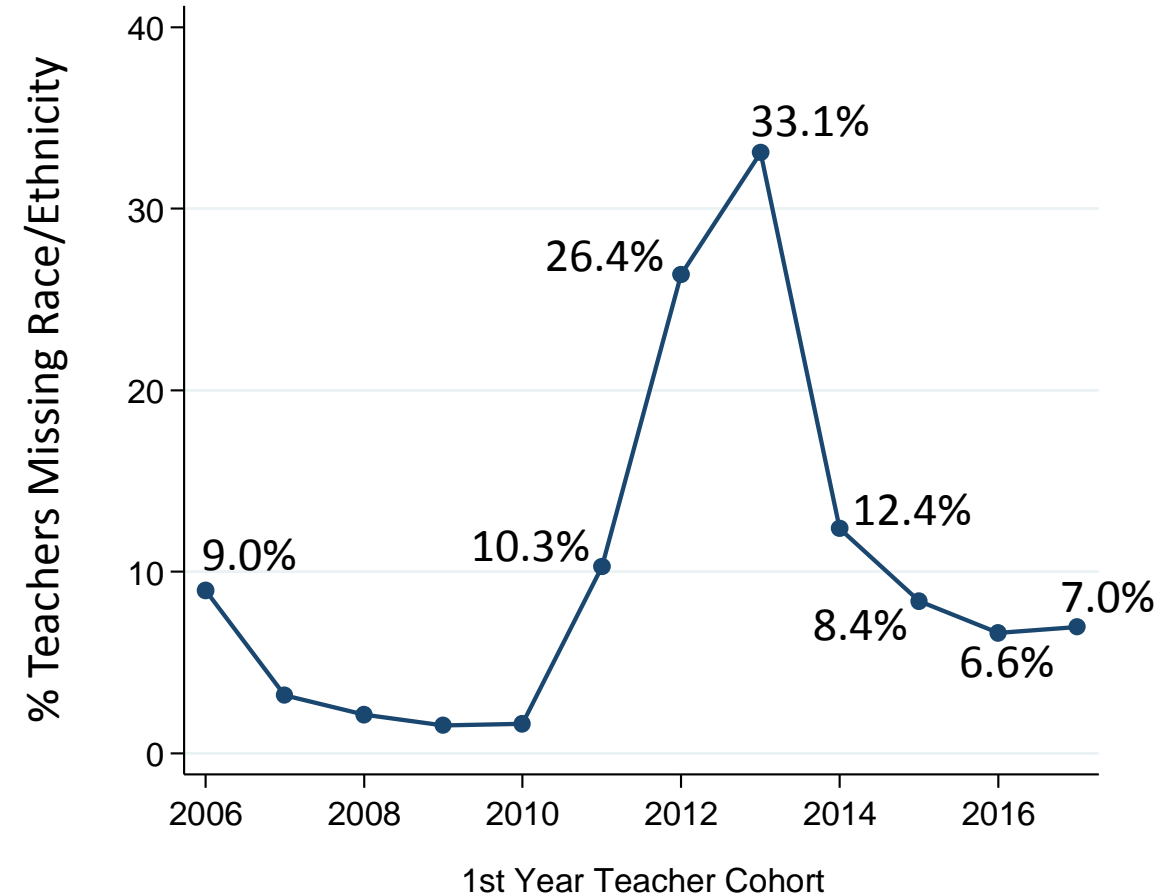


Racial/Ethnicity Diversity of 1st Year Teachers

Race/Ethnicity Composition

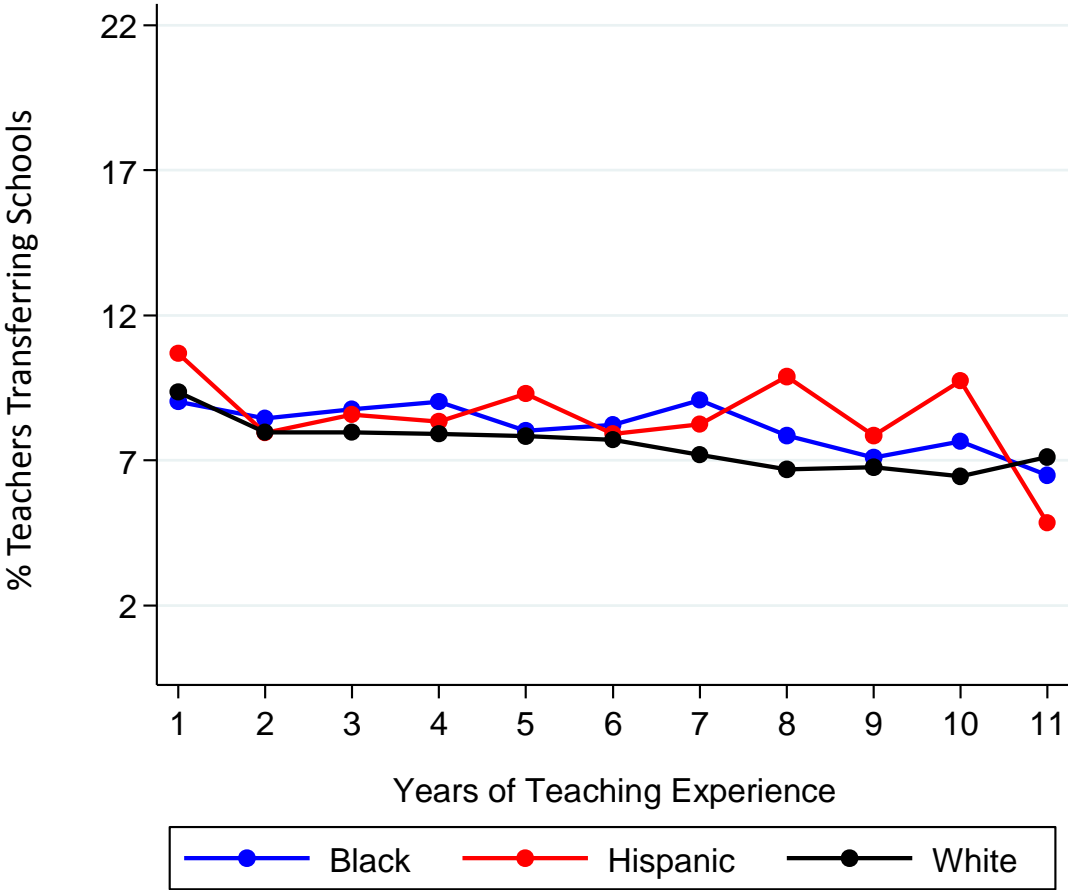


9.9% are Missing Race/Ethnicity

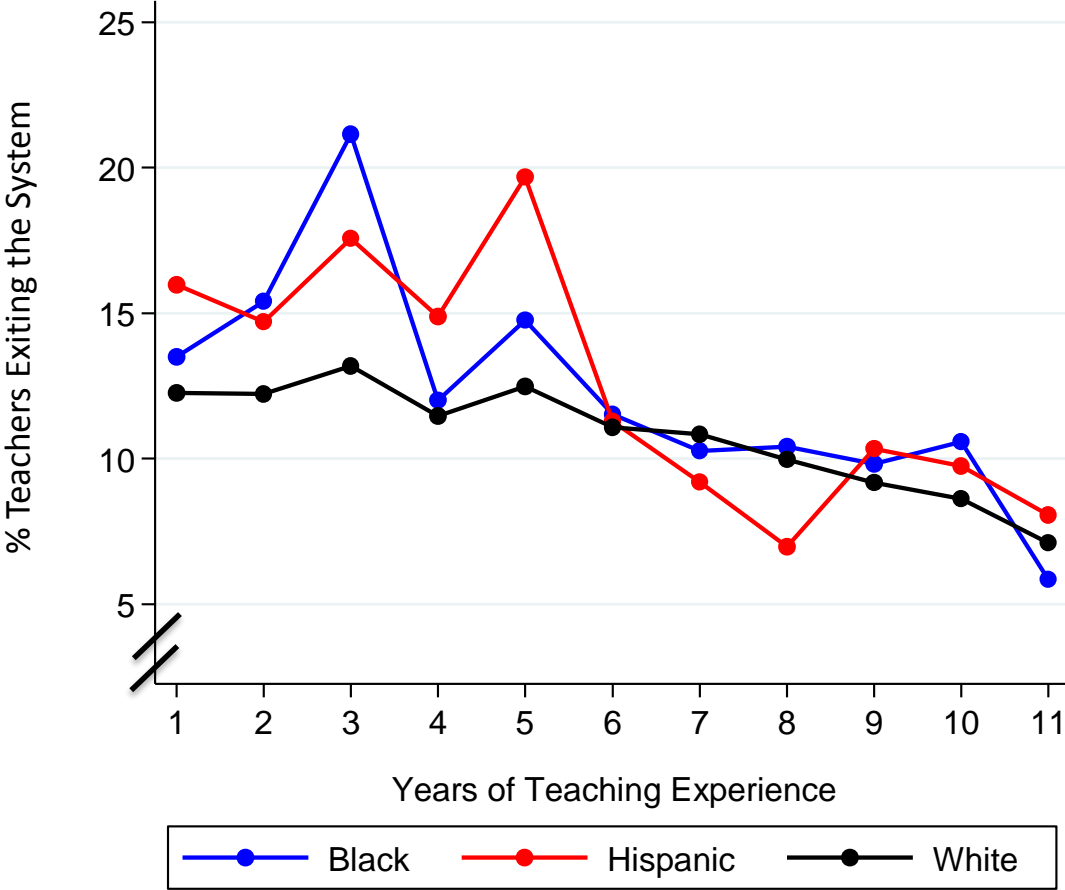


Teacher Race/Ethnicity

Transfer Rates



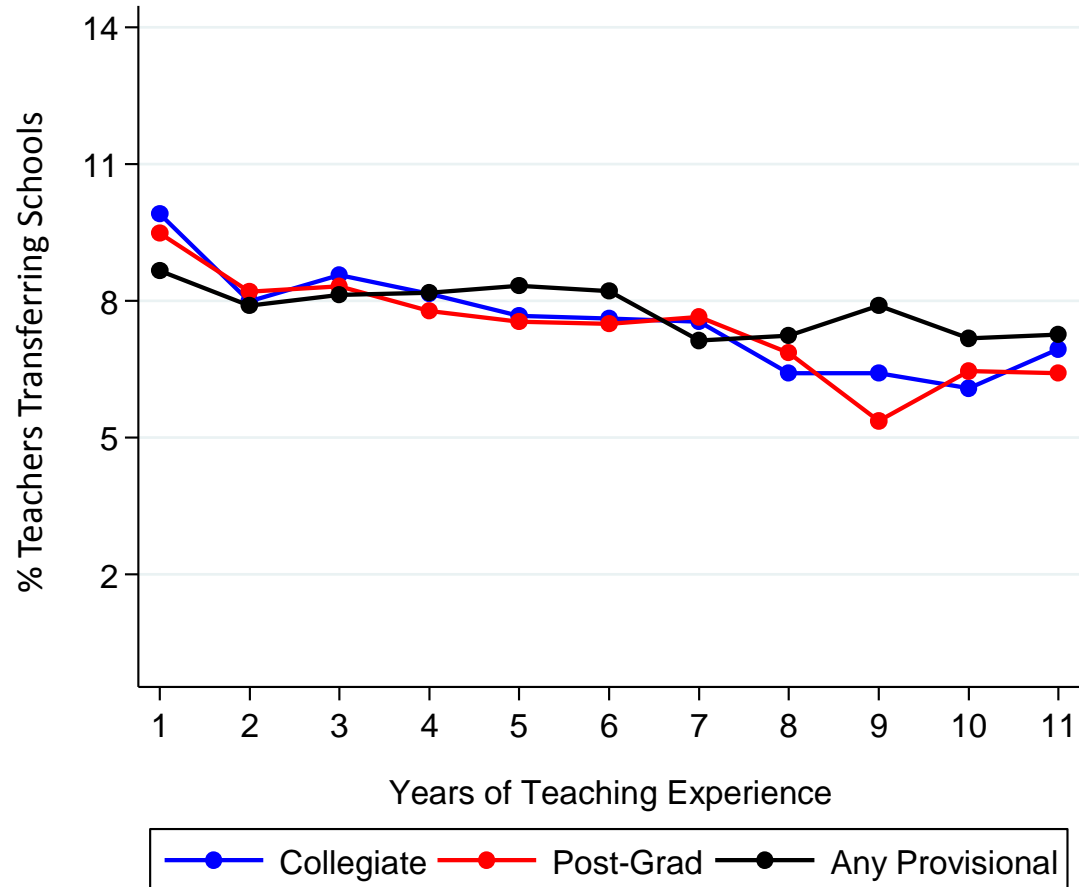
Exit Rates



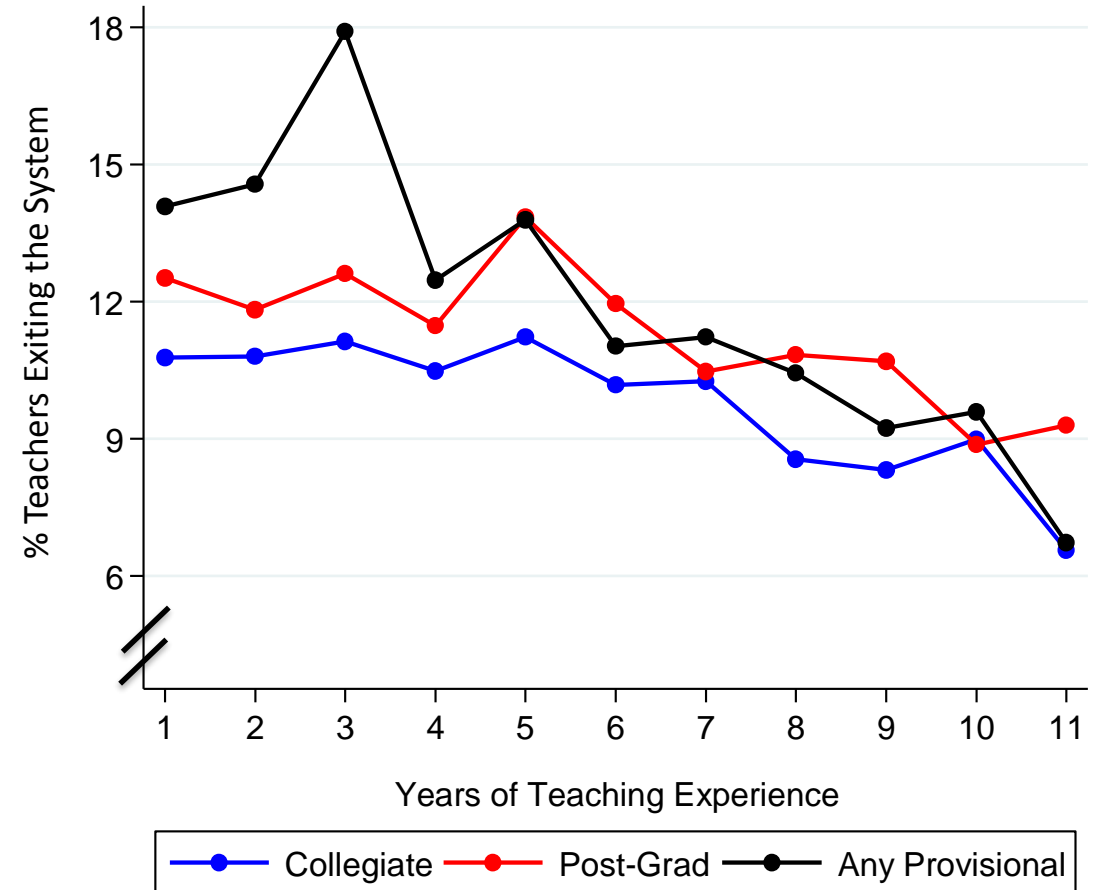
License Type

29% = Collegiate Professional, 29% = Post-Graduate Professional, 30% = Provisional, 8% = Provisional-SpecEd, 4% = Provisional-Career Switcher

Transfer Rates



Exit Rates



Route to Endorsement

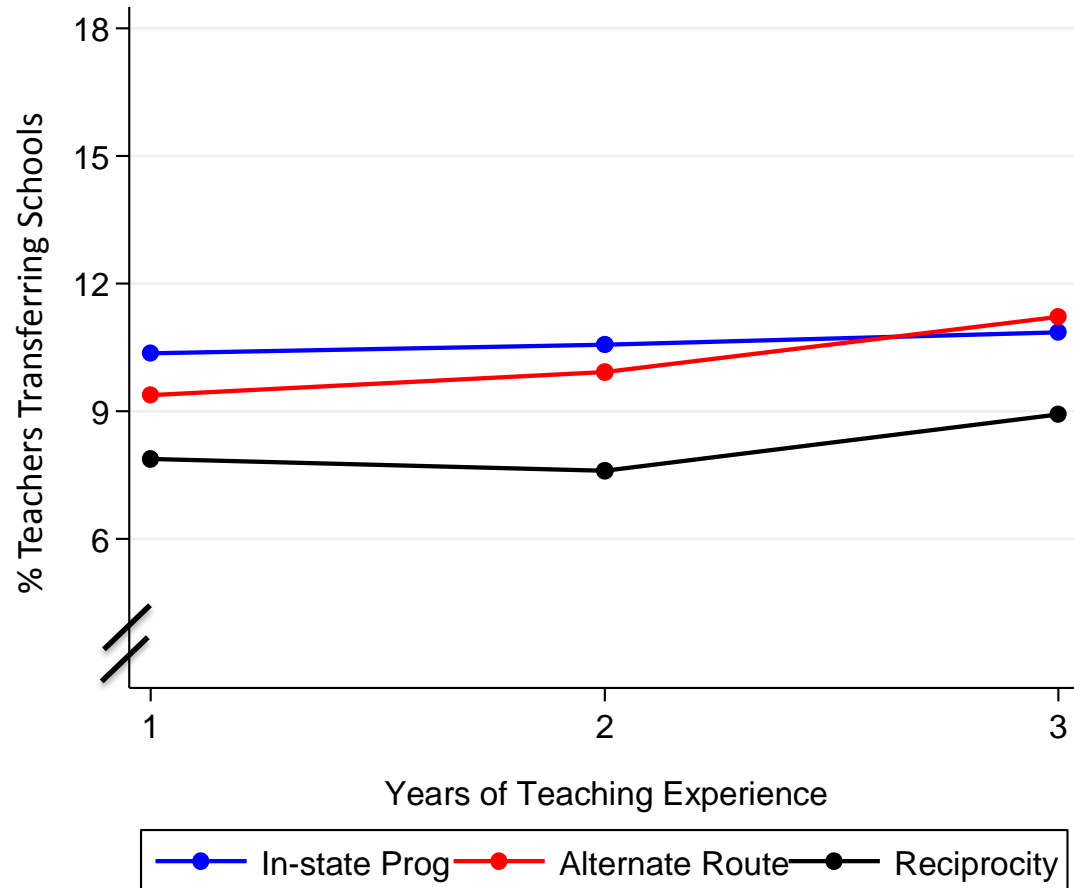
- One route for each endorsement a teacher holds
 - 73% have 1 endorsement
 - 21% have 2
 - 5% have 3
 - < 2% have between 4 and 7
- 12 routes to an endorsement
 - Approved In-State Program
 - Alternate Route
 - Reciprocity
 - Testing

Added to electronic licensure data in 2013
→ 2014 Cohort onwards

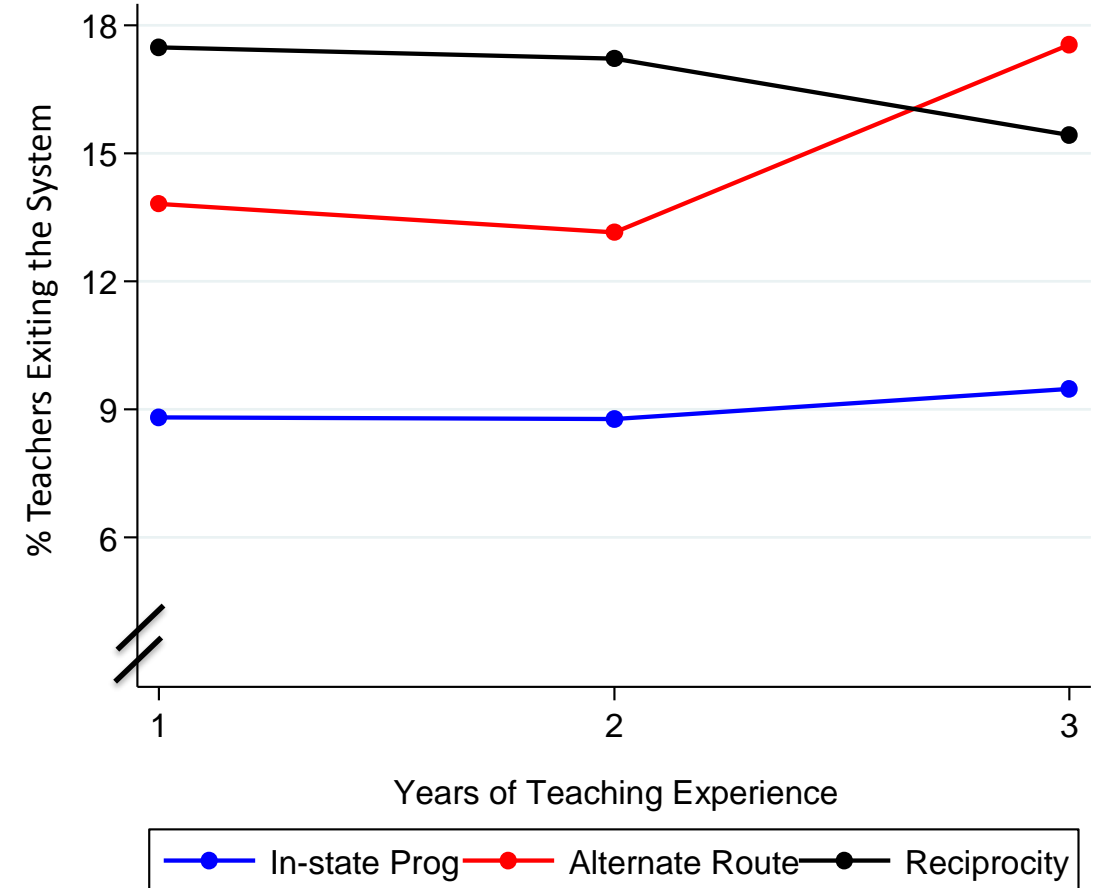
Route To Endorsement	%
Approved In-State Program	34%
Alternate Route	31%
<i>Transcript Review</i>	73%
<i>Career Switcher</i>	16%
Reciprocity	37%
<i>Out-of-State License</i>	68%
<i>Out-of-State Approved Program</i>	33%
Testing	6%

Retention by Route to Endorsement

Transfer Rates

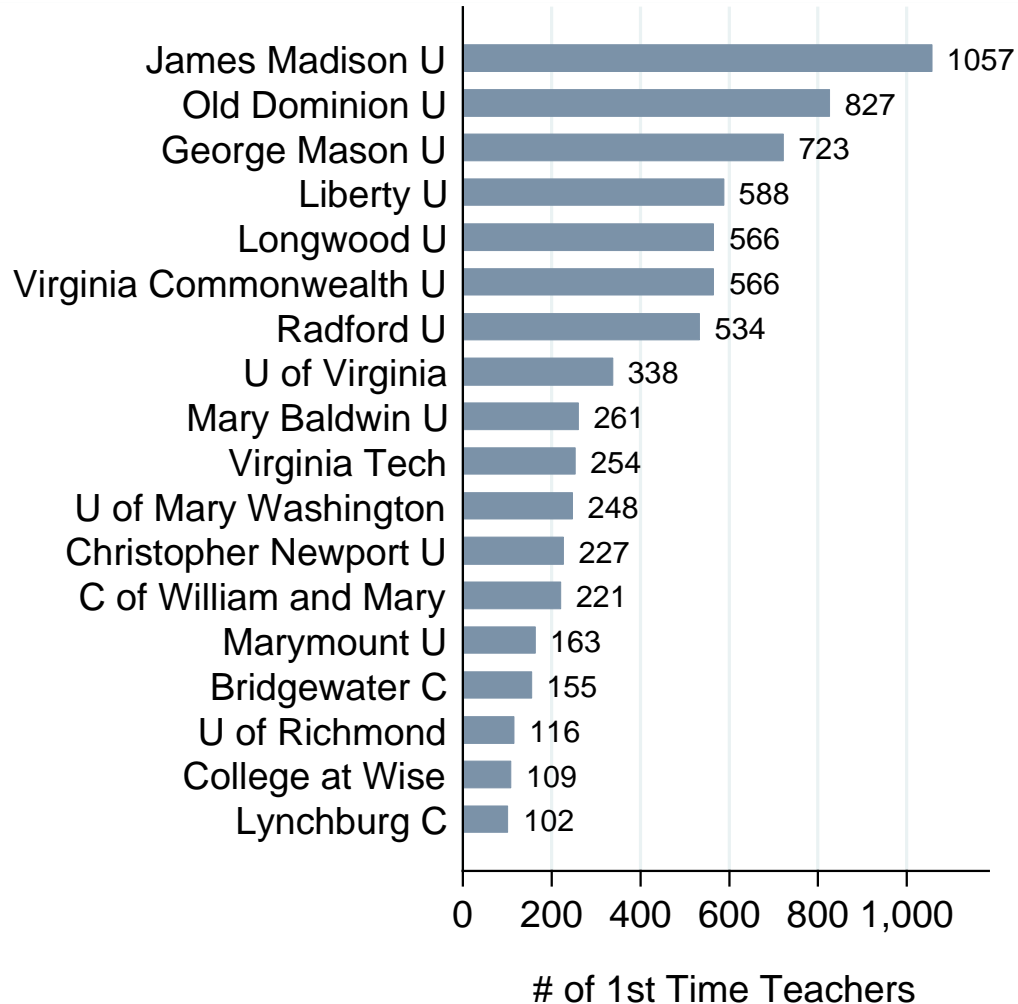


Exit Rates

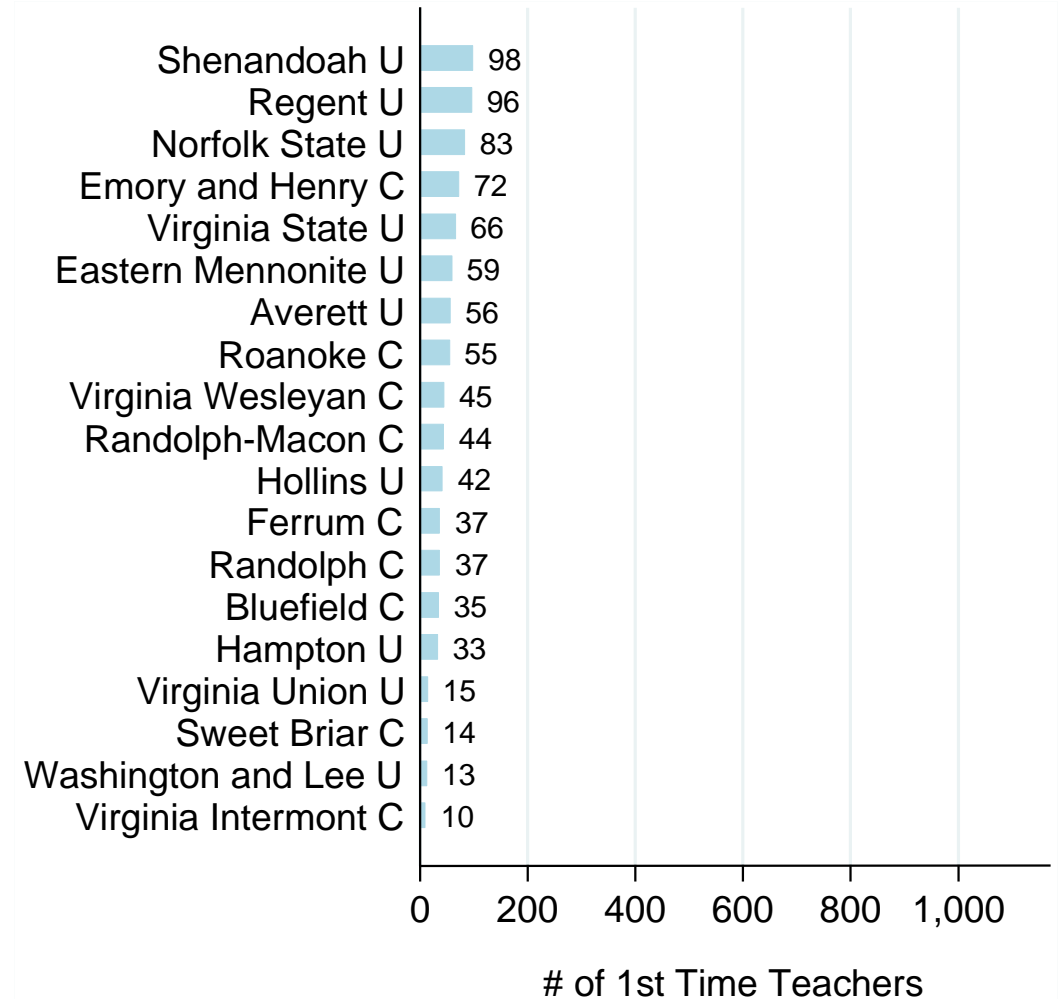


1st Time Teachers by Preparation Programs: 2014-15 to 2017-18

18 Had Trained at Least 100 Teachers



19 Had Trained Less than 100 Teachers

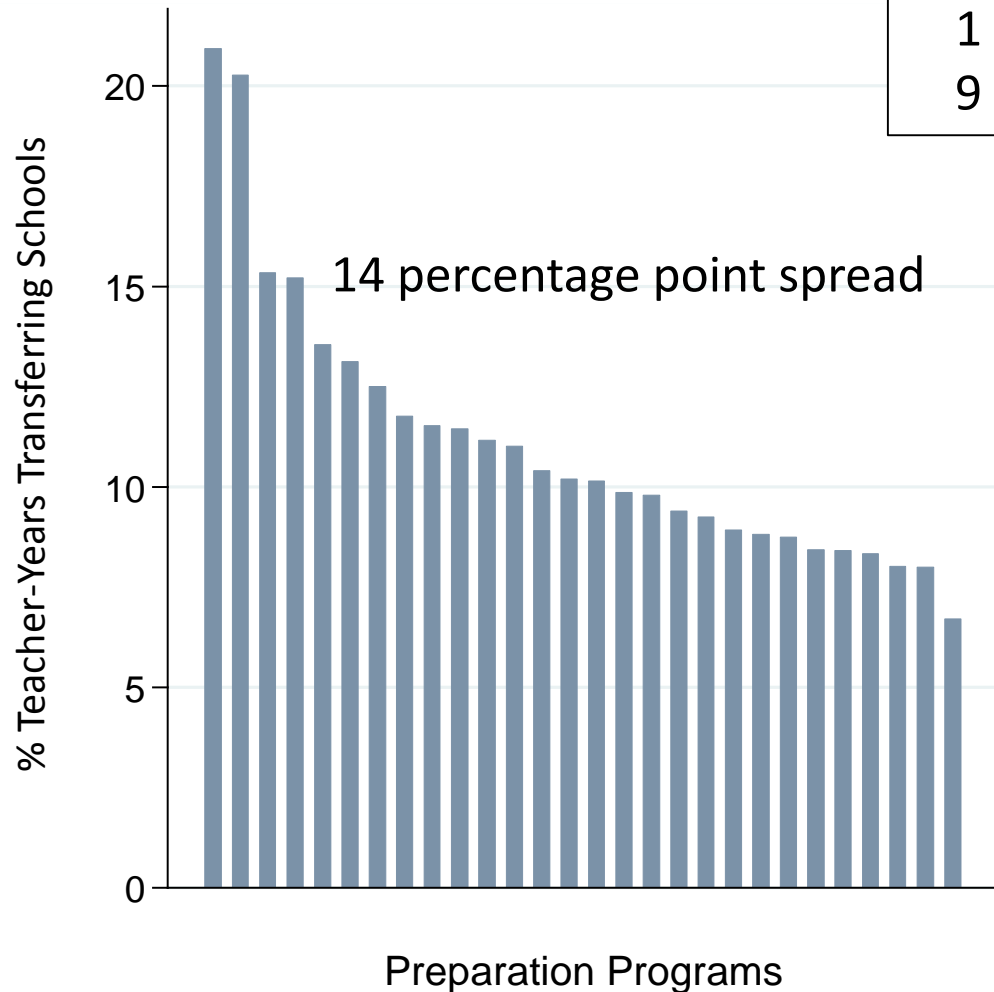


Retention by Preparation Program:

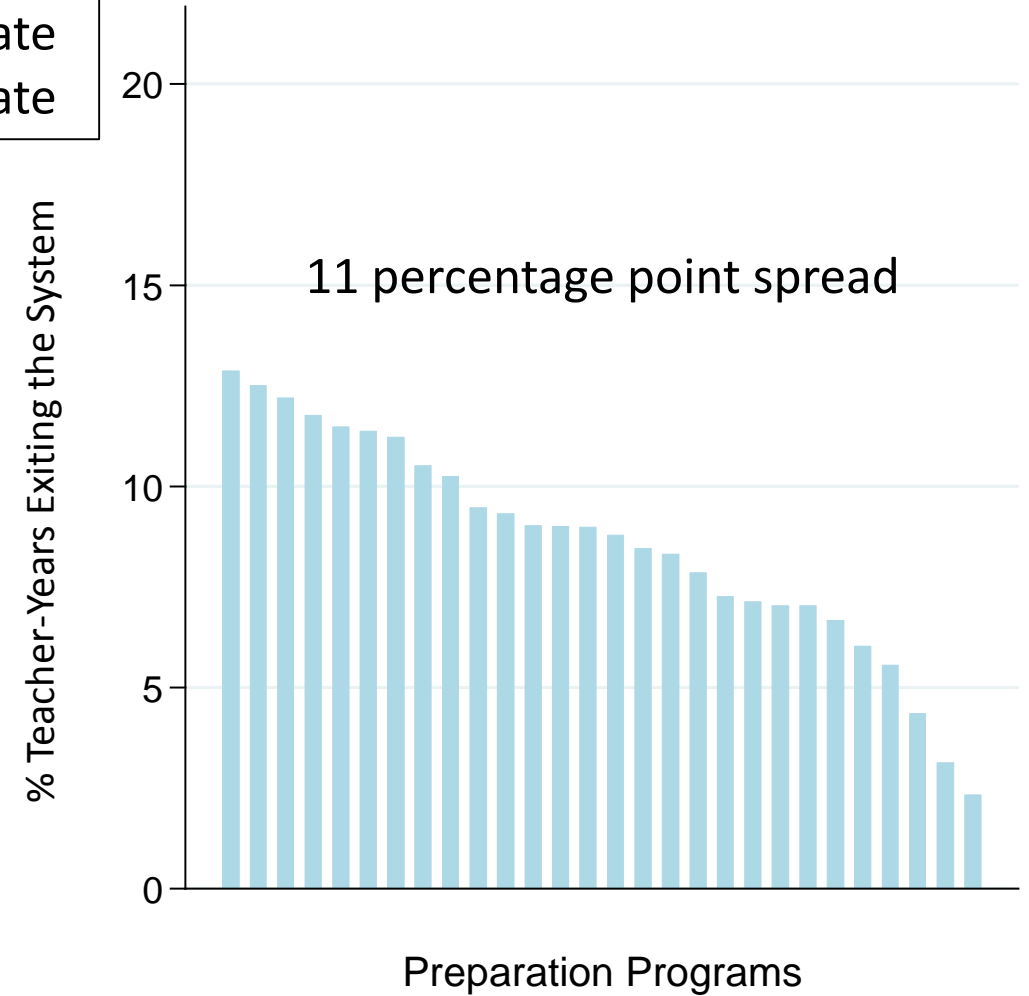
Averaged over first 3 years of teaching

Transfer Rates

19 Transfer Rate > Exit Rate
1 Transfer Rate = Exit Rate
9 Transfer Rate < Exit Rate



Exit Rates



Key Takeaways ~ informing policy landscape & opportunities

- Ongoing redistribution of students and teachers which, in contracting divisions, lowers the retention rate and increases transfers
- Significant variation in teacher turnover across divisions suggesting the importance of local context
- Emergence of a gender gap with females less likely to be retained and more likely to exit
- Importance of focusing on teachers at the beginning of their careers
 - 50% have left their first school after 4 years → hiring processes and job match
 - 50% remain teachers in Virginia after 11 years
- Associations with student poverty and academic performance
- Teacher workforce diversity – the first 5 years are crucial
- Higher exit rates among teachers with a Provisional License suggests some are struggling to transition to a Professional License
- Higher exit rates among teachers using reciprocity to earn an endorsement
- Significant variation in teacher turnover by preparation programs

Future Research Directions

- Develop and execute a research agenda on Virginia's teacher workforce
- Link teachers to
 - Students they teach
 - Salaries they earn
 - Working conditions and school climate
 - Community characteristics, e.g. alternate job opportunities
- Unpack differences by teacher preparation programs
 - Map the flow of teachers from programs to schools
 - Understand how the context of those schools differ across programs
- Learn about local teacher retention efforts
- Recruitment



UNIVERSITY
of
VIRGINIA

CURRY SCHOOL *and*
BATTEN SCHOOL
EdPolicyWorks

now for Your Questions

For the most up to date information from
EdPolicyWorks please contact us:

Luke C. Miller: lcm7t@virginia.edu

<http://curry.virginia.edu/EdPolicyWorks>

EdPolicyWorks@virginia.edu