A First Look at
Teacher Retention in Virginia

Luke C. Miller, Ph.D.
Research Assistant Professor, EdPolicyWorks

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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 >= .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

**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

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# 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

4. Northern
- Students: +26.7%
- Teachers: +16.7%

5. Valley
- Students: -0.3%
- Teachers: -2.8%

3. Northern Neck
- Students: +4.6%
- Teachers: -4.9%

2. Tidewater
- Students: -6.3%
- Teachers: -11.6%

6. Western
- Students: -3.8%
- Teachers: -4.1%

8. Southside
- Students: -13.3%
- Teachers: -14.7%

7. Southwest
- Students: -9.7%
- Teachers: -4.3%

1. Central
- Students: +3.8%
- Teachers: -1.5%
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

**School-level Retention Outcomes**

- **7% Transfer Schools**
- **11% Exit System**
- **82% Stay at Current School**

**TRANSFERS**
- 58% Within Division
- 42% Across Divisions

**EXITERS**
- 17% Move into Administration
  - 65% Current School
  - 25% Within Division
  - 10% Across Divisions
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

<table>
<thead>
<tr>
<th>Returning after a...</th>
<th>Pooled %</th>
<th>By Leaving Cohort Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>... 1-Year Break</td>
<td>10.1%</td>
<td>7.5%</td>
<td>14.3%</td>
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<tr>
<td>... 2-Year Break</td>
<td>4.4%</td>
<td>2.8%</td>
<td>6.3%</td>
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<tr>
<td>... 3-Year Break</td>
<td>2.8%</td>
<td>2.0%</td>
<td>4.2%</td>
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<tr>
<td>... 4-Year Break</td>
<td>2.0%</td>
<td>1.5%</td>
<td>2.6%</td>
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<tr>
<td>... 5-Year Break</td>
<td>1.6%</td>
<td>1.2%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

...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

<table>
<thead>
<tr>
<th>Primarily an issue for:</th>
<th>Evidence-based Policies</th>
<th>Proximal Outcomes</th>
<th>Distal Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Some endorsement areas:</strong></td>
<td>Strong school leadership</td>
<td>Improve school climate</td>
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<tr>
<td>– STEM</td>
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<td>– Special education</td>
<td>Targeted financial incentives</td>
<td>Improve teacher retention</td>
<td>Improve teacher quality</td>
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<td>– English as a 2\textsuperscript{nd} language</td>
<td>Better teacher recruitment</td>
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<td>Improve student outcomes</td>
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<td><strong>Some students:</strong></td>
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<td>– Low-income</td>
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<td>– Low-performing</td>
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<tr>
<td>– Minority</td>
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<td><strong>Some teachers:</strong></td>
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<tr>
<td>– Early career</td>
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<tr>
<td>– Alternately licensed</td>
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<tr>
<td>– Late hires</td>
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</tbody>
</table>

*SOURCE: Katz (2018)*
Statewide Trends in School-level Retention Rates

Retention Rates by Year

% Teachers Staying at Current School

School Year (fall)


82.0% 84.0% 87.5% 83.0% 83.8% 82.2% 82.1%
Statewide Trends in School Transfer Rates

Transfer Rates by Year

<table>
<thead>
<tr>
<th>School Year (fall)</th>
<th>% Teachers Transferring Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>6.8%</td>
</tr>
<tr>
<td>2006</td>
<td>6.2%</td>
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<tr>
<td>2007</td>
<td>6.8%</td>
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<td>2008</td>
<td>4.5%</td>
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<td>2009</td>
<td>5.7%</td>
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<tr>
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<td>2015</td>
<td>5.3%</td>
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<tr>
<td>2016</td>
<td>6.8%</td>
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</tbody>
</table>
Statewide Trends in Exit Rates

Exit Rates by Year

% Teachers Exiting the System

2005: 11.2%
2006: 7.9%
2007: 11.3%
2008: 11.1%
2009: 11.6%
2010: 10.6%
2011: 11.6%
2012: 11.1%

School Year (fall)
Change in Student Enrollment, 2005-06 to 2017-18

Retention Rates

% Teachers Staying at Current School

Exit Rates

% Teachers Exiting the System

School Year (fall)
Change in Size of Teacher Workforce, 2005-06 to 2017-18

Retention Rates

Exit Rates

% Teachers Staying at Current School

% Teachers Exiting the System

School Year (fall)


LOSS Loss Growth GROWTH

% Teachers Staying at Current School

% Teachers Exiting the System

School Year (fall)


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School Year (fall)


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School Year (fall)


LOSS Loss Growth GROWTH
### Location of Undergraduate Institution

#### Retention Rates

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

#### Exit Rates

- **In-State:**
  - 2005: 56%
  - 2007: 50%
  - 2009: 46%
  - 2011: 48%
  - 2013: 42%
  - 2015: 40%

- **Out-of-State:**
  - 2005: 38%
  - 2007: 34%
  - 2009: 34%
  - 2011: 32%
  - 2013: 30%
  - 2015: 28%

- **Out-of-Country:**
  - 2005: 8%
  - 2007: 8%
  - 2009: 8%
  - 2011: 8%
  - 2013: 8%
  - 2015: 8%
Gender

Retention Rates

% Teachers Staying at Current School

School Year (fall)

Exit Rates

% Teachers Exiting the System

School Year (fall)

79% Female, 21% Male
Age: Attrition Rates Follow a U-Shape

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

Leaving the Profession and Searching for Better Fit

Retirements
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

7,945
7,338
6,472
4,948
5,930
5,248
5,473
6,086
6,279
6,492
5,911


School Year (fall)

7,945
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2009 Cohort was 53% smaller than the 2006 Cohort

2017 Cohort was 26% smaller than the 2006 Cohort

# First-Time Teachers
Attrition by Years of Teaching Experience

- 22% do not return to their school after their 1st year
- 14% do not return to their school after their 11th year

Issues involving Continuing Contracts?

% Teachers Leaving Current School

1 2 3 4 5 6 7 8 9 10 11

Years of Teaching Experience

Transfer to Another School    Exit the System
50% of first-time teachers are still teaching in Virginia after 11 years.

50% of first-time teachers have left their initial school after 4 years.

- **Remain a Teacher in Virginia**
- **Remain at Initial School**

Years of Teaching Experience
School Poverty ~ Free/Reduced-Price Lunch Eligibility

**Transfer Rates**

- % Teachers Transferring Schools
- Years of Teaching Experience
- Q1 (lowest) - Q2 - Q3 - Q4 (highest)

**Exit Rates**

- % Teachers Exiting the System
- Years of Teaching Experience
- Q1 (lowest) - Q2 - Q3 - Q4 (highest)
Academic Performance ~ SOL Reading Pass Rates

**Transfer Rates**

% Teachers Transferring Schools

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<th>Q2</th>
<th>Q3</th>
<th>Q4 (highest)</th>
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**Exit Rates**

% Teachers Exiting the System

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Academic Performance ~ SOL Math Pass Rates

**Transfer Rates**

![Graph showing transfer rates over years of teaching experience](Image)

**Exit Rates**

![Graph showing exit rates over years of teaching experience](Image)
Racial/Ethnicity Diversity of 1st Year Teachers

Race/Ethnicity Composition

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>13%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td>White</td>
<td>80%</td>
</tr>
</tbody>
</table>

9.9% are Missing Race/Ethnicity

Race/Ethnicity of 1st Time Teachers

<table>
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</tr>
</tbody>
</table>

% Teachers Missing Race/Ethnicity

- 2006: 9.0%
- 2008: 10.3%
- 2010: 33.1%
- 2012: 26.4%
- 2014: 12.4%
- 2016: 7.0%
Teacher Race/Ethnicity

Transfer Rates

Exit Rates

% Teachers Transferring Schools

% Teachers Exiting the System

Years of Teaching Experience

Black Hispanic White

Teacher Race/Ethnicity

Transfer Rates

Exit Rates

% Teachers Transferring Schools

% Teachers Exiting the System

Years of Teaching Experience

Black Hispanic White
License Type

% Teachers Exiting the System

% Teachers Transferring Schools

Transfer Rates

Exit Rates

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

<table>
<thead>
<tr>
<th>Route To Endorsement</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved In-State Program</td>
<td>34%</td>
</tr>
<tr>
<td>Alternate Route</td>
<td>31%</td>
</tr>
<tr>
<td>Transcript Review</td>
<td>73%</td>
</tr>
<tr>
<td>Career Switcher</td>
<td>16%</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>37%</td>
</tr>
<tr>
<td>Out-of-State License</td>
<td>68%</td>
</tr>
<tr>
<td>Out-of-State Approved Program</td>
<td>33%</td>
</tr>
<tr>
<td>Testing</td>
<td>6%</td>
</tr>
</tbody>
</table>
Retention by Route to Endorsement

**Transfer Rates**

- % Teachers Transferring Schools

<table>
<thead>
<tr>
<th>Years of Teaching Experience</th>
<th>In-state Prog</th>
<th>Alternate Route</th>
<th>Reciprocity</th>
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<tbody>
<tr>
<td>1</td>
<td>9</td>
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<td>6</td>
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<td>2</td>
<td>12</td>
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**Exit Rates**

- % Teachers Exiting the System

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<td>12</td>
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Curry School and Batten School
EdPolicyWorks
18 Had Trained at Least 100 Teachers

- James Madison U: 1057
- Old Dominion U: 827
- George Mason U: 723
- Liberty U: 588
- Longwood U: 566
- Virginia Commonwealth U: 566
- Radford U: 534
- U of Virginia: 338
- Mary Baldwin U: 261
- Virginia Tech: 254
- U of Mary Washington: 248
- Christopher Newport U: 227
- C of William and Mary: 221
- Marymount U: 163
- Bridgewater C: 155
- U of Richmond: 116
- College at Wise: 109
- Lynchburg C: 102

19 Had Trained Less than 100 Teachers

- Shenandoah U: 98
- Regent U: 96
- Norfolk State U: 83
- Emory and Henry C: 72
- Virginia State U: 66
- Eastern Mennonite U: 59
- Averett U: 56
- Roanoke C: 55
- Virginia Wesleyan C: 45
- Randolph-Macon C: 44
- Hollins U: 42
- Ferrum C: 37
- Randolph C: 37
- Bluefield C: 35
- Hampton U: 33
- Virginia Union U: 15
- Sweet Briar C: 14
- Washington and Lee U: 13
- Virginia Intermont C: 10

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

Transfer Rates

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

Exit Rates

- 11 percentage point spread

Program must have >= 60 teacher-year observations over the 3 years to be shown.
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
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