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## The Teaching Profession in 2015 (in Charts)

By [Ross Brenneman](#) on December 30, 2015 2:13 PM

At the end of every year (now for a record *two years!*), we dig through all the white papers and research findings and think tank reports sent to *Education Week*, as well as a few in-house originals, to find some useful nuggets of visual information that may have escaped people's notice and that help capture the state of teaching.

If not all groundbreaking, the data and graphs and statistics below serve as a reminder about some of the struggles educators face on a frequent basis that may not garner as much attention as perhaps deserved.

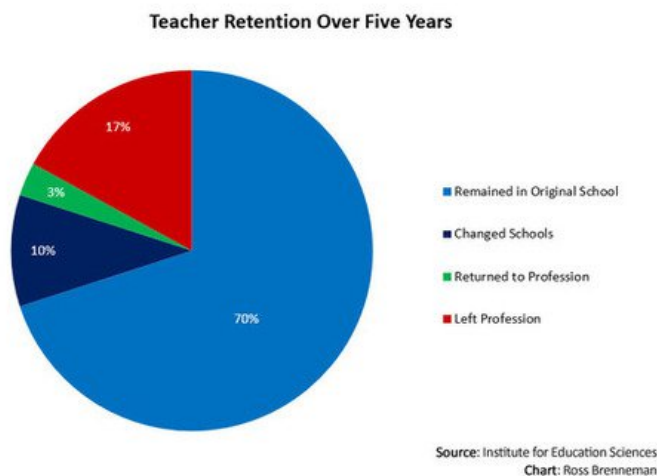
[Last year's edition of this post](#) focused a lot on the teaching profession itself: Composition, salary, benefits, etc. This year's edition looks at teaching largely through a student lens, because ultimately, how students perform in life after school comes to shape the teaching profession; schools are often a mirror for the communities surrounding them. When teachers get training in cultural competency, for instance, it's often not because that's just a nice thing to learn; it's because a lot of students of color are failed by the system, and that perpetuates economic inequalities, which drive demand for school solutions, which are implemented by teachers. One big cycle.

Now here are some graphs.

### Chart #1: How Many New Teachers Stay?

For a decade or so, the de facto statistic about new teachers was that almost half of them leave the teaching profession within five years. But a longitudinal study conducted by the Institute for Education Sciences, published in April, found that statistic to be very different by 2012:

**Only 17 percent of new teachers** are now believed to leave the profession within five years:

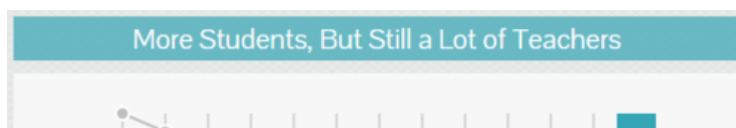


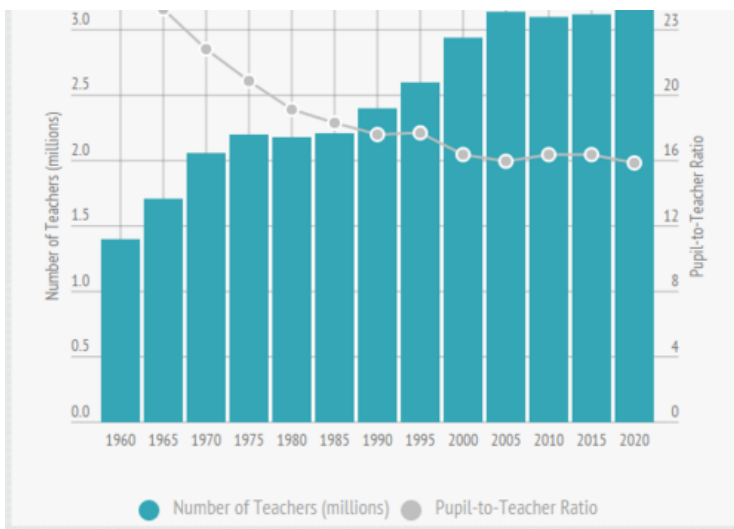
Even if future studies find that the measurement has moved again, the change documented is a little shocking, and shows that it takes a long time and a lot of effort to understand where and when and how teachers move. The new data don't necessarily reduce the need **to understand and address teacher attrition**, but it does help clear up what turned out to be a major misconception.

### Chart #2: Teacher Shortages

This summer, as schools looked to fill teacher vacancies, some folks looked at teacher-prep enrollment numbers and came to a conclusion: That there is a national teacher shortage, and \_\_\_\_\_ is to blame for it. Subsequent examinations, both here and in other outlets, have shown that **"national teacher shortage" is a red herring**, indifferent to the reality that education is still very local and reasons for shortages of any one kind may vary.

There are **persistent teacher shortages** in some forms, such as in certain subject areas, in rural locations, and in non-white demographics, among others. But in terms of sheer quantity? The teacher-to-student ratio is about as good as it's ever been, as you can see in this chart published in *Education Week* this past August based on data from the National Center for Education Statistics:

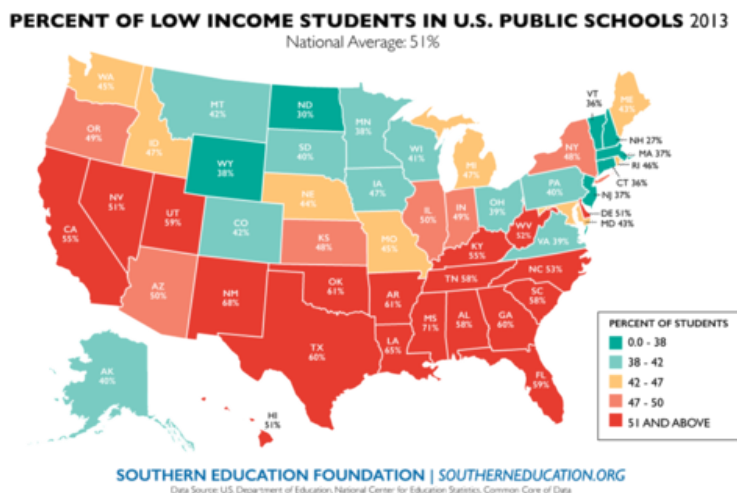




Teacher-prep numbers aren't the same as the overall teaching supply. An important part, yes, but not the whole story.

**Chart #3: Student Poverty**

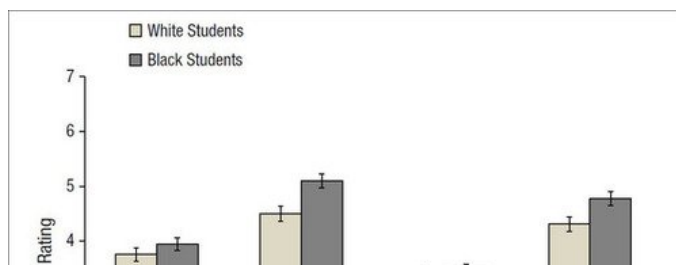
In a study released last January, the National Center for Education Statistics published a sobering statistic: As of 2013, 51 percent of public school students qualified for free-and-reduced-price meals, a common indicator of low-income families. That's up from 32 percent in 1989. Here's a state breakdown:

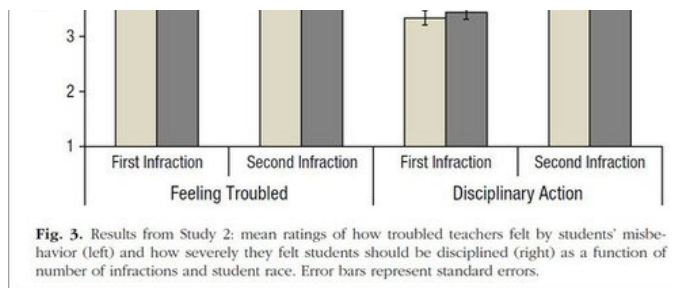


The stressors that come from low-income life—worries about security, mental and physical health, etc.—affect instruction every day. For teachers, this chart represents a frank assessment that those struggles are only growing at present.

**Chart #4: Discipline Bias**

In April, researchers at Stanford University conducted an experiment to see **how teachers would respond to behavioral issues** based on a student's race. But rather than just look at responses to first infractions, the study also examined responses to second infractions. In doing so, they found that while teachers are more likely to discipline a child of any race for a second violation, the discipline rate is higher for black students than white students.



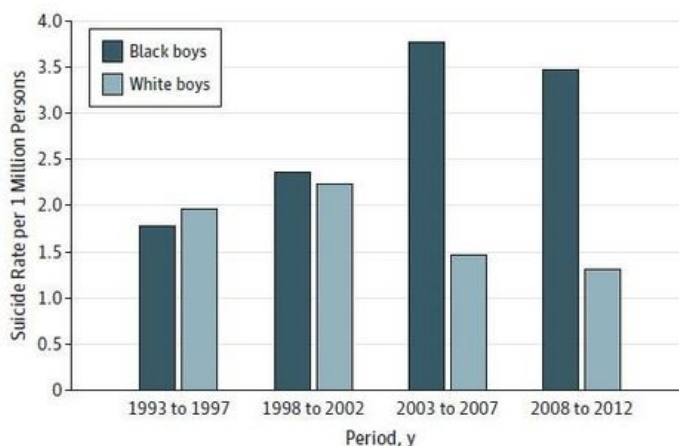


This isn't the first study to delve into racial bias among teachers, nor will it be the last. **Bias is an ongoing issue in education**, and studies like these can serve as valuable reminders to acknowledge a problem.

**Chart #5: Suicide**

Over the past two decades, the suicide rate for children ages 5-11 held fairly constant. But that's because a drop in the suicide rate among white children corresponded to **a significant jump in the suicide rate** for black children, according to a study by the Nationwide Children's Hospital published in May.

**Figure 1. Suicide Rates Among White and Black Boys Aged 5 to 11 Years in the United States Between 1993 to 1997 and 2008 to 2012**



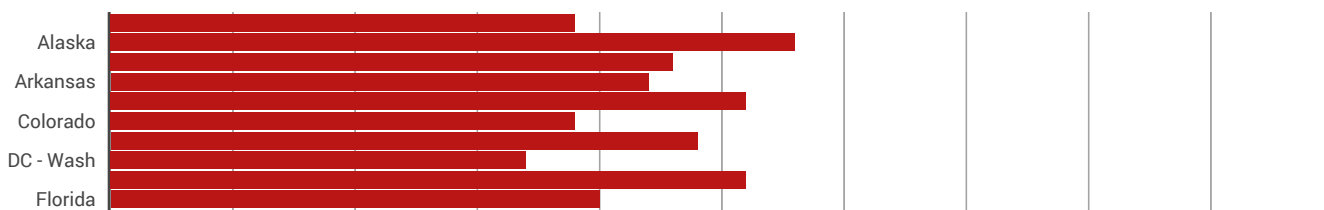
"Our findings suggest questions about what factors might influence increasing suicide rates among young black children," the researchers concluded. "Black children may experience disproportionate exposure to violence and traumatic stress and aggressive school discipline."

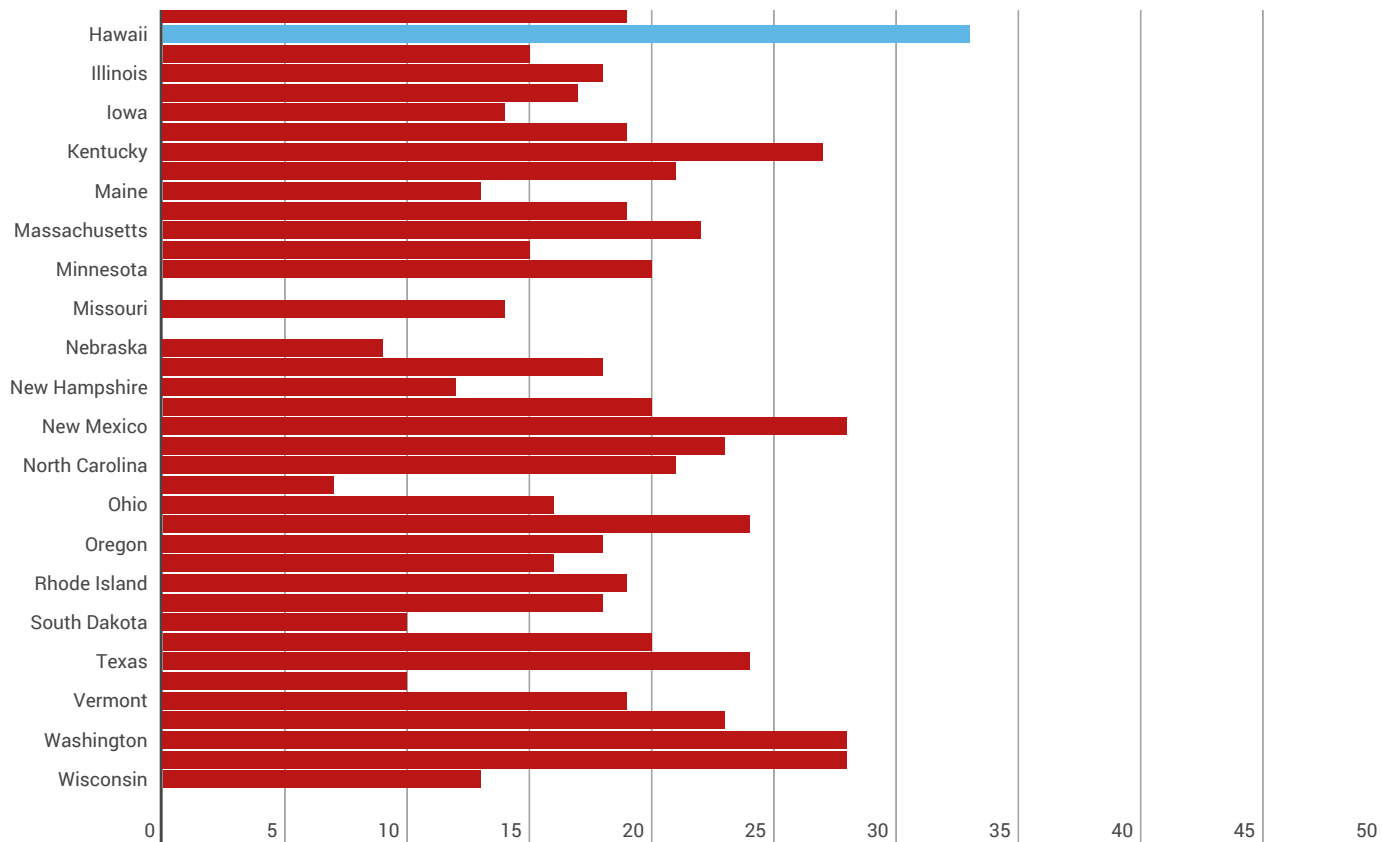
**Charts #6 and #7: Progress-ish**

In 2015, 10 states had fewer than 10 girls **take the AP Computer Science exam**. No girls took the exam in Mississippi, Montana, or Wyoming. Actually: No one took the exam in Montana at all. (It's called the Big Sky state, not the Big Sci state, people forget that.)

There is still a big gender disparity, although some states show gains. In Hawaii, a full third of test-takers were also girls:

## Percent of 2015 AP Computer Science Test-Takers Who Are Female, By State





Source: The College Board and Barbara Ericson, Georgia Tech

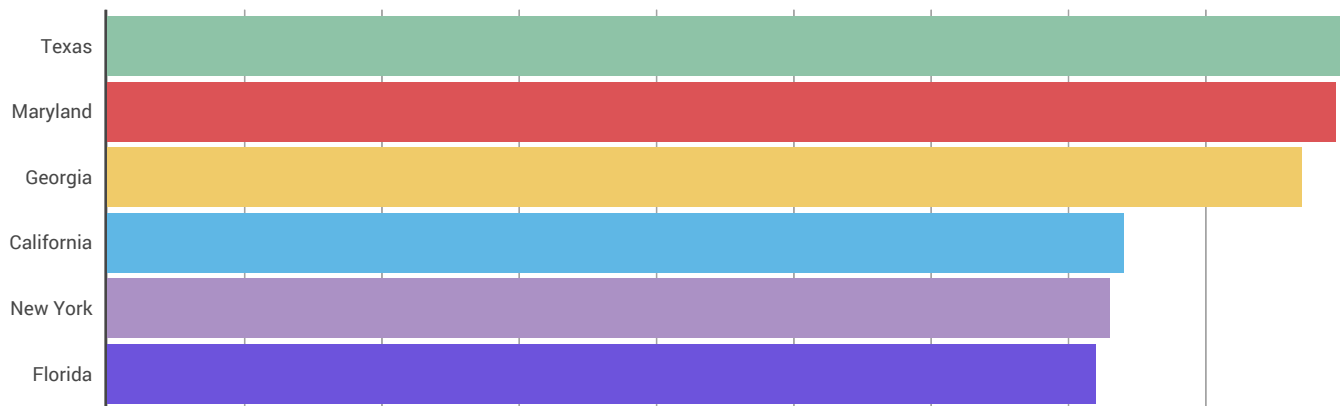
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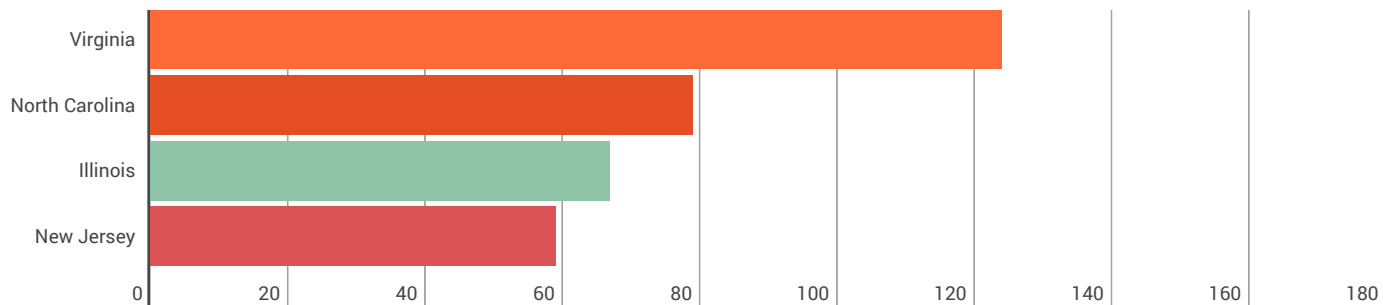
Fun fact: In four states (Alaska, Iowa, Kansas, and Wisconsin) girls performed better than boys on the 2015 AP Computer Science exam; indeed, in Iowa, all 24 girls who took the exam passed.

There was also some good news on black students, as pass rates on the exam went up in several states (although not everywhere). But there were nine states where no black students took the AP exam at all. Another disparity: The District of Columbia had the largest percentage of black test-takers, at 22 percent—but about half the district is black students.

## Top 10 States for Number of African-American Test-Takers

○ # African-American Students Who Took 2015 AP Computer Science Exam ○ Pass Rate for African-Americans





Source: The College Board and Barbara Ericson, Georgia Tech

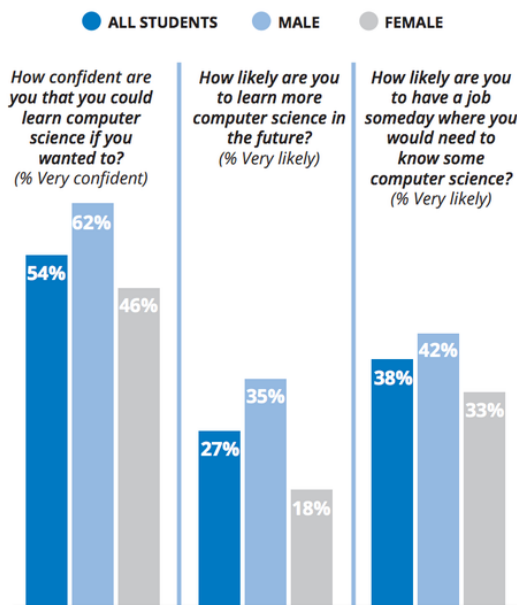
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### Chart #8: Girls and Computer Science, Redux

Why might girls not be invested in computer science? Confidence is one possible culprit. According to a Gallup poll commissioned by Google and published in November, **girls are less likely to feel confident about their computer science skills** than boys:

Figure 7.

#### CONFIDENCE AND LIKELIHOOD TO LEARN AND WORK IN COMPUTER SCIENCE



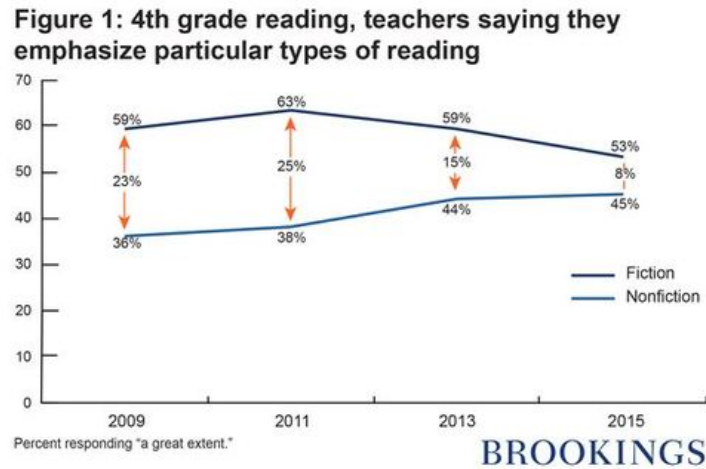
The Gallup poll also found a dearth of computer science role models in film and television who were women or people of color. I recommend Arrow's Curtis Holt and Felicity Smoak:



Then again, maybe students can find role models in their own classrooms ...

### Chart #9: The Rise of Non-Fiction

The Common Core State Standards promised an emphasis on non-fiction, and NAEP data indicate that this emphasis may be delivering. According to a study from the Brookings Institution, the **gap between non-fiction and fiction has narrowed** to its smallest point yet:



The non-fiction push **continues to be a sore spot**; many English teachers say they've had to abandon classic literature—or worse, use snippets—in order to teach more non-fiction, while supporters of the movement say non-fiction is meant to **include all classes**, like science and math.

**See also:** [The Teaching Profession in 2014 \(in Charts\)](#)

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 [Follow Ross Brenneman on Twitter for more news and analysis of the teaching profession.](#)

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