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U.S. Teacher Shortages—Causes and Impacts

As students prepare to return to school this fall, many school administrators are reviewing their teacher workforce and voicing concerns that there are still not enough fully-prepared teachers to meet the need.

Teacher shortages have become an increasing problem since the Great Recession when, to balance budgets, many jurisdictions reduced their teacher workforces. Since then, low teacher salaries (relative to other professions), lack of adequate teacher preparation, lack of administrative support, and challenging working conditions (especially in schools serving large numbers of low-income families) have [driven many teachers out of the profession](#) and dissuaded people from joining.

Teacher turnover and shortages are among the most critical issues in education: Teachers are the number one in-school influence on student achievement and research shows that poor-quality teaching disrupts learning and has a negative impact on students' ability to graduate from school college- and career-ready.

Because of this, the Learning Policy Institute has conducted extensive research into the teaching profession, including teacher shortages. Below are some of our research data on this crucial topic.

The Teaching Pipeline

- Between 2009 and 2014, teacher education enrollments dropped from 691,000 to 451,000 — a 35% reduction. This amounts to a decrease of almost 240,000 professionals on their way to the classroom in the year 2014, as compared to 2009. [Source](#)
- Only 5% of the students in a recent survey of those taking the ACT college entrance exam were interested in pursuing a career in education, a decrease of 29% between 2010 and 2014. [Source](#)

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Underqualified Teachers

- At the start of the 2017 school year, more than 100,000 classrooms across the country were staffed by teachers not fully qualified to teach. [Source](#)
- National studies of teacher retention indicate that around 20–30% of new teachers leave the profession within the first five years. One effective intervention to address this drop-off is teacher residencies. Studies of teacher residency programs consistently point to the high retention rates of their graduates, even after several years in the profession. The rate of teacher residency graduates who stay in the same district for more than three years ranges from 80–90%, and 70–80% after five years. [Source](#)
- If a new teacher receives mentoring, collaboration, and extra resources, and is part of a strong teacher network, first-year turnover is cut by more than half (from 41% to 18%). But just 3% of beginning teachers had such a comprehensive set of supports in 2012. [Source](#)

Teacher Attrition

- While shortages tend to draw attention to recruitment issues, 90% of open teaching positions are created by teachers who leave the profession and about 2/3 of those teachers leaving are doing so before they are eligible for retirement. [Source](#)
- Roughly 6 of 10 new teachers hired each year are replacing colleagues who left the classroom before retirement. [Source](#)
- Compared to high-achieving jurisdictions like Finland, Singapore, and Ontario, Canada — where only about 3–4% of teachers leave in a given year — U.S. teacher attrition rates are quite high, hovering near 8% over the last decade. [Source](#)
- New teachers leave at rates of somewhere between 19% and 30% over their first five years of teaching. [Source](#)
- Urban districts can, on average, spend more than \$20,000 on each new hire, including school and district expenses related to separation, recruitment, hiring, and training. A 2007 study estimates a national price tag of over \$7 billion a year. With inflation, these costs would be more than \$8 billion today.

To calculate the cost of replacing teachers in your school or district, you can use this [online tool](#).

Teacher Turnover

- Turnover rates are 70% higher for teachers in schools serving the largest concentrations of students of color. [Source](#)
- Turnover rates are 50% higher for teachers in Title I schools, which serve more low-income students. Mathematics and science teacher turnover rates are nearly 70% greater in Title I schools than in non-Title I schools, and turnover rates for alternatively certified teachers are more than 80% higher. [Source](#)

Teacher Turnover (cont'd)

- Recent data show teacher turnover rates reaching nearly 25% among teachers who strongly disagree that their administrator encourages and acknowledges staff, communicates a clear vision, and generally runs a school well. [Source](#)
- Teachers at schools with the greatest proportion of students of color move to other schools or leave teaching at a rate 50% higher than teachers in schools with the fewest students of color. [Source](#)
- Teachers of color, who disproportionately teach in high-minority, low-income schools and who are also significantly more likely to enter teaching without having completed their training, have higher turnover rates than White teachers overall (about 19% versus about 15%). [Source](#)
- Total turnover rates (which include both movers and leavers) are highest in the South (16%) and lowest in the Northeast (10%), where states tend to offer higher pay, support smaller class sizes, and make greater investments in education. [Source](#)
- Controlling for other factors, teachers in districts with the highest salary schedules are 31% less likely to leave their schools or the profession than teachers in districts with poorer pay scales. [Source](#)

Impact on Students

- Turnover impacts the achievement of all students in a school, not just those with a new teacher, by disrupting school stability, collegial relationships, collaboration, and the accumulation of institutional knowledge. [Source](#)
- According to one study examining the impact of turnover by grade level, students in grade levels with higher turnover scored lower in both English language arts and math. The effects of turnover were stronger in schools with larger numbers of low-performing and African American students. [Source](#)

If you are working on a story on teacher shortages and are looking for an expert to discuss the research in this area, please contact Barbara McKenna via phone at [202.798.5595](tel:202.798.5595) or by [email](#).

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About the Learning Policy Institute

The Learning Policy Institute conducts and communicates independent, high-quality research to improve education policy and practice. Working with policymakers, researchers, educators, community groups, and others, the Institute seeks to advance evidence-based policies that support empowering and equitable learning for each and every child. Nonprofit and

nonpartisan, the Institute connects policymakers and stakeholders at the local, state, and federal levels with the evidence, ideas, and actions needed to strengthen the education system from preschool through college and career readiness.