

Third in a series

THE CHANGING WORLD OF
TEACHERS
AND TEACHING: HOW
WISCONSIN
NEEDS TO ADJUST



**Subject by subject, Wisconsin
districts face higher rates
of teacher turnover**

By Wyatt Eichholz

Subject by subject, Wisconsin districts face higher rates of teacher turnover

Third in a series on the changing world of teachers and teaching. For previous reports, see [Wisconsin student enrollment and teacher staffing trends](#) and [To what extent are school districts losing teachers they want?](#)

By Wyatt Eichholz

The contention that teachers in Wisconsin are in short supply and high demand at first seems counterintuitive.

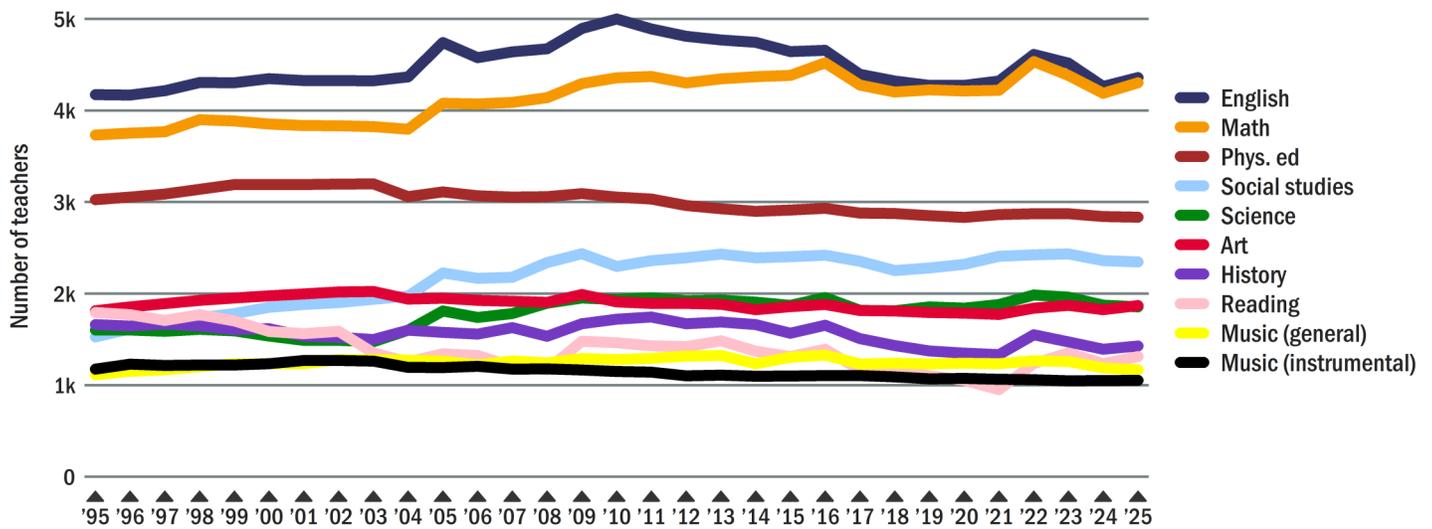
The number of teachers statewide was about 59,000 in the 2024-25 school year, the latest year for which data is available, almost the same as it was in 2011-12. Meanwhile, student enrollment has declined significantly over that time, so that the number of teachers per 100 students, when looked at in aggregate across the state, is higher than it has been in at least 15 years.

Prior Badger Institute research points out, however, that teachers are leaving their schools at higher rates than they have in more than 25 years. Some exit public education altogether to pursue either private opportunities or an entirely different career. Many others are transferring between districts. These two motives for leaving constitute turnovers.

Transfers between districts, a subset of turnovers, are generally much higher than they were historically. Prior to 2009-10, the rate of transfer was between 1 percent and 1.6 percent. Starting in 2009-10, transfers began to steadily climb. The average transfer rate from 2013-14 to 2019-20 of 4.4 percent was 3.6 times greater than the historical baseline. Recent upticks in turnover have pushed it even higher to 5.6 percent in 2023, though it has regressed back to 4.5 percent in the latest data.

This paper will put turnover and transfer rates under the microscope and examine trends by district, subject area and grade level. Rates of turnover among teachers in core subjects such as English, math and science exceeded 15 percent in the 2022-23 school year — higher than any year since at least 1996.

Teachers by subject area over time



Source: Wisconsin Department of Public Instruction



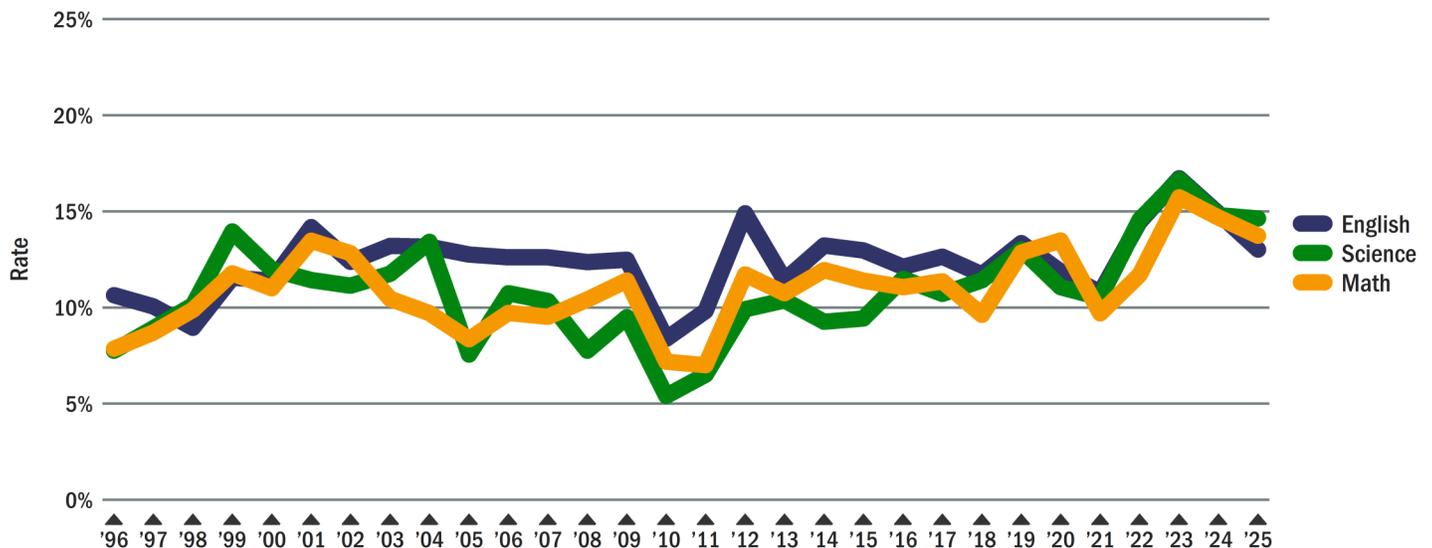
Headcount by subject area

While the Wisconsin Department of Public Instruction specifies dozens of unique “subject area” codes, most teachers are assigned to work in common subjects such as English, mathematics, history, science and the like. Statewide, the total faculty headcounts for subjects with the greatest number of teachers have been generally decreasing in recent years, though a few subjects are notable exceptions.

The number of English teachers in the state peaked at 5,001 in 2010 but fell to 4,360 by 2024-25. The number of math teachers in the state reached 4,521 in 2016, and was as high as 4,535 in 2022, but it dipped in 2023-24 to just under 4,200 and increased to only 4,305 in 2024-25. Art and history teachers have both been in decline, as have reading teachers.

Two major exceptions to this trend are science and social studies. Teacher headcounts in both subjects generally increased in the 2000s and plateaued in the 2010s, when other

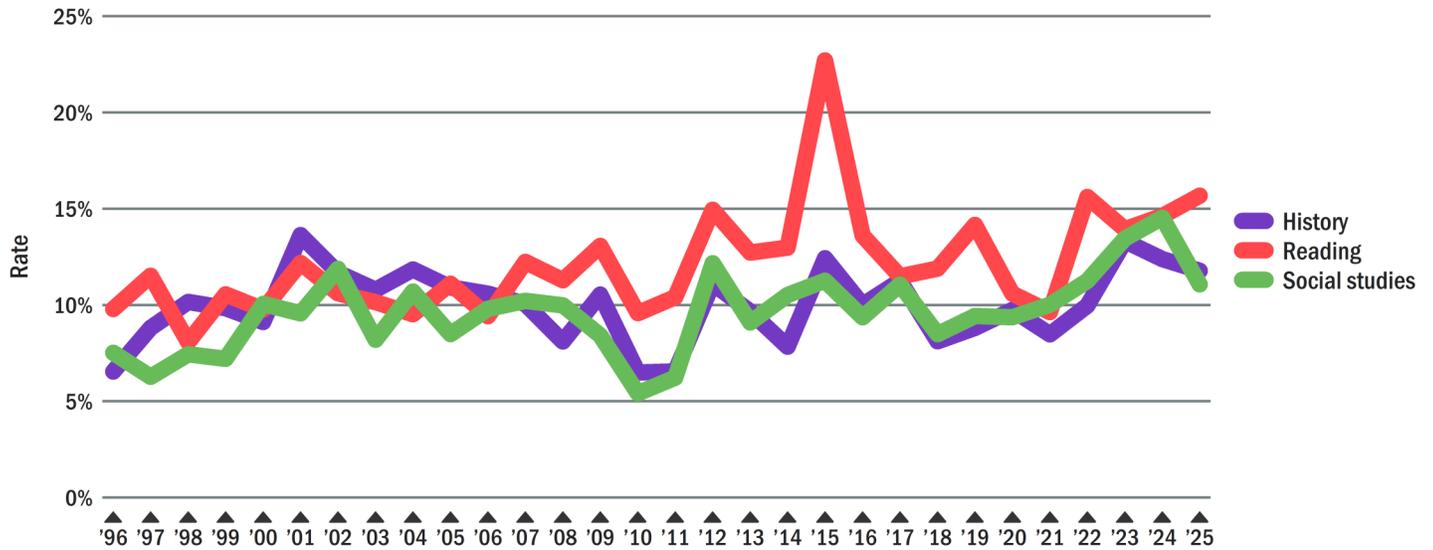
Average district-level turnover rate: English, science and math



Source: Wisconsin Department of Public Instruction



Average district-level turnover rate: history, reading and social studies



Source: Wisconsin Department of Public Instruction



subject areas were declining.

Recently released numbers for 2024-25 show that for some subjects like English, math, art, history, and reading, teacher headcounts have increased slightly over the prior year.

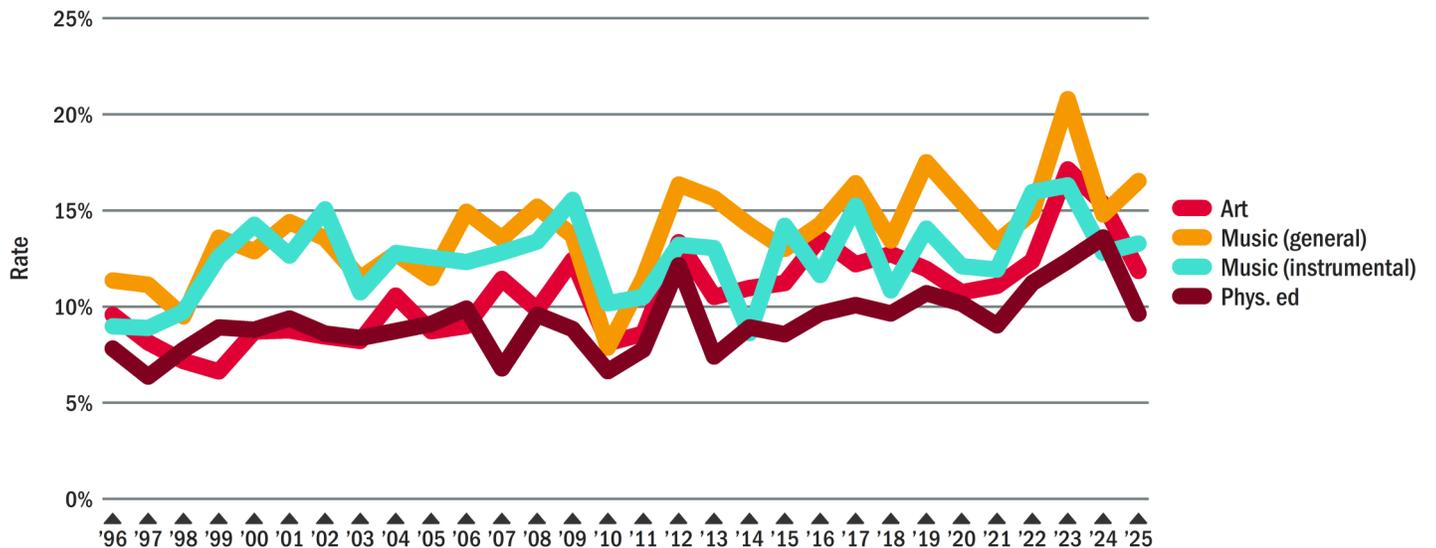
Turnover by subject area

Turnover rates have been generally increasing across all subject areas since 2010.

Among math teachers, the rate of turnover rose from 7 percent in 2010-11 to 15.7 percent in 2022-23. By 2024-25, the rate decreased to 13.7 percent. Turnover among science teachers bounced from 5.4 percent in 2009-10 to 16.7 percent in 2022-23, before receding back to 14.6 percent in 2024-25. English teacher turnover went from 8.9 percent in 1997-98 to as high as 16.7 percent in 2022-23, though it has come down slightly to about 13 percent in 2024-25.

The general pattern also shows up for history and social

Average district-level turnover rate: art, music and physical education



Source: Wisconsin Department of Public Instruction



studies teachers: from 6.5 percent to 12.4 percent for history, and from 7.5 percent to 14.5 percent for social studies. Additionally, art teachers appear to follow a trend of steadily increasing turnover over the entire period, growing from low of 7.2 percent in 1998 to a high of 17.1 percent in 2022-23. Turnover for general music teachers reached 20.8 percent in 2022-23 and was still as high as 16.5 percent in 2024-25.

Turnover among reading teachers deviates from the general trend with a spike in turnover rates in 2014-15 to 23 percent, before falling back down to around 11 percent in 2016-17. It has climbed since then to 15.7 percent in 2024-25.

Subject turnover by district size

The size of a school district seems to make a difference for turnover rates by subject, as it did for turnover on the whole in prior Badger Institute research. While small districts have decreased staffing on average, not all departments are affected equally. Small district teacher-to-student ratios have generally diverged from medium and large districts due to disproportionately large declines in enrollment.

Many smaller districts are located in rural areas where populations are declining. Price, Wood and Rusk counties, predominantly rural areas, have seen some of the largest drops in population. The Wisconsin county with the largest decrease in population was Milwaukee County, where the Milwaukee Public Schools district has seen dramatic decreases

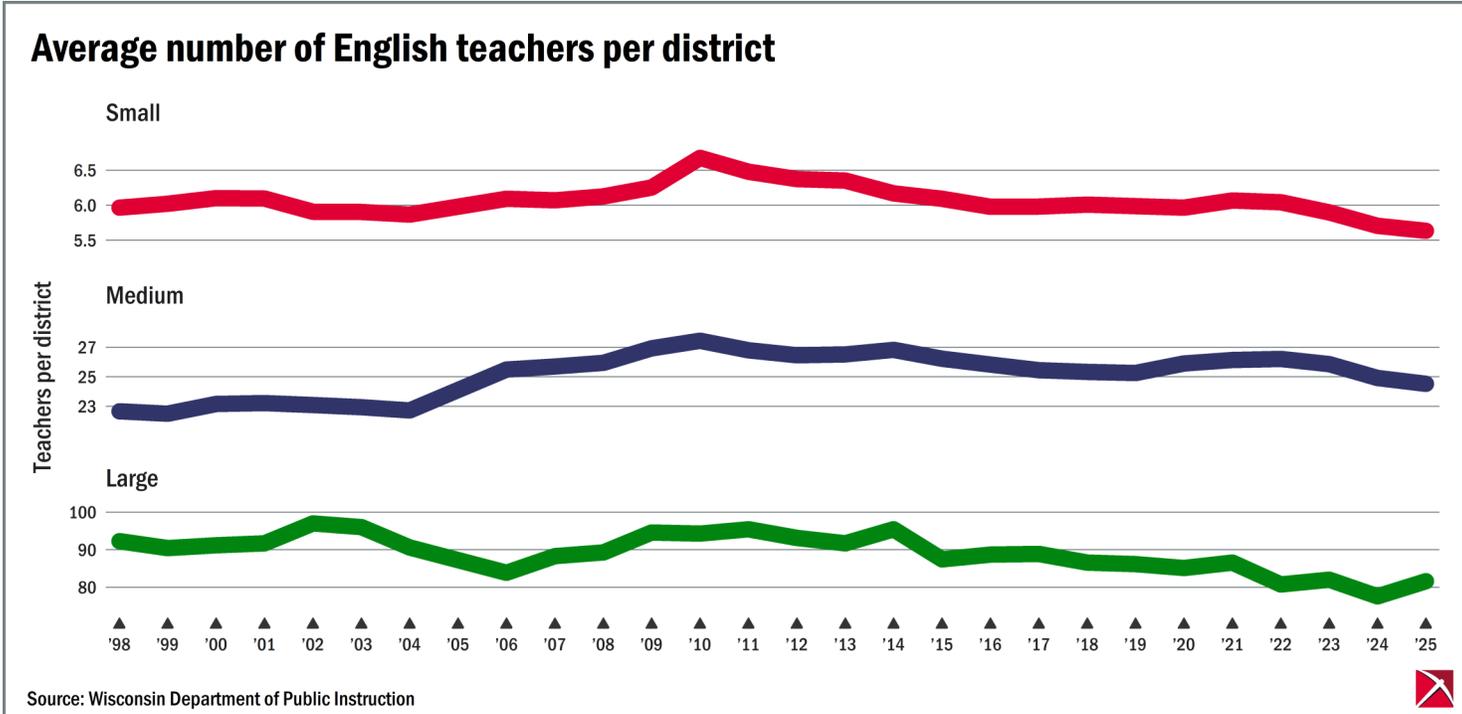
in enrollment.

For this report, we categorize districts as being small if they have 3,000 or fewer students, as medium for those districts with between 3,000 and 10,000 students, as large for those with between 10,000 and 50,000 students. Milwaukee Public Schools, with more than 60,000 students, is the only district in the “giant” category.

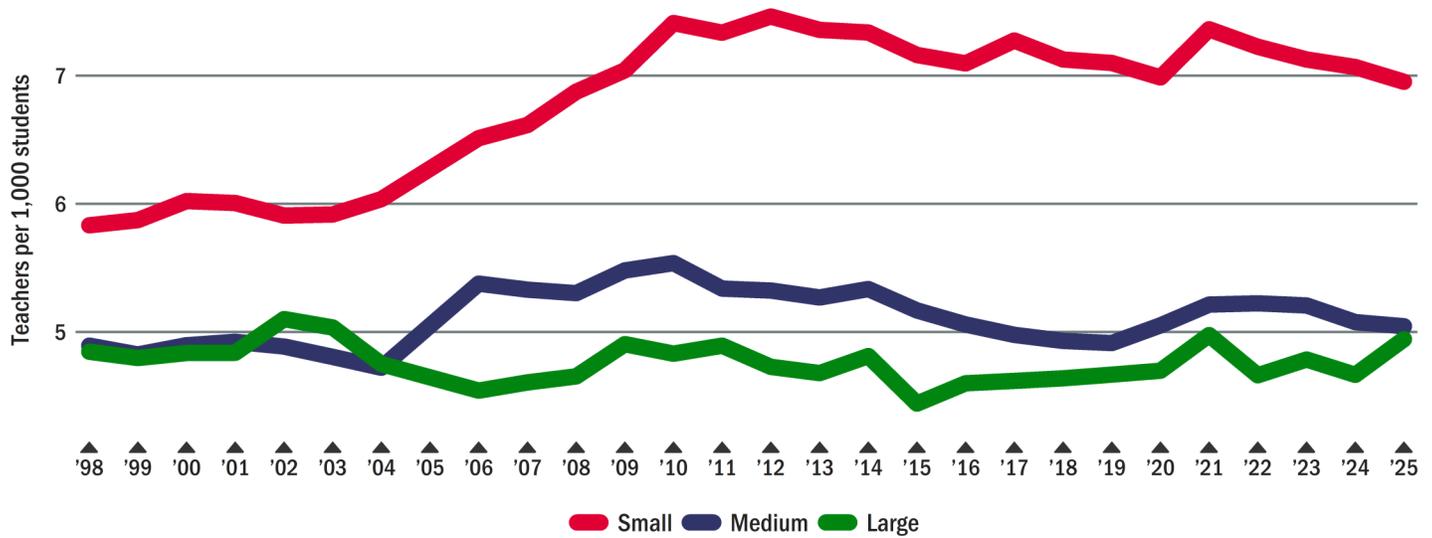
English

Among small districts, the average number of English teachers rose from about 6 in 1997-98 to 6.67 in 2009-10 but has declined steadily since to 5.71 in 2023-24. The average medium district followed a similar trend, increasing from around 23 English teachers in 2003-04 to a high of more than 27 in 2009-10 before trailing downwards. For large districts, the average number of English teachers has similarly decreased since the 2013-14 school year.

For medium and large districts, this decline has still been somewhat proportional to the decline in enrollment: The number of English teachers per 1,000 students in these districts has hovered around 5 on average. Small districts, on the other hand, saw the ratio of English teachers per 1,000 students rise substantially from around 6 to more than 7 before stabilizing. This suggests that even as the average district cut its English department from year to year, as shown in the graph above, enrollment in small districts declined faster.



English teachers per 1,000 students



Source: Wisconsin Department of Public Instruction



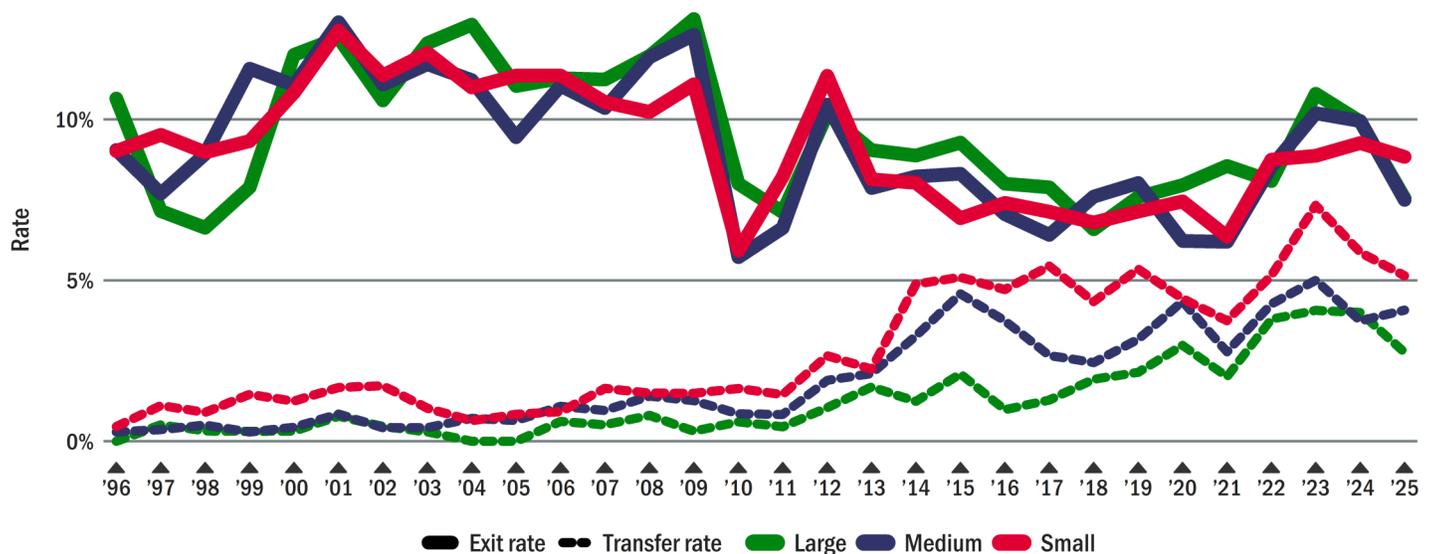
A detailed look at the components of English teacher turnover reveals several remarkable trends. First, over the long term, the rate of teachers exiting the profession (shown with solid lines) has generally decreased across all district sizes, while transfer rates (shown with dashed lines) have steadily risen. The highest rate of transfers is among teachers in small districts. Exit rates in the years following the COVID-19 pandemic began to tick upward across all districts, reversing decades of decreases, but those rates have been in decline over

the past two years.

Math

Both small and medium districts saw the number of math teachers on staff increase from 2003-04 to about 2021-22. The average small district went from fewer than 5.25 teachers to about 6, while the average medium district went from around 20 to more than 25. Both categories have seen these average levels decline in the past few years. For large dis-

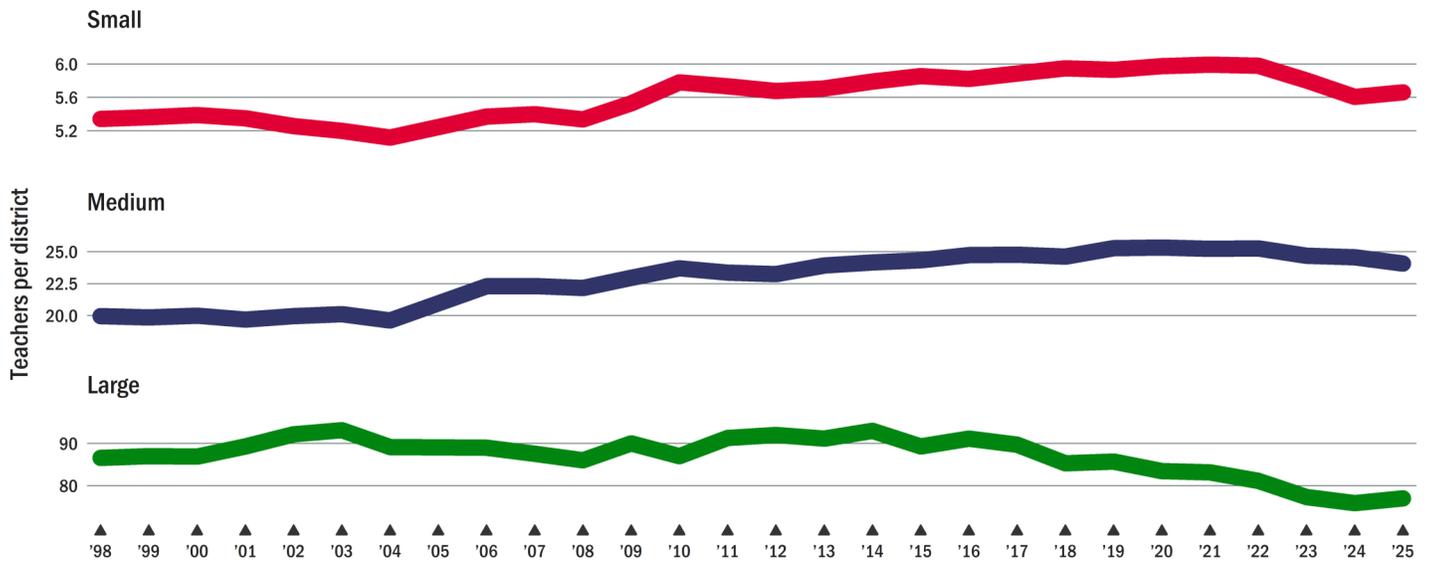
English teacher exit and transfer rates by district size



Source: Wisconsin Department of Public Instruction



Average number of math teachers per district



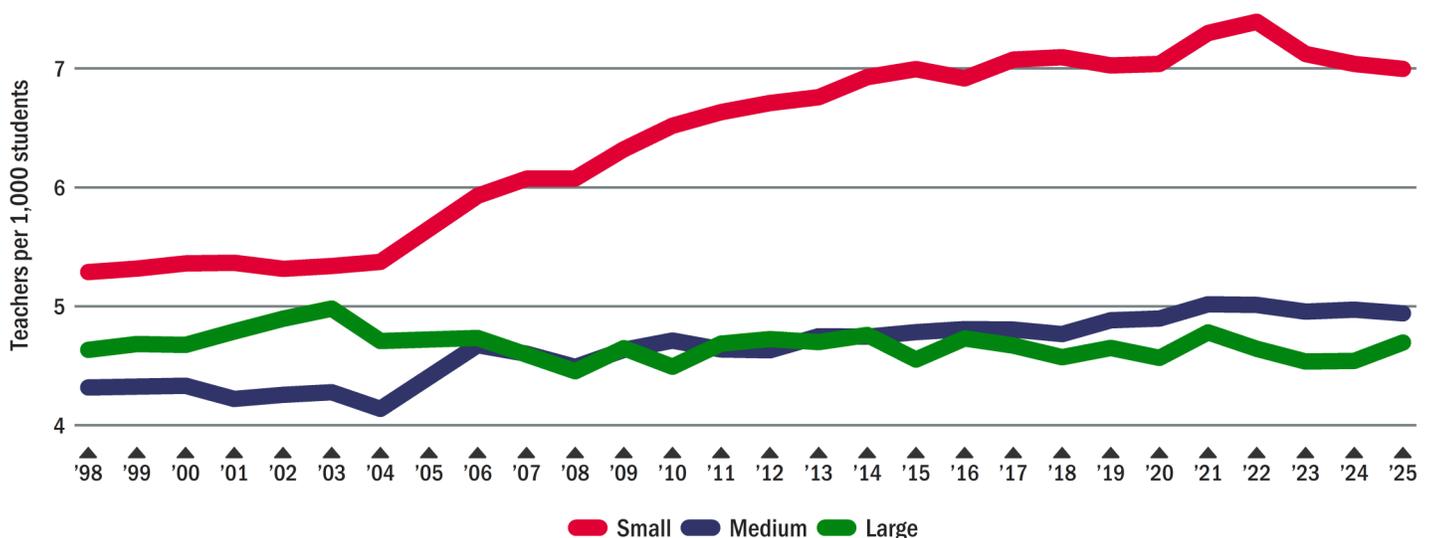
Source: Wisconsin Department of Public Instruction

tricts, math departments reached an average peak of more than 90 in 2002-03. Headcounts hovered around that level until 2013-14 but have been in decline until this most recent year, when they ticked upward slightly.

As in English, large districts have decreased their math departments in proportion to dropping enrollment, so that the ratio of teachers per 1,000 students has remained steady. For small districts, the ratio has risen from just over 5 to around 7.

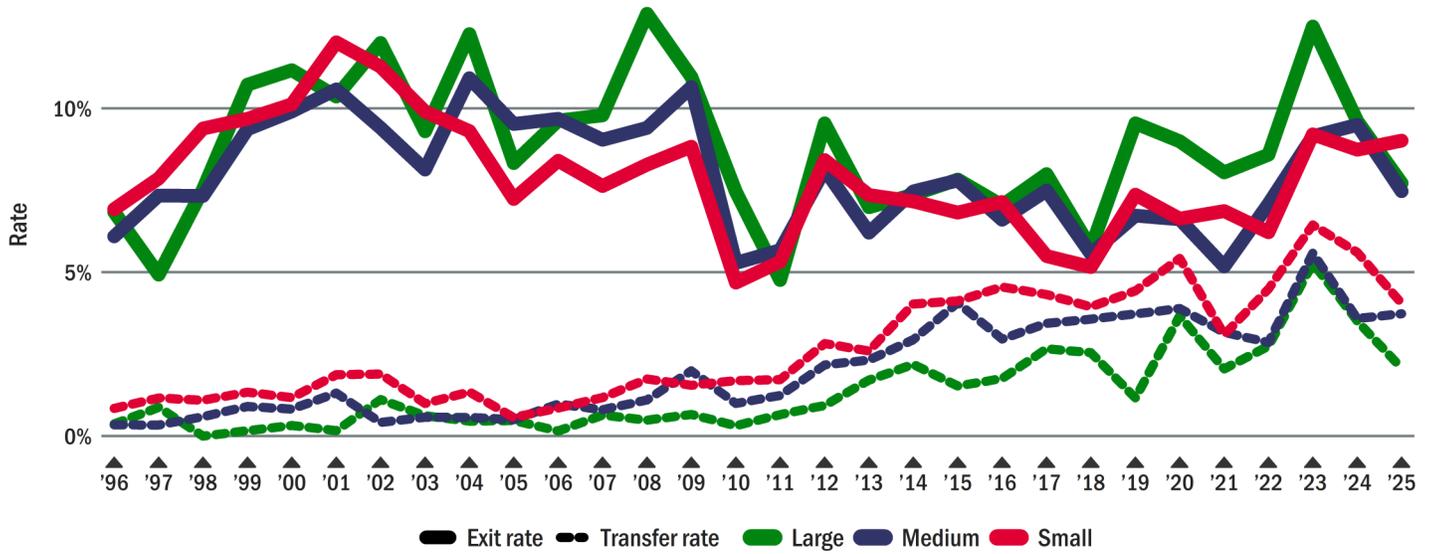
Analysis of math teacher turnover shows patterns similar to English teachers. First, exit rates have generally fallen while transfer rates have generally increased. Small districts experienced noticeably higher transfer rates but their exit rates were in line with the exit rates of larger districts. In the years following the pandemic, the exit rate trend reversed course as math teachers were as likely to leave the public school system as they were in 2008 and 2009. In the most recent data, exit rates came down for medium and large districts, and ticked up

Math teachers per 1,000 students



Source: Wisconsin Department of Public Instruction

Math teacher exit and transfer rates by district size



Source: Wisconsin Department of Public Instruction



slightly for small districts. Transfer rates declined for small and large districts, but ticked up slightly for medium districts.

Science

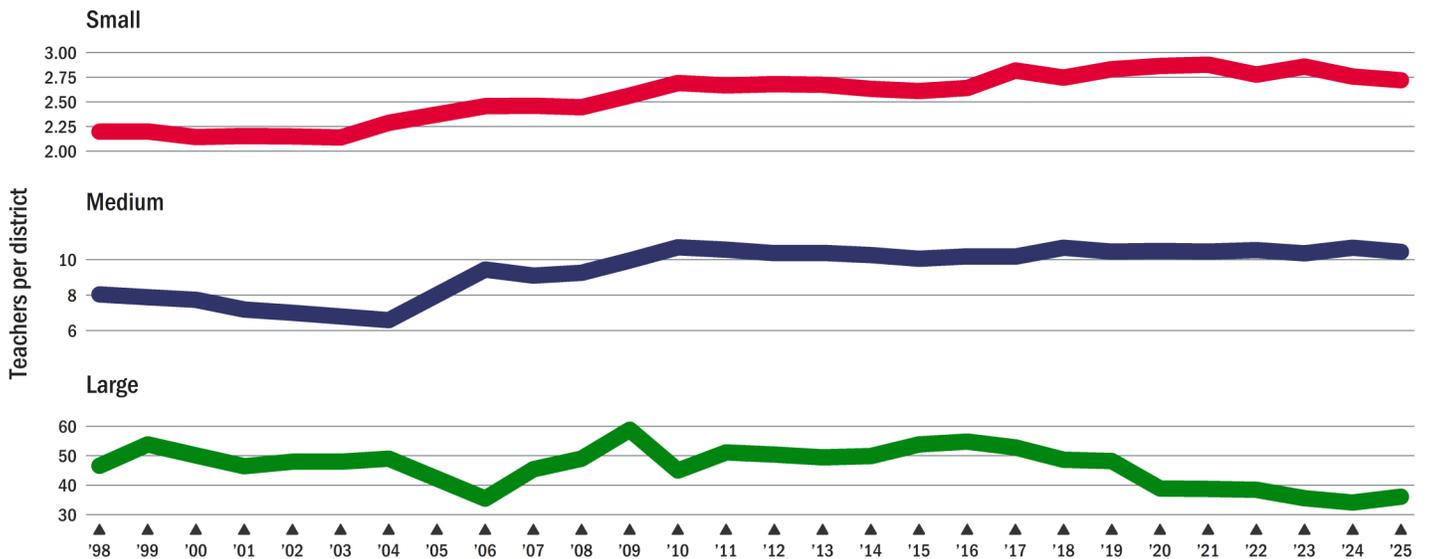
Small and medium districts have increased their science staffs over time. Small districts increased from around 2.2 science teachers on average in 2002-03 to just over 2.7 in 2024-25, while medium districts went from fewer than 7 in 2003-04 to over 10 in 2024-25. Large districts have seen de-

creasing science staffing, from a high of 60 in 2008-09 to around 36 in the most recent school year.

For small districts, this has meant that the average number of science teachers per 1,000 students has increased from 2.5 in 2002-03 to more than 3.5 in the most recent school year. Medium and large districts, however, have mostly stabilized around 2 as enrollment levels have dropped.

Analysis of science teacher turnover shows a noisier trend compared to math and English teachers, due in part to a

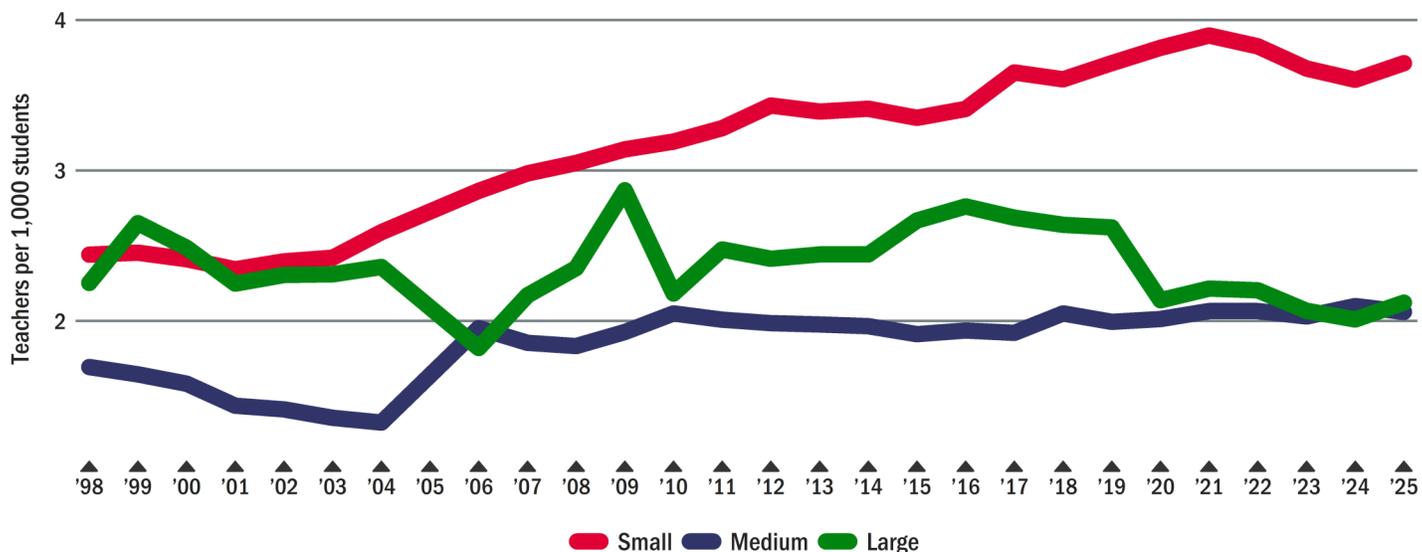
Average number of science teachers per district



Source: Wisconsin Department of Public Instruction

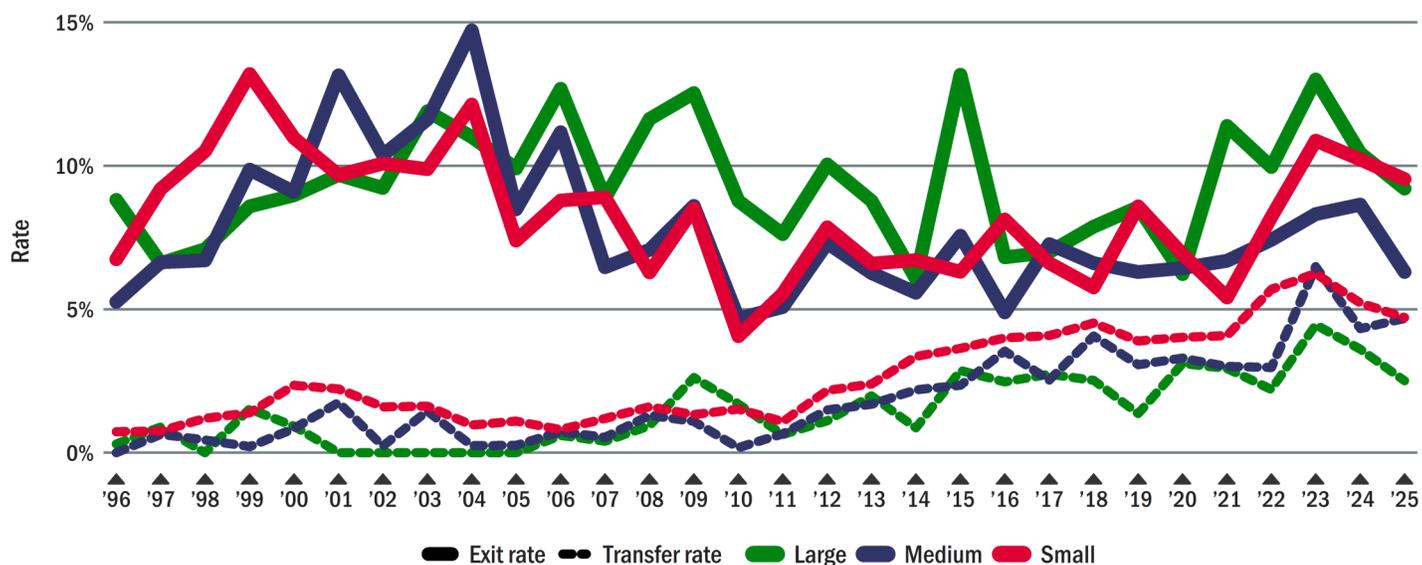


Science teachers per 1,000 students



Source: Wisconsin Department of Public Instruction

Science teacher exit and transfer rates by district size



Source: Wisconsin Department of Public Instruction

smaller sample size. The story is generally the same, though: Transfer rates are on the rise, with small districts suffering losses due to transfers at the highest rates. Meanwhile, exit rates rose after the pandemic as increasing numbers of science teachers from all district sizes are leaving public teaching entirely, but that trend has reversed in the 2023-24 and 2024-25 school years.

Conclusion

Looked at solely through the lens of numbers of teachers per 1,000 students, Wisconsin does not generally appear to have a teacher shortage in comparison to years past. The number of teachers is declining, but in some cases student enrollment is dropping even more precipitously — particularly in small districts.

It is possible that smaller districts generally have a more difficult time consolidating classes or shifting teachers. But in many schools in Wisconsin, there are more teachers for a given number of students today than seven or eight years ago. Where exactly are the shortages then, and why? And is there a problem with quality and retention rather than purely with numbers?

After the pandemic, turnover increased for nearly every subject area. Turnover in core subjects such as English, math and science exceeded 15 percent in 2023, while turnover among art and music teachers went even higher. As our previous reports have shown, the increases in turnover are driven not only by the rate of exits from teaching altogether, but even more by increases in transfers between districts.

Exit rates, meanwhile, while not unprecedented historically, have started to increase in recent years as well — and a key question is why more teachers are leaving the profession altogether.

Teacher quality is a somewhat subjective measure that we will decipher in coming research with a less empirical approach that will include focus groups and individual interviews. We will also delve into the amount of effort school

administrators must devote to finding new teachers and whether policy change could help address challenges.

It is already clear through this analysis, however, that retention and turnover is a significant issue, one that will grow more pressing as public school enrollment continues to decline.

Key questions remain:

- Are transfer rates high because more districts have created a meritocracy and good teachers are, therefore, more mobile?
- Or are teachers, regardless of quality, benefiting from increasingly desperate districts that need bodies in the classrooms?
- Are teachers generally less satisfied with their positions? Or just more in demand?

The Badger Institute will explore these questions on a qualitative level in the near future.



About the author

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He graduated from the University of Alabama in 2024 with a Master of Arts in economics.



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