

Do educational results suffer in schools where there is a high turnover among the teaching staff? **Shqiponja Telhaj** and colleagues explore this question by analysing data from all state secondary schools in England.

Does teacher turnover affect young people's academic achievement?

Hiring and retaining good teachers has been a persistent policy concern in the UK. There is a general belief among researchers and policy-makers that teacher turnover harms school students' achievement. That is why a 2012 report by the House of Commons Education Committee concluded that recruitment and retention of outstanding teachers should be at the top of the educational reform agenda. But there is little known about the impact of teacher turnover on academic attainment.

Teachers gain experience and promotion through job search and changing schools, but this turnover might have a direct impact on young people. Teacher turnover may matter for their achievement because of the variable quality of teachers to whom they are exposed: they might lose a good teacher and gain a bad one, or vice-versa.

Teacher turnover may also matter because it disrupts learning in a number of ways: it can result in a loss of expertise within the school; teaching quality may be affected by the time required for the new teachers to acclimatise and assimilate into a school; and turnover may break continuity in learning as different teachers adopt different approaches and teach in different ways. Relationships between teachers and students may also be weaker.

If teacher turnover does harm learning, then there is a potential case for providing incentives to encourage the retention of teachers or to compensate schools with additional resources when turnover is high.

The lack of appropriate data linking the performance of individual students and schools to teacher turnover has made it difficult to investigate whether high teacher mobility has an impact. Until recently, research on this issue has mainly examined factors associated with higher turnover,

Higher teacher turnover has a moderately negative impact on school students' attainment in their GCSEs

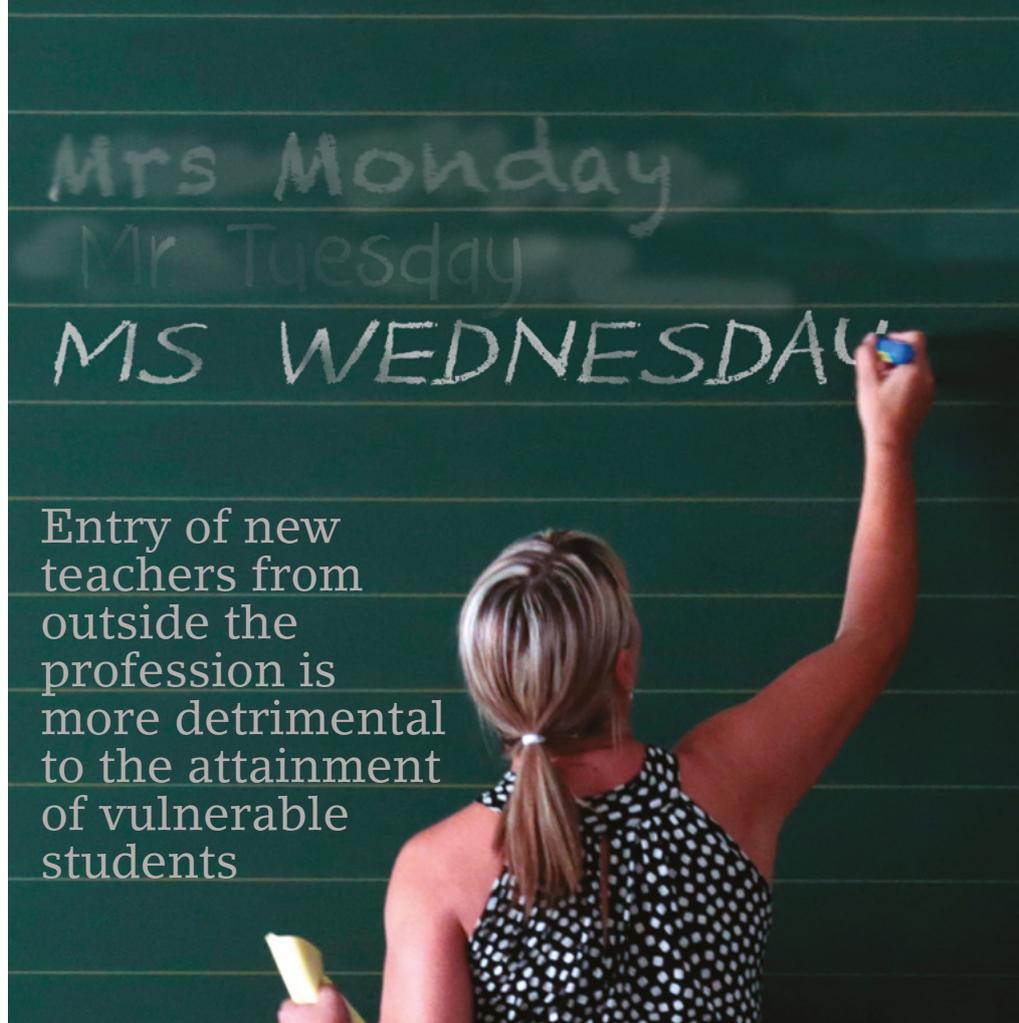
finding that schools serving disadvantaged young people have higher turnover than other schools. It is also worth noting that most of these studies have based their findings on small-scale surveys or cross-sectional data.

The key question we answer in our research is whether (and to what extent) teacher turnover affects academic progress in state secondary schools in England. We use unique administrative data for the period 1995 to 2013 covering all state secondary schools in England. Data on teachers are matched with achievement data for individuals and schools at the end of compulsory schooling at age 16.

To examine the effects of different types of movers, we use alternative measures of teacher turnover: entry from other schools; entry into the teaching workforce; exit from schools; and exit from the profession. We also examine turnover rates by teacher characteristics, age, experience, gender and salary.

We estimate the net impact on academic attainment of school entry and exit rates over two years prior to students taking their final year 11 exams, the General Certificate of Secondary Education (GCSE).

Descriptive statistics suggest that teacher turnover is indeed an issue for state secondary schools in England. Figure 1 reports annual rates of entry and exit between 1995 and 2015. As Panel A shows, entry rates have been consistently high throughout this period. Overall, exit



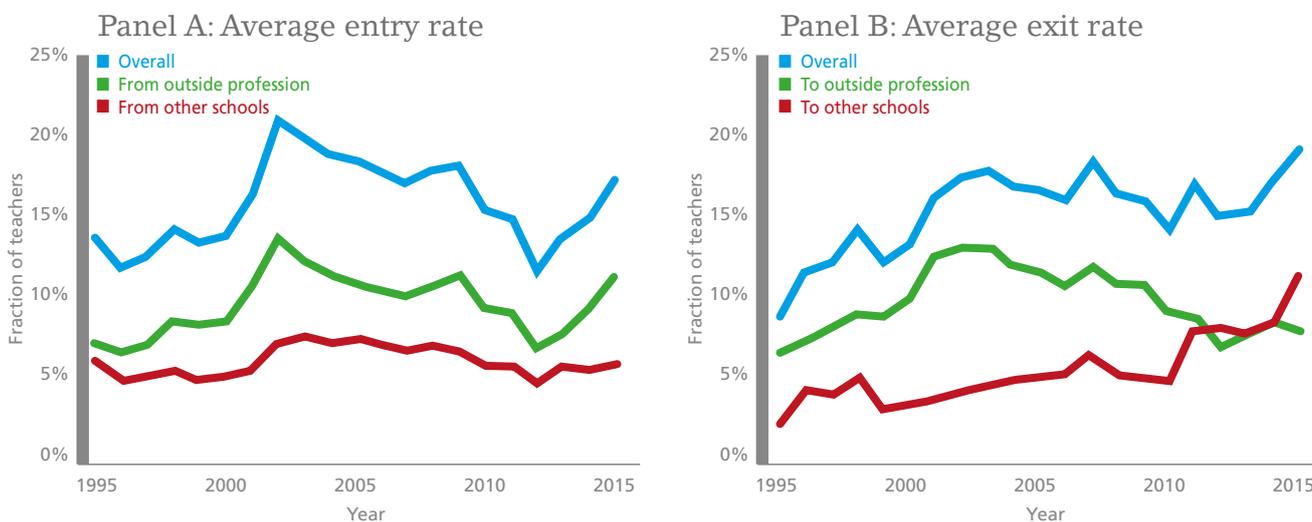
rates (Panel B) show similar patterns, with the number of teachers leaving the profession steadily rising over time too.

Turnover also varies by teacher characteristics: part-time teachers, young teachers and teachers with fewer than five years of experience are the ones who move more. For example, exit rates for teachers with fewer than five years of experience are

about 60% higher than exit rates of more experienced teachers (21% compared with 14%).

Similarly, exit rates for teachers aged between 20 and 29 are almost twice the exit rates of teachers aged between 40 and 49 (19.5% compared with 11.5%). Teachers with the lowest salaries (first and second quartile) move twice as

Figure 1:
Turnover in secondary schools



often as teachers in the two top quartiles of the wage distribution (22% compared with 11%).

As descriptive statistics show, turnover in secondary schools is high, and this makes it more important to establish the effects on academic progress. We employ two measures of attainment: the proportion of students achieving five or more grade A*-C examination results in their GCSEs; and the proportion getting no GCSE passes.

We find a negative association between the proportion achieving five A*-C grades and entry rates in the raw school data: a percentage point increase in entry from outside the profession leads to a decline of 0.5 percentage points in the share of students achieving five or more A*-C in their GCSEs, while a similar increase in entry from other schools is related to a 0.1 percentage point lower share of good GCSE results.

Given that, on average, 58% of students achieved five or more A*-C GCSEs in the period we analyse, these effects are small. This association is further weakened once we control for observed teacher characteristics and other factors affecting school performance. But it remains statistically significant: a percentage point increase in entry from outside the profession and entry from other schools leads, respectively, to a 0.14 and 0.062 percentage point decline. Entry rates are detrimental but the effect remains small when the share of no passes is used as a measure of school performance.

The effect of exit rates on school performance is similar to those of entry rates. But it is worth noting that entry into the profession appears to be more detrimental to the attainment of more vulnerable students. As Figure 2 shows, the effect of entry from other schools and the proportion of entry from outside the teaching profession on GCSE scores is substantially larger in schools in the top quartile of the distribution of students eligible for free school meals.

Effects are, in any case, negative in all quartiles. The effect of entry from outside the profession on achievement of good GCSEs is less clear-cut.

Overall, our findings suggest that teacher turnover does reduce student attainment at GCSE level, even after controlling for teacher characteristics. But the effects are moderate: a percentage point increase in entry from other schools reduces the share of five or more A*-C GCSEs by 0.06 percentage points on average; and entry from outside the profession by 0.14 percentage points. The effects are small relative to overall variation in student attainment, given that 58% of students achieved five or more A*-C GCSEs during this period.

This suggests that targeting teacher turnover per se might not be the most effective policy to improve student performance. But since students from more disadvantaged social backgrounds are the ones affected the most, resources should be directed at retaining teachers in their schools.

This article summarises 'Does Teacher Turnover Affect Student Academic Achievement?', a forthcoming paper by Shqiponja Telhaj, Steve Gibbons and Vincenzo Scrutinio.

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Resources should be directed at retaining teachers at schools in disadvantaged neighbourhoods

Figure 2: The effects of teacher entry from other schools and outside the teaching profession on schools' share of students achieving five or more A*-C GCSEs

