# Physics teacher shortage in deprived UK areas threatens to widen educational inequality



# Deepening Educational Inequality: The Physics Teacher Shortage in Disadvantaged Areas

Recent research indicates that schools in economically disadvantaged areas of the UK are grappling with significant teacher shortages, most notably in subjects critical for future career opportunities, such as physics and computer science. A study conducted by the charity Teach First reveals that approximately **nine per cent** of schools in these regions no longer offer physics A-Level, a stark contrast to just **one per cent** of schools in wealthier areas. Furthermore, this gap extends to computer science, where **31 per cent** of disadvantaged schools have discontinued the subject compared to only **11 per cent** in affluent backgrounds.

This trend poses grave implications for students from lower socio-economic backgrounds, effectively locking them out of fields integral to the country's technological advancement. The findings echo warnings from education leaders about an impending crisis that could deepen inequalities for a generation. "If we do not act now, we won’t just fail these young people — we’ll hold our country back," noted Russell Hobby, chief executive of Teach First, highlighting the urgency of the situation during a recent address.

The data compiled underscores broader national concerns around teacher recruitment crises. While the government has pledged to recruit **6,500 new teachers**, the National Audit Office (NAO) has raised doubts about the feasibility of this commitment, stating that the current projections do not adequately consider existing shortages. The Department for Education has acknowledged that achieving this goal will present a "significant challenge," particularly in schools serving lower-income students where more than **half** of teachers report understaffing.

The situation not only affects physics but extends to other essential subjects. According to the Teacher Tapp survey, **23 per cent** of schools in the most deprived areas do not offer French A-Level, and **17 per cent** lack the capacity to teach music A-Level. This limits students' academic trajectories and hampers their future opportunities, as it appears that **70 per cent** of A-Level physics students originate from just **30 per cent** of schools, with more than **300 schools** sending no students on to physics A-Level at all.

Additional insights from the Royal Society of Chemistry suggest that **48 per cent** of teachers in schools with high percentages of free school meal (FSM) eligibility report understaffing issues. About **42 per cent** of these educators observe high staff turnover, signalling a cycle of instability that affects both teaching quality and student learning experiences. The research indicates that while some teachers express a desire to give back to their communities by working in these schools, it is increasingly clear that systemic issues must be addressed for such motivations to translate into effective educational outcomes.

Moreover, studies from the Institute of Physics emphasise the concerning qualifications gap. In the least affluent regions outside of London, only **17 per cent** of physics teachers possess relevant degrees—compared to more than **52 per cent** in better-funded schools. The Education Policy Institute points to a need for targeted interventions aimed at increasing the number of qualified teachers in these deprived schools, an effort essential for ensuring equitable access to quality education.

As the debate continues around the most effective strategies to bolster teacher recruitment and retention, the emphasis remains on improving pay, conditions, and support for teachers in critical shortage areas. Without decisive action, the disparities faced by students in disadvantaged schools will only worsen, perpetuating a cycle of inequality that will affect generations to come.

## Reference Map:

* Paragraph 1 – [[1]](https://www.dailymail.co.uk/news/article-14688355/schools-poor-areas-physics-teacher-recruitment.html?ns_mchannel=rss&ns_campaign=1490&ito=1490), [[5]](https://committees.parliament.uk/writtenevidence/120781/html/)
* Paragraph 2 – [[1]](https://www.dailymail.co.uk/news/article-14688355/schools-poor-areas-physics-teacher-recruitment.html?ns_mchannel=rss&ns_campaign=1490&ito=1490), [[3]](https://www.iop.org/about/news/state-schools-losing-out-physics-teacher-shortage)
* Paragraph 3 – [[2]](https://www.rsc.org/news-events/articles/2024/feb/tsts-2023/), [[4]](https://epi.org.uk/publications-and-research/the-teacher-labour-market-in-england/)
* Paragraph 4 – [[6]](https://committees.parliament.uk/writtenevidence/120476/html/), [[7]](https://www.iop.org/about/news/response-to-physics-teacher-recruitment-england)
* Paragraph 5 – [[4]](https://epi.org.uk/publications-and-research/the-teacher-labour-market-in-england/), [[5]](https://committees.parliament.uk/writtenevidence/120781/html/)
* Paragraph 6 – [[3]](https://www.iop.org/about/news/state-schools-losing-out-physics-teacher-shortage), [[6]](https://committees.parliament.uk/writtenevidence/120476/html/)

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## Bibliography

1. <https://www.dailymail.co.uk/news/article-14688355/schools-poor-areas-physics-teacher-recruitment.html?ns_mchannel=rss&ns_campaign=1490&ito=1490> - Please view link - unable to able to access data
2. <https://www.rsc.org/news-events/articles/2024/feb/tsts-2023/> - The 2023 Science Teaching Survey, led by the Royal Society of Chemistry and supported by the Institute of Physics and the Royal Society of Biology, highlights significant staffing challenges in schools with high levels of socio-economic deprivation. Over 2,900 educators across the UK and Ireland participated, revealing that 48% of teachers in high free school meal (FSM) schools reported understaffing, compared to 32% in other schools. Additionally, 42% of teachers in higher FSM schools noted high staff turnover, compared to 25% elsewhere. Teachers in these schools often cited a desire to give back to the community as a reason for choosing their school, with 51% in higher FSM schools compared to 18% overall. The survey underscores the disproportionate impact of staffing shortages on disadvantaged students and calls for urgent action to address these disparities.
3. <https://www.iop.org/about/news/state-schools-losing-out-physics-teacher-shortage> - Research from the Institute of Physics reveals that over half (52%) of teachers in mainstream secondary schools report understaffing in physics, compared to only 22% in private schools. The shortage is most acute in England, with 50% of teachers reporting a lack of physics teachers, followed by 46% in Wales and 40% in Northern Ireland. The survey of 2,932 teachers, heads of department, and technicians highlights low morale in the physics teaching profession, with 30% of physics teachers expressing a desire to leave their school by 2025. The report emphasizes the need for a multi-pronged approach to tackle issues across teacher recruitment, retention, and support for established teachers to retrain.
4. <https://epi.org.uk/publications-and-research/the-teacher-labour-market-in-england/> - The Education Policy Institute's report on the teacher labour market in England highlights severe shortages of highly-qualified teachers in disadvantaged schools, particularly in physics. In the most deprived schools outside London, only 17% of physics teachers have a relevant degree, compared to over half (52%) in more affluent schools outside London. The report also notes that in London, the differences in teacher qualifications are less pronounced, with between 40-50% of physics teachers holding a relevant degree, regardless of school deprivation level. The findings underscore the disparities in teacher quality across local authorities and the need for targeted interventions to address these inequalities.
5. <https://committees.parliament.uk/writtenevidence/120781/html/> - Evidence presented to the Education Committee highlights a desperate shortage of physics teachers in the UK, estimating a shortfall of about 6,500 teachers, with many schools lacking a single in-field physics teacher. This shortage disproportionately affects schools in more socially deprived areas, leading to a lower quality experience of physics education for students up to 16. The evidence also points out that 70% of A-level physics students come from just 30% of schools, and at least 300 schools, likely in deprived areas, send no students on to take A-level physics at all. The report emphasizes the equity issue arising from these disparities.
6. <https://committees.parliament.uk/writtenevidence/120476/html/> - A submission to the Education Committee discusses the underrepresentation of students from socioeconomically disadvantaged backgrounds in physics, noting that a student in the lowest socioeconomic status quintile is three times less likely to take A-level physics than someone in the top quintile. The evidence also highlights that 70% of A-level physics students come from just 30% of schools, with at least 300 schools, likely in deprived areas, sending no students on to take A-level physics at all. The submission calls for actions to address these disparities and improve the attractiveness of the teaching profession.
7. <https://www.iop.org/about/news/response-to-physics-teacher-recruitment-england> - The Institute of Physics responds to the Department for Education's annual Initial Teacher Training Census, noting an improvement in physics teacher recruitment from 17% in 2023 to 30% in 2024 of the government's target for trainee physics teachers in England. However, physics still lags behind other subjects, with 119% in biology and 62% in chemistry. The Institute estimates a shortage of around 3,500 physics teachers across England and calls for a clear plan to recruit, retrain, and retain the next generation of physics specialists to address the disparities in access to specialist physics teachers.