

Pioneering study reveals teaching techniques that boost exam performance

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With the exam season in full swing, teenagers taking their GCSEs are hoping their teachers covered everything so they can achieve top marks. The methods teachers use in the classroom could also hold the key to

improving pupils' grades, according to a pioneering report published today.

The study, led by the University of Bristol, sheds new light on the fascinating and elusive question: what makes an effective teacher? For the first time in the U.K., the researchers have identified which [teaching](#) practices drive up [exam results](#) and how different class activities work better depending on the subject.

Lead author Simon Burgess, Professor of Economics, said: "Whether or not you have an effective teacher is by far the most important factor influencing pupils' GCSES, outside of your family background. This unique research unlocks the black box to effective teaching, helping us understand what specific teaching practices are more likely to produce better test scores.

"This is crucial to know as it could also make a dramatic difference to a child's life chances and their potential future earnings."

The team of international researchers analyzed around 14,000 GCSE results of pupils from 32 [secondary schools](#) across the UK, comparing the scores to classroom observation reports spanning two years just before the COVID-19 pandemic on 251 teachers from the same schools.

The research revealed compelling links between GCSE grades depending on teacher effectiveness ratings and class time usage.

The research showed that how teachers used class time had a significant impact on their pupils' results. In fact, typical variations in class activities between teachers accounted for around a third of the total influence of teachers on the GCSE marks of their pupils.

Highly-rated teachers were also shown to have a greater impact on lower-

achieving pupils than higher achievers, a finding with implications for how schools should deploy their most effective teachers.

There were also notable conclusions highlighting how specific teaching approaches are more beneficial for certain subjects.

For instance, the most important activity for English teachers appears to be facilitating interaction and discussion between classmates; more time spent on this tends to raise English GCSE scores. Conversely, for Math teachers, the key activity is making time for pupils to practice questions individually in class; again, more time on this increases GCSE marks.

Assessing the long-term impact, the researchers went on to project how such improvements would enhance pupils' future salaries. The effects are sizeable: the typical change in [class time](#) use considered raised GCSEs and later salaries that generated an additional £150k of lifetime income every year for a class of 30 pupils.

The report, in collaboration with the Oxford Partnership for Education Research and Analysis (OPERA) and Harvard University, forms the basis for a cheap and easy tool which teachers and school leaders can use to identify and improve classroom skills.

Professor Burgess said: "The potential of these findings is huge in both educational and economic terms. This greater understanding of the most effective teaching techniques could be used to help teachers learn and improve their own performance. Now we know the added importance of effective teaching for lower-achieving pupils, the research could also be used to inform and advance the 'levelling-up' agenda, helping underprivileged pupils thrive."

Josh Hillman, director of education at the Nuffield Foundation, said: "We all know that the quality of teaching is extremely important in

raising pupil attainment. But there is surprisingly little hard-edged evidence of the specific characteristics of effective teaching, especially in the U.K. This project makes an exciting contribution by using innovative techniques to analyze a massive dataset of classroom observations and the impact of teaching on young people's later achievements, pathways and destinations. The findings provide a wealth of insights to help [teachers](#) improve their practice and school leaders to better support and deploy their staff."

More information: Characterising Effective Teaching:
[www.nuffieldfoundation.org/wp- ... eport-April-2022.pdf](http://www.nuffieldfoundation.org/wp-...eport-April-2022.pdf)

Provided by University of Bristol

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