Teacher quality: why it matters, and how to get more of it

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Abstract

The educational achievement of a country’s population is a key determinant of economic growth, and so improving educational attainment is an urgent priority for all countries. A number of ways that this might be done have been attempted, including changes to the structure of schooling, to the governance of schools, to the curriculum, and an increased role for digital technology. While each of these approaches has produced some successes, the net impact at system level has been close to, if not actually, zero. In this paper, I argue that the main reason that most system-wide educational reforms have failed is that they have ignored (1) the importance of teacher quality for student progress; (2) the fact that it is highly variable; and (3) that teacher quality has differential impact on different students.

Teacher quality can be improved by replacing teachers with better ones, but this is slow, and of limited impact. This suggests that our future economic prosperity requires improving the quality of the teachers already working in our schools. We can help teachers develop their practice in a number of ways; some of these will benefit students, and some will not. Those with the biggest impact appear to be those that involve changes in practice, which will require new kinds of teacher learning, new models of professional development, and new models of leadership.

Why is teacher quality so important?

Measured on the most culture-free measures of intelligence, such as Raven’s Progressive Matrices, today’s children are more intelligent than their parents and their grandparents. A child who would just have gained entry into a grammar school on the basis of IQ scores at the end of the second world war would today be regarded as below average in intelligence. Furthermore, teaching, at least in the maintained sector is better than it ever has been, and, on average, much higher than is found in the independent sector. This may seem a bold claim, but the evidence is incontestible.

On the tests used in the OECD’s Programme for International Student Achievement (PISA), the gap between students attending private school and those attending publicly funded schools is greater in England than for any other OECD country, but when one controls for the effects of the social class of the student, and the ‘halo effects’ generated by her peers, the difference disappears, suggesting that the quality of teaching is the same in the private and publicly-funded sectors. Except that the average class size in the private sector is 13, and 25 in the public sector. In other words, teachers in the state sector are delivering the same quality of teaching in classes of 25 that their private school counterparts are delivering in classes of 13.
So if young people are so intelligent, and the teaching is so good, why is that employers are so unhappy? The answer is simple. Schools have improved dramatically, but the changes in the world of work have been even more extraordinary.

Over the last ten years, the UK economy has shed 400 no-qualification jobs every single day, and the impact has been particularly sharply felt in the manufacturing industries. Britain still makes things; indeed, the UK is currently the world’s sixth largest manufacturer and the ninth largest exporter. We still make things, but we don’t use so many humans to do so. Some of the jobs that used to be undertaken by humans are now being done by robots, and others are being done in China. In 1978, seven million people worked in manufacturing in the UK. Thirty years later, it was less than three million.

We are, in fact, entering a completely new era. Up until now, productive employment has been available to almost all adults of working age. In other words, whatever their skill level, adults have been able to find jobs in which they add sufficient value for their employers to be able to afford to pay the employees a living wage. Whether this will continue to be the case is by no means certain.

It is as if we are walking up a down escalator. In the past, the rate at which our schools generated skills was greater than the rate at which low skill jobs were being destroyed, so we made progress. But the speed of the down escalator has been increasing. If we cannot increase the rate at which our schools are improving, then, quite simply, we will go backwards.

In the past, we have treated schools as talent refineries. The job of schools was to identify talent, and let it rise to the top. The demand for skill and talent was sufficiently modest that it did not matter that potentially able individuals were ignored. The demand for talent and skill is now so great, however, that schools have to be talent incubators, and even talent factories. It is not enough to identify talent in our schools any more; we have to create it.

Successive governments have understood the importance of educational achievement, and have striven to raise standards, through a bewildering number of policy initiatives. Although most of these seemed like sensible measures at the time, the depressing reality is that the net effect of the vast majority of these measures on student achievement has been close to, if not actually, zero.

We have created specialist schools, which do, to be fair, get better results than non-specialist schools, but they also get more money—£129 per student per year. And by a strange coincidence, the improvement in results we have seen in specialist schools is exactly what we would get if we just gave the schools £129 per student per year. And the results of specialist schools in their specialism are no better than their results in other subjects.

We have created academies, which, again, to be fair, improve their exam results at a faster rate than non-academies, but they also tend to start from a lower baseline—which is why they became academies in the first place. And when we compare the
improvements in the results of academies with other schools starting from similar baselines, we find no difference\textsuperscript{10}.

We have searched for more effective textbooks, and found that in the vast majority of cases, there is no difference\textsuperscript{11}. We have saturated schools with computers even though they have minimal impact on student achievement\textsuperscript{12} and have spent thousands of pounds on interactive whiteboards that, in the hands of experts are stunning pieces of educational technology, but have produced no system-wide improvements\textsuperscript{13}. The national literacy and numeracy strategies were designed to improve the achievement of students in primary schools, but the biggest improvements occurred in the years before they strategies were introduced, and the biggest improvements of all were found in science—the one core subject that did not have a national strategy. The £500m spent on the national roll-out of the national primary strategy resulted in one just one extra student reaching level 4 per school\textsuperscript{14}.

Most recently, we have discovered that the millions of pounds spent on classroom assistants has actually lowered the achievement of the students they were intended to help\textsuperscript{15}.

Under the Conservatives, we are promised a pupil premium, which can be used (according to the election manifesto of the Liberal Democrats) to reduce class size in the early years of primary school for schools serving the most disadvantaged areas. To be fair, the recurrent costs have been estimated reasonably accurately, but class size reduction requires additional teachers, which are likely to be less good than those already serving, and an extra 17,000 classrooms.

Why have we pursued such ineffective policies for so long? Part of the answer lies in the fact that we have been looking in the wrong place for answers.

For many years, it has been known that there are large differences in the achievements of students attending different schools, and for many years, the main policy thrust has been to try to emulate the features of the most successful schools. However, as we have managed to collect better data, it turns out that the biggest difference between so called “good” schools and “bad” schools is the difference in the students attending the schools. Some schools get all their students five good grades at GCSE including English and mathematics, and some get hardly any, but only 7% of the variation between schools on this standard benchmark is due to the effect of the school. The other 93% is due to factors over which the school has no control\textsuperscript{16}.

This is why schools make much less difference than is commonly supposed. In the average school, 15 out of a class of 30 will achieve five good grades at GCSE (including English and mathematics). If those same students went to a so-called “good” school, then 17 out of 30 would reach the same standard, and in a so-called “bad” school, then only 13 out of 30 would do so. It turns out that it doesn’t matter very much which school you go to, but it matters very much which classrooms in that school you are in. And it’s not class size that makes the difference, nor is it the presence or absence of setting by ability—these have only marginal effects. The only thing that really matters is the quality of the teacher\textsuperscript{17}. 

In the classrooms of the best teachers, students learn at twice the rate they do in the classrooms of average teachers—they learn in six months what students taught by the average teachers take a year to learn. And in the classrooms of the least effective teachers, the same learning will take two years. Moreover, in the classrooms of the most effective teachers, students from disadvantaged backgrounds learn just as much as those from advantaged backgrounds, and those with behavioural difficulties learn as much as those without. That is why, as Michael Barber says, the quality of a country’s education system cannot exceed the quality of its teachers.

How do we get better teachers?

In some countries, such as Finland, Japan, and Singapore, teaching is such a high-status occupation that recruitment into the profession is highly selective. For countries in this position, the quality of teacher preparation, and the quality of continuing professional development is almost irrelevant. If you can persuade the smartest people in the country to want to be teachers, you will have a great education system.

For countries not in this position, efforts to raise the status of the profession are essential, but changes in the entrants to a profession take a very long time—typically of the order of thirty years—to work through, and are of limited impact. For example, suppose we could immediately raise the threshold for entry into teaching so that from now on, only those who are better than the lowest performing one-third of current entrants were able to become teachers. Suppose further that despite this raising of the threshold for entry into the profession, we were still able to recruit as many teachers as we needed. The effect of this—over thirty years—would be to increase teacher quality by just 20% of the current gap between teacher quality in Finland and teacher quality in the UK. In terms of exam results, this would result in just one extra student per class passing an exam every three years.

This would be a step change of unprecedented size in terms of the recruitment to the profession, and yet it hardly makes a dent in the challenge. Our future economic prosperity therefore requires that as well as improving the quality of entrants to the teaching profession, we have to make the teachers we have better—what I call the “love the one you’re with” strategy.

Twenty, or even ten, years ago this would have resulted in a very gloomy prognosis, since there was little evidence that professional development could improve teacher quality. In recent years, however, we have begun to understand that professional development has been ineffective because it has been based on a faulty analysis of the problem.

The standard model of teacher professional development is based on the idea that teachers lack important knowledge. For the last twenty years, most professional development has therefore been designed to address those deficits. The result has been teachers who are more knowledgeable, but no more effective in practice. Changes in what teachers know or believe will not benefit students unless teachers also change what they do in classrooms. We have been focusing on getting teachers to
think their way into a new way of acting, whereas it would be far more effective to get teachers to act their way into a new way of thinking\textsuperscript{21}.

Unfortunately, changing teacher practice is difficult, because it involves changing long established habits. For example, we know that the way that most teachers ask questions in their classrooms is less than optimal, but a twenty-year veteran teacher may have asked over a million questions in her classroom. When you’ve done something one way over a million times, doing it a different way it is difficult. This is the key idea if we are to improve teachers’ practice—the realization that we need to help teachers change habits rather than acquire new knowledge—and this is why that all the current proposals for recertification will be bureaucratic distractions.

On the other hand, we are beginning to learn what kinds of structures need to be in place to help teachers change habits. Teachers need to be able to exercise choice, to find ideas that suit their personal style, and they also need the flexibility to take other people’s ideas and adapt them to work in their own classrooms. Because teachers use a number of well-established routines to manage their classrooms, changing these can make their teaching, at least in the short term, less fluent, so they need to take small steps as they develop their practice. Teachers need to be accountable for developing their practice—the evidence is that left to their own devices, teachers improve their practice slowly if at all. And because changes in practice are so difficult, they also need to be given support for change.

It is clear that all these elements can be provided through the establishment of school-based teacher learning communities\textsuperscript{22}. In monthly meetings, of around 75 minutes duration, teachers report back to their colleagues about what they have done in their classrooms to improve their practice, get the support of their colleagues for persisting with these difficult changes, hear about new ideas for improving practice, and commit themselves to specific improvements in their practice for the coming month. Schools that have embraced this kind of structure have seen significant improvements both in practice, as observed in classrooms, and in GCSE results\textsuperscript{23}.

\textbf{Why aren’t we doing it already?}

However, the biggest obstacle is leadership. In one London borough, the headteachers of the secondary schools planned the introduction of teacher learning communities for a year, and released, at the schools’ expense, 150 teachers to attend training on the establishment of teacher learning communities (TLCs). Each school agreed to establish three such TLCs, but four months after the start of the school year, less than half of the TLCs had found time for even a single meeting, let alone the scheduled four\textsuperscript{24}.

The problem is that our schools are inundated with initiatives, and too many schools try to embrace them all. When everything is a priority, nothing is, and schools have to be selective about where they invest their efforts. Too many educational leaders, at school, at local authority, and at national level, are content to “let a thousand flowers bloom” in terms of school improvement. If we had no idea what we needed to do, then this would be a good Darwinian approach—try out lots of things, and evaluate them to see what works. But when there is clear evidence about what does work, it is
frankly self-indulgent. And we do have very good evidence on a number of interventions that have proven impact on educational achievement, although the list is quite short. Notable examples are Success for All\textsuperscript{25}, Philosophy for Children\textsuperscript{26}, Cognitive Acceleration\textsuperscript{27}, and formative assessment\textsuperscript{28}.

Effective leadership is rarely about stopping people doing unproductive things. In most public service organizations, people are in the main genuinely interested in doing good. The problem is that when resources are limited (as they always are) then whether something is good is irrelevant. What matters is whether there is something better that could be done with the same resources. That is why leadership is so hard. It requires preventing people from doing good things to give them time to do even better things.

**Conclusion**

If we are serious about improving the quality of our education system to meet the increasing demands of the world of work, then we need a culture change. No longer can we accept that once one has been teaching five or ten years, one is “good to go”. Teaching is such a complex craft that one lifetime is not enough to master it, but by rigorously focusing on practice, teachers can continue to improve throughout their career. From teachers, therefore, we need a commitment—not to attending a certain number of hours of professional development per year—but a career-long commitment to the continuous improvement practice, and an agreement to develop in their practice in ways that are likely to improve outcomes for their students.

For leaders, the requirement is to create a culture for the continuous improvement of practice, and to keep the focus on a small number of things that are likely to improve outcomes for students. In addition, they need to create the time within the existing teachers’ contracts to do this, and to encourage the taking of sensible risks.

Improving the quality of entrants to the profession has a part to play here, but it is a small part. Even with their most ambitious plans for expansion, teachers trained through Teach First are unlikely to account for more than 1% of the teaching force, but by signaling that teaching is a job that smart people do, it will increase the attractiveness of the profession to others. We need people who are drawn to the profession not because it is easy, but because it is hard—a job that is so difficult that one’s daily experience is of failure, but one where, each day, to quote Samuel Beckett, one can “fail better”\textsuperscript{29}. 


References

7 Patel, et al., op. cit.
11 See results of randomized allocation trials of mathematics and reading textbooks at the What Works Clearinghouse (http://ies.ed.gov/ncee/wwc/).
18 Loc. cit.


23 For example, at Edmonton County School in Enfield, where they are in their second year of using teacher learning communities to support teachers in improving practice, CVA went up from 998 in 2008 to 1017 in 2009.


