

8-10-2015

‘Big five’ challenges in school education

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Recommended Citation

Masters, Geoff N. (2015). ‘Big five’ challenges in school education. *Teacher*, 10 August 2015. Retrieved from <https://www.teachermagazine.com.au/columnists/geoff-masters/big-five-challenges-in-school-education>

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'Big five' challenges in school education

There is no shortage of challenges in school education.

Some of the biggest challenges we face can appear frustratingly intractable. Despite reform efforts, regular government reviews and ongoing calls for change, progress in addressing our most significant challenges is often slow and solutions continue to elude us.

It's not that we don't know what the challenges are. But their roots sometimes lie largely outside the reach of schools or in deeply entrenched educational processes and structures that are difficult to change. A political response is sometimes to focus instead on low-hanging fruit and quick wins – to make changes at the margins where change seems possible. However, real reform and significant progress in improving the quality and equity of Australian schooling depend on tackling our deepest and most stubborn educational challenges.

Here are five such challenges.

Raising the professional status of teaching

A first challenge is to raise the status of teaching as a career choice, to attract more able people into teaching and to develop teaching as a knowledge-based profession.

As Michael Barber and Mona Mourshed observed in their report, [How the world's best-performing schools come out on top](http://mckinseysociety.com/how-the-worlds-best-performing-schools-come-out-on-top/) (<http://mckinseysociety.com/how-the-worlds-best-performing-schools-come-out-on-top/>), the top-performing school systems internationally consistently attract highly able people into teaching, thus driving up the status of the profession and attracting even more able entrants. In high-performing countries such as Singapore and Hong Kong, teachers are drawn from the top 30 per cent of school leavers. In South Korea and Finland, teachers are drawn from the top 10 per cent. In these high-performing countries, places in teacher education programs are limited and competition for entry is intense. As Pasi Sahlberg notes in [The secret to Finland's success: educating teachers](https://edpolicy.stanford.edu/sites/default/files/publications/secret-finland%E2%80%99s-success-educating-teachers.pdf) (<https://edpolicy.stanford.edu/sites/default/files/publications/secret-finland%E2%80%99s-success-educating-teachers.pdf>), only one in 10 applicants is accepted to study to become a primary teacher in Finland.

Attracting the best and brightest school leavers to teaching is only a first step for top-performing nations. They also work to understand the nature of expert teaching and use this understanding to shape initial teacher education programs, coaching and mentoring arrangements and ongoing professional development. Features of these high-performing systems include rigorous teacher education courses and well-developed processes for defining and recognising advanced teaching expertise.

In contrast to top-performing countries, Australia draws its teachers largely from the middle third of school leavers. And there is little evidence that this is about to change. Following recent demand-driven reforms, some universities are admitting larger numbers of teacher education students with increasingly low Year 12 performances – a trend that may continue as the number of teachers required to staff our schools grows over the next decade.

Meeting this first challenge requires an understanding of why teaching is currently not more attractive, what high-performing countries have done to raise the status of teaching, and what strategies are likely to make teaching a more highly regarded profession and sought-after career in Australia.

Reducing disparities between Australian schools

A second challenge is to reduce the disparity between the schooling experiences of students in Australia's most and least advantaged schools.

The OECD's Programme for International Student Assessment (PISA) shows that some countries have been successful both in lifting overall levels of achievement and in reducing differences related to socioeconomic background. Germany, Mexico and Turkey are examples. Two conclusions from recent PISA studies are that increased national performance is associated with **greater equity in the distribution of educational resources** (http://www.oecd-ilibrary.org/education/pisa-2012-results-excellence-through-equity-volume-ii_9789264201132-en;jsessionid=tnnio1qptb0o.x-oecd-live-02) and that **equity can be undermined when school choice segregates students into schools based on socioeconomic background** (http://www.oecd.org/education/EDUCATION%20POLICY%20OUTLOOK%20AUSTRALIA_EN.pdf). According to the OECD, at least as important as how much countries spend on schools is how these resources are distributed across schools.

Although Australia performs relatively well in PISA, both in terms of quality and equity, there are trends that should be of concern. These include a steady decline in the average performance of Australian 15-year-olds since 2000 and no reduction in the relationship between student performance and socioeconomic background.

Perhaps even more concerning has been an increase in between-school variance in PISA (a measure of the extent to which Australian schools differ from each other). In Finland, which has a comprehensive school system and little social stratification by location, between-school variance in reading increased from eight per cent to nine per cent between 2000 and 2009. In Australia, as John Ainley and Eveline Gebhardt observe in their report *Measure for Measure* (http://research.acer.edu.au/cgi/viewcontent.cgi?article=1015&context=ar_misc), between-school variance increased from 18 per cent to 24 per cent, suggesting that our schools became more different from each other over this time. Significant between-school increases also were recorded in New Zealand, Sweden and the United States.

Further, there was a significant increase in the gap between low and high socioeconomic schools in Australia over this period. Australia was the only OECD country to observe such an increase, with several countries recording a significant decrease. And there is little reason for optimism that this trend is about to reverse.

Meeting this second challenge depends on identifying and implementing policies – including school funding policies – capable of reducing disparities between Australia's schools.

Designing a 21st-century curriculum

A third challenge is to re-design the school curriculum to better prepare students for life and work in the 21st century.

Today's world is vastly different from that of 50 years ago. And the pace of change is accelerating, with increasing globalisation; advances in technology, communications and social networking; greatly increased access to information; an explosion of knowledge; and an array of increasingly complex social and environmental issues. The world of work also is undergoing rapid change with greater workforce mobility, growth in knowledge-based work, the emergence of multi-disciplinary work teams engaged in innovation and problem solving, and a much greater requirement for continual workplace learning. The school curriculum must attempt to equip students for this significantly changed and changing world.

However, many features of the school curriculum have been unchanged for decades. We continue to present disciplines largely in isolation from each other, place an emphasis on the mastery of large bodies of factual and procedural knowledge and treat learning as an individual rather than collective activity. This is particularly true in the senior secondary school, which then influences curricula in the earlier years. As a

result, students' experiences of school subjects can be very different from the experiences of those who ultimately work in these disciplines, as Jo Boaler notes in *What's Math Got to Do With It?* (<http://www.penguinrandomhouse.com/books/532153/whats-math-got-to-do-with-it-by-jo-boaler/>) There is little evidence that these general features of the school curriculum are about to change.

At the same time we are seeing a decline in the popularity of subjects such as advanced mathematics and science and a decline in the performances of Australian students in comparison with students in some other countries. *International studies* (https://www.acer.edu.au/files/TIMSS-PIRLS_Australian-Highlights.pdf) indicate that the top 10 per cent of our Year 8 students now perform at about the same level in mathematics as the top 50 per cent of students in Singapore, Korea and Chinese Taipei. Again, it is not obvious that we have policies in place to reform mathematics and science curricula in ways that might reverse these trends in subject enrolments and performance.

Meeting this third challenge requires a significant rethink of the school curriculum. Objectives should include giving greater priority to the skills and attributes required for life and work in the 21st century – including skills in communicating, creating, using technologies, working in teams and problem solving – and developing students' deep understandings of essential disciplinary concepts and principles and their ability to apply these understandings to complex, engaging real-world problems.

Promoting flexible learning arrangements focused on growth

A fourth challenge is to provide more flexible learning arrangements in schools to better meet the needs of individual learners.

The organisation of schools and schooling also has been largely unchanged for decades. Although composite classes are common, students tend to be grouped into year levels, by age, and to progress automatically with their age peers from one year of school to the next. A curriculum is developed for each year of school, students are placed in mixed-ability classes, teachers deliver the curriculum for the year level they are teaching, and students are assessed and graded on how well they perform on that curriculum.

This approach to organising teaching and learning might be appropriate if students of the same age commenced each school year at more or less the same point in their learning. But this is far from the case; the most advanced students commencing any year of school are typically five to six years ahead of the least advanced students. In practice this means that less advanced students often struggle with year-level expectations and are judged to be performing poorly – often year after year. At the other extreme, some more advanced students are unchallenged by year-level expectations and receive high grades year after year with minimal effort.

Underpinning this practice is a tacit belief that the same curriculum is appropriate for all, or almost all, students of the same age. Learning success and failure are then defined as success or failure in mastering this common curriculum. This age-based approach to organising teaching and learning is deeply entrenched and reinforced by legislation that requires teachers to judge and grade all students against year-level expectations.

Meeting this fourth challenge depends on more flexible ways of personalising teaching and learning – for example, by using technology to better target individuals' current levels of achievement and learning needs – and on defining learning success and failure in terms of the progress, or growth, that individuals make over time, regardless of their starting points. In this way, excellent progress becomes an expectation of every student, including those who are already more advanced.

Identifying and meeting the needs of children on trajectories of low achievement

A fifth challenge is to identify as early as possible children who are at risk of falling behind in their learning and to address their individual learning needs.

By Year 3, there are wide differences in children's levels of achievement in learning areas such as reading and mathematics. Some children are already well behind year-level expectations, and many of these children remain behind throughout their schooling. They are locked into trajectories of 'underperformance' that often lead to disengagement, poor attendance and early exit from school.

Trajectories of low achievement often begin well before school. Differences by Year 3 tend to be continuations of differences apparent on entry to school when children have widely varying levels of cognitive, language, physical, social and emotional development. Some children are at risk because of developmental delays or special learning needs; some begin school at a disadvantage because of their limited mastery of English or their socioeconomically impoverished living circumstances; and some, including some Indigenous children, experience multiple forms of disadvantage.

Many children in our schools not only remain on trajectories of low achievement, but also fall further behind with each year of school. They make up a long – and sometimes growing – tail of underperforming students, many of whom continually fail to meet minimum standards of achievement. In the 2014 ***National Assessment Program Literacy and Numeracy (NAPLAN)*** ([http://www.nap.edu.au/verve/resources/National Assessment Program Literacy and Numeracy national report for 2014.pdf](http://www.nap.edu.au/verve/resources/National%20Assessment%20Program%20Literacy%20and%20Numeracy%20national%20report%20for%202014.pdf)), 25 per cent of Indigenous children in Year 3 failed to meet the Year 3 national minimum standard in reading, and 30 per cent of Indigenous students in Year 9 failed to meet the Year 9 national minimum standard. There is little evidence that, as a nation, we are doing a better job of reducing the numbers of students on long-term trajectories of low achievement or of reducing the resulting 'tail' of student underperformance.

Meeting this fifth challenge depends on better ways of: identifying children at risk of being locked into trajectories of low achievement at the earliest possible ages; enhancing levels of school readiness; diagnosing learning difficulties upon entry to school; and intervening intensively during the early years of school to address individual learning needs to give as many students as possible the chance of successful ongoing learning.

