

The “long tail” of underachievement

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In my recent *Teacher* article [‘Big five’ challenges in school education](#) I argue that one of the biggest challenges we face as educators is to find better ways to meet the learning needs of the many students who fall behind in our schools, fail to meet year-level expectations (often year after year) and, as a consequence, become increasingly disengaged.

The OECD estimates that approximately 40 000 Australian 15-year-olds (that is, one in seven students) fail to achieve an international baseline proficiency level in reading. After 10 or more years of school, these students lack the reading skills that the OECD believes are required to participate adequately in the workforce and to contribute as productive citizens in the 21st century.

The situation is worse in mathematics where an estimated 57 000 Australian 15-year-olds (that is, one in five students) fail to achieve the international baseline level. At the completion of their compulsory study of mathematics, these students lack the mathematical knowledge and skills judged by the OECD to be adequate for life beyond school.

By international standards, Australia does not have an unusually large percentage of 15-year-olds performing below the international baseline. Some countries have significantly higher percentages. Nevertheless, it is of concern that so many Australian 15-year-olds are failing to achieve minimally adequate levels of reading and mathematical literacy. And it is instructive that a few countries have less than half Australia’s percentage of underperformers.

Students who perform below expectation at 15 years of age have generally performed below year-level expectations for much, if not all, of their schooling. They tend to start each school year behind most of their age group and they are poorly equipped for the material they are about to be taught. Most struggle, and this is reflected in their poor performance on the year-level curriculum. Many students receive low grades year after year, reinforcing the message that they are not succeeding at school – or worse, that they are inherently poor learners.

In Australia, as in many other countries, part of the policy response to underachievement has been to set higher standards and to hold students, teachers and schools accountable for achieving those standards. Curricula have been developed that make explicit the standards that all students in each year of school are expected to meet. And we have made it a national requirement that teachers judge and grade students (using A to E or equivalent ratings) on how well they achieve year-level curriculum expectations.

In other words, the policy response has been to confirm existing practice – to set clear curriculum expectations for each year of school and to judge and grade all students on how well they achieve those expectations. The difference is that these expectations have been

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redeveloped and agreed nationally, and there has been some strengthening of accountability arrangements.

However, it is questionable whether higher standards and increased accountability will benefit students who have fallen behind in their learning, reduce levels of disengagement among these students, or decrease Australia's 'long tail' of underachievement. Progress in addressing these challenges almost certainly requires a different set of strategies.

A national key performance indicator (KPI)

One indicator of progress in reducing Australia's long tail of underachievement would be a reduction in the percentage of 15-year-olds not meeting the OECD's baseline proficiency levels as measured by PISA. Figure 1 shows these percentages for reading, mathematical and scientific literacy in 2012. The corresponding percentages for some of the world's highest performing education systems are also shown, indicating the levels that some countries have achieved.

	Reading Literacy	Math. Literacy	Scientific Literacy
Australia	14	20	13
Shanghai	3	4	2
Hong Kong-China	6	9	5
Korea	7	9	6

Figure 1. Percentage of 15-year-olds performing below the international baseline proficiency level (2012)

Strategies?

The organisation and delivery of school education have been largely unchanged for decades. Although composite classes are common, students tend to be grouped into year levels by age, and progress automatically with their age peers from one school year 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.

Underpinning this practice is a tacit belief that the same curriculum is appropriate for all, or almost all, students of the same age. This assumption 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. This variability in students' levels of achievement and learning readiness is often underestimated.

As a consequence, the learning needs of some students are not well met. Year-level expectations can be much too ambitious for some less advanced students and not sufficiently ambitious for more advanced students. The challenge for teachers is to meet all students at their points of need with learning opportunities that stretch and extend them. There are several strategies to consider.

Diagnosing where students are in their learning

An alternative to assuming that individuals' levels of readiness and learning needs can be reasonably well inferred from their age or year level is to undertake assessments to establish where students are in their learning. Assessments commonly are undertaken after teaching to determine how well students have learnt what they have been taught. However, to maximise the probability of successful teaching and learning, information is required about where students are in their long-term progress before teaching commences. This information can be collected at varying levels of diagnostic detail. For example, teachers may wish to establish individuals' overall levels of achievement in an area of learning, but also to confirm that they have mastered particular prerequisite skills and/or understandings. The collection of detailed information about where individuals are in their learning prior to commencing teaching is not yet routine practices in many schools.

Personalising teaching and learning

The purpose of diagnosing where students are in their learning before teaching commences is to ensure that learning opportunities are well targeted on individuals' current levels of achievement and readiness. It is now well established that learning is most likely when learners are given activities at an appropriate level of challenge – beyond their comfort zone in what Vygotsky called the 'zone of proximal development' – where learners can succeed, but often only with assistance. Differentiated teaching and personal learning plans are widely used in schools. But these practices sometimes compete with an alternative policy view that the best way to raise standards is to hold all students to the same high expectations, coupled with a belief that this is more 'equitable' than recognising that students have different learning needs. Improved outcomes for less advanced students depend on establishing in some detail the points individuals have reached in their learning and then providing targeted teaching to address specific skill deficits and misunderstandings and to establish stretch targets for further growth. New technologies have the potential to assist in these diagnostic and personalisation processes.

Monitoring learning progress over time

An alternative to simply holding all students in the same year of school to the same year-level expectations and judging and grading them on how well they achieve those expectations is to expect every student to make excellent progress in their learning, regardless of their starting point. In this way, what it means to learn successfully is re-defined as the progress (or growth) that learners make. Rather than judging less advanced students as 'poor performers' year after year, the progress these students make is made visible and acknowledged. While every student is expected to achieve high standards eventually, this approach recognises that, because of their less advanced starting points, some students take longer to reach high standards than others. It also recognises that the best way to build students' self-confidence is not to judge and label them as poor learners year after year, but to help them see and appreciate the progress they are making.

Sharing progress with parents and families

School reports typically show how students have performed against year-level expectations and/or the performances of other students. Such information is likely to be of continuing interest to parents. Much less common is information about the progress students have made in their learning over a semester or school year – information that better indicates the amount of learning that has occurred. This information is important because some less advanced students can make good progress during a school year even though they are still below year-level expectations. It is important that parents appreciate this progress rather than concluding from students' low grades that they are poor learners. Failure to recognise and report progress not only provides parents with an incomplete picture of learning, but also can undermine students' understandings of the relationship between effort and success.

The long tail of underachievement is also a long tail of disenchantment with school. Many less advanced students remain or fall further behind with each year of school and become increasingly convinced that they are poor learners and that school is not for them. By the middle years of school, many of these students have become disenchanted and disengaged.

As a nation, we cannot afford to have large numbers of young people marginalised in this way. Part of the solution lies in more flexible ways of organising teaching and learning to better target individuals' current levels of achievement and learning needs. Another part of the solution lies in reconceptualising what it means to learn successfully – defining success and failure not so much in terms of age or year-level expectations but as the progress that individuals make in their learning, regardless of their starting points. In short, the long tail of underachievement will be reduced by expecting and ensuring that every student makes excellent progress every year.

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