

# AFTER THE NATIONAL CURRICULUM REVIEW: WHAT COMES NEXT IN EDUCATION POLICY?

Australian schooling is not in crisis, but it is expensive and performing well below potential, argues **Ken Gannicott**

In January 2014, the Minister for Education Christopher Pyne named Dr Kevin Donnelly and Professor Ken Wiltshire to review the National Curriculum, and their final report is due by July 2014. Much of the criticism of the review has focused on its timing and the difficulty of implementing a detailed new syllabus by 2015. That criticism misses the point. It is doubtful whether the review team has any intention of even trying to produce a detailed replacement. The faults with the new curriculum go far beyond the headline issues of bias or balance. The underlying problem is that the curriculum is the expression of an education system that has lost its way. In the short term, the task for Donnelly and Wiltshire is to remove the most glaring problems so schools can prepare their own detailed syllabus for 2015. In the longer term, the reviewers have to lay the foundations for more fundamental reform.<sup>1</sup>

## Salvaging the wreckage

By far the best short-term contribution by Donnelly and Wiltshire would be to abandon the cross-curriculum themes of Asia, Indigenous Australians, and sustainability. Are these issues important? Of course they are, but there is not a scrap of evidence, from either the education literature or worldwide practice, that a cross-curriculum approach amounts to more than empty words. A few years ago, the fad was for 'language across the curriculum.' The 'success' of that approach can be measured from the latest evidence that by world standards, Australian high

school students are going backwards in maths and science as well as literacy.<sup>2</sup>

What is really depressing about the themes is that they are so old fashioned. They give the impression of being written not by dead white males but certainly by middle-aged ones recycling all the issues and attitudes of their student years in the 1960s and '70s. They have learned nothing and forgotten nothing.

The 'organising ideas' of the sustainability theme have all the flavour of Nimbin. The theme explicitly harks back to the long-discredited Club of Rome, which told us in 1972 that there were 'limits to growth' because the world was running out of nearly everything.<sup>3</sup> Since then (global financial crisis notwithstanding) the world has experienced unparalleled prosperity. Globalisation, freer trade, and economic development have lifted tens upon tens of millions of people in Asia out of poverty. World food production has soared, while shale oil is transforming the energy situation in the United States and Canada (and 'fracking' will potentially



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do the same in Australia). Is the ‘socially just world’ anticipated in the sustainability theme limited to the perspective from Balmain and inner north Melbourne, or does it acknowledge that China, India and Indonesia are not going to settle for less than we have when it comes to the good life? The reader looks in vain for any recognition in the Australian curriculum that environmental degradation is often worse in poor countries, and that economic growth provides the resources to do something about it.

Most parents, many policymakers, and probably a considerable number of teachers would be astonished to hear that until recently we haven’t had solid evidence on the wider role of educational achievement in economic growth.

The Asian theme also carries more than a whiff of yesterday’s attitudes. Leaving aside the fact that the mainstream cultural heritage in Australia draws overwhelmingly from Europe, and our military security depends heavily on the United States, it is entirely desirable that Australians should have an appreciation of Asian geography and cultures. You would never know from the national curriculum that the days have long gone when Asia was somewhere you flew over on your way ‘home’ to the old country. The proportion of migrants born in Asia increased from 24% of the overseas-born population in 2001 to 33% in 2011. By definition, these Australians already have strong links with Asia. These days, nearly two million Australians travel each year to Asia for business or recreation, and not just for the pleasures of Kuta Beach. Their first-hand experience is worth more than any amount of patronising waffle that the ‘peoples and countries of Asia have contributed ... to world history and human endeavour.’<sup>4</sup>

The claim that this sort of rhetoric will provide ‘students with the skills to communicate and engage with the peoples of Asia so they can effectively live, work and learn in the region’ is just fanciful.<sup>5</sup> What would genuinely assist that worthwhile objective is teaching the major Asian

languages in our schools, and doing so from an early age. In the entire 700-page curriculum there is not one mention—not one—about the teaching of Asian languages. We all understand from other documents that language teachers are scarce and the curriculum is already very crowded. The current federal government does have a languages policy,<sup>6</sup> but in what purports to be a national curriculum it beggars belief that we can find room for teaching Australia’s contribution to international popular culture and the quasi-mysticism of Gaia, but the critical issue of Asian languages is excluded without a word.

Saddest of all is the recycling of every tired cliché about Indigenous culture and identity. There is nothing new or contentious about teaching Indigenous issues in our primary schools, but the idea that Indigenous culture should infuse every aspect of the curriculum is debatable. Anyone who has worked in a teacher education faculty is familiar with the wearily cynical tearoom joke that ‘primary students may not learn much, but they sure know a lot about Aboriginals and dinosaurs.’ Is it at least possible that more of the same will simply promote equal cynicism in our students?

### Foundations for the future

How do we move from the faddish, the vague, and a domination by yesterday’s ideas to a system that better serves our students’ (and our nation’s) interests?

A good starting point is to look at the latest evidence on student performance. Most parents, many policymakers, and probably a considerable number of teachers would be astonished to hear that until recently we haven’t had solid evidence on the wider role of educational achievement in economic growth. Of course, parents have always known intuitively that basic skills are crucial, and economists have long known that a country’s development is connected to the skills of its workers. The problem is that we have not had research-based robust statistical evidence about the contribution to our national wellbeing of cognitive skills such as maths, science and literacy. Researchers have had to fall back on proxy measures such as years of schooling or enrolment

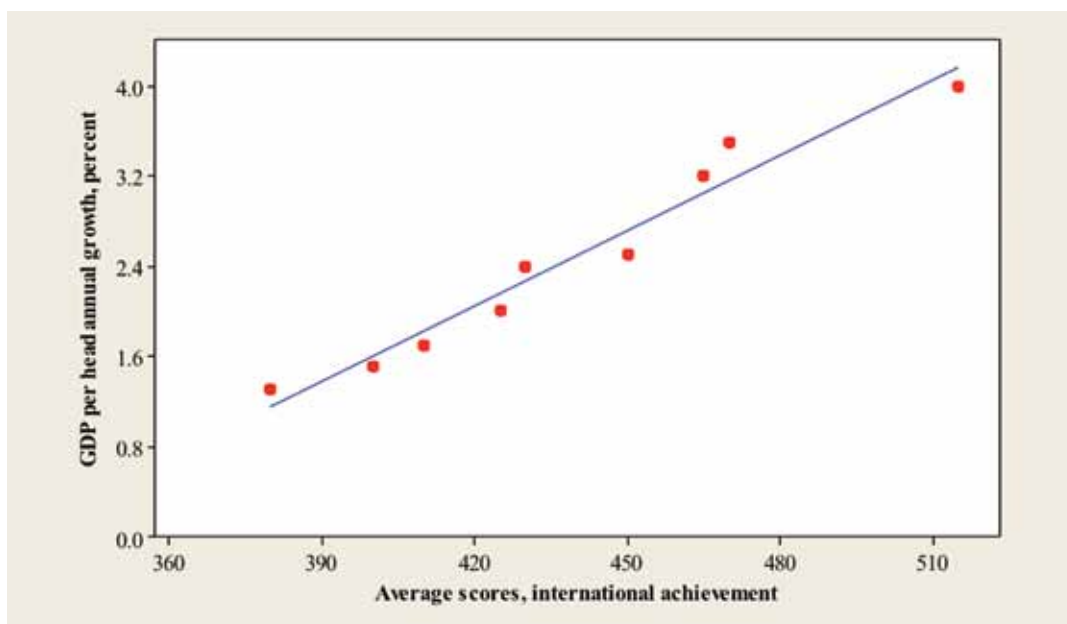
rates, and input measures such as variations in school expenditure and teacher numbers.

In a series of path-breaking studies, US economist Eric Hanushek and his colleagues have now filled that gap.<sup>7</sup> After mapping to a single universal scale evidence from all the international achievement tests given in 50 countries since 1960, they used a battery of mathematical models to measure the contribution of those test scores to economic development. The work is of daunting technical complexity, because their models test for genuinely

causal relationships as well as the many factors that affect economic growth.

The work is complex, but the results could not be simpler: As we can see from Figure 1, we now have reliable international evidence showing that better performance in the cognitive skills of maths, science and literacy is statistically related to increased prosperity (Figure 1 has been simplified for presentation purposes). In short, what counts for our long-term wellbeing is high performance in the mainstream subject areas.

**Figure 1: With subject knowledge comes growth**



**Source:** Author's adaptation from Eric A. Hanushek and Ludger Woessmann, 'Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation,' *Journal of Economic Growth* 17:4 (2012), Figure 1.

Simply spending more years in school has little impact on economic growth. You have got to learn improved skills in the mainline subject disciplines. In Hanushek's apt phrase, 'If you aren't learning anything at your desk, it doesn't matter how long you sit there.' And, to bring these findings back home to Australia, it is not difficult to see that a national curriculum that filters vital maths, science and literacy subjects through Aboriginal, Asian or Green perspectives will not even come close to giving our students the necessary level of international achievement.

### **The longer term: where do we go from here?**

Many factors enter into economic prosperity, and lucky Australia has done well in recent years

from its commodity boom. We have done better in economic terms than would be statistically predicted from our mediocre education performance. But that relative advantage has passed its peak. We should remember that economic gains come many years after educational investments take place. If we are to have a long-run engagement with Asia on competitive terms, our modest and declining international scores need to match those in countries that routinely top the achievement charts—South Korea, Taiwan, Singapore and Hong Kong. The stellar achievement scores for Shanghai in the latest international tests may be a foretaste of what we can expect more widely from China (see Box 5).

**Box 1: The growth of assessment testing**

An often-quoted statistic is the claim from David H. Kamens and Aaron Benavot that from 2000 to 2009, 'the total number of assessments skyrocketed from double digits (43) to a total of 886.'<sup>8</sup> There has been an increasing realisation that commonly used input measures such as expenditure per student or the student:teacher ratio (STR) have neither helped understand student achievement nor assisted policy development. It is now broadly accepted that system-wide student assessments play a critical role in identifying improvements in student outcomes, allocating resources and teaching efforts where necessary, and holding educators accountable for raising student outcomes.<sup>9</sup>

The OECD's Programme for International Student Assessment (PISA) is by some margin the most prominent of the current crop of international assessments. Its methodology has been to move away from the curriculum-based approach of Trends in International Mathematics and Science Study (TIMSS) and focus on the more outcomes-based skills required by those aged 15 and about to leave basic education. But PISA is not enough. PISA measures the *end point* of basic schooling. 'Reverse engineering' those results to unravel the causes and cures of poor performance that might have its origins many years before age 15 is a major, and probably impossible, task. This is where the annual NAPLAN assessments can play a major role. System-wide annual assessments and three-yearly international comparative results from PISA is exactly the right combination for both student and system diagnostic information. Australia has got the balance almost exactly right in this aspect of educational policy.

We need to find ways of getting a greater performance orientation in Australian schools. How can Australian student achievement be boosted? No sensible person wants an educational system dominated by competitive exams. Finland routinely scores near the top in international achievement tests but no one has ever suggested that Finnish schools are unhappy crammers that pay no attention to wider personal development in drama, music and art.

In Australia, the annual National Assessment Program—Literacy and Numeracy (NAPLAN) assessment for students in years 3, 5, 7 and 9, and various international assessments on a (generally) three-year cycle, hardly seem excessive (see Box 1).

Nor does a focus on boosting cognitive skills entail what uninformed critics like to dismiss as 'drill and kill.' Anyone suggesting that the Asian

countries achieve their high scores by rote learning, and therefore lack the creativity of Australia's students, should be directed to stay behind after school and write out 100 times: 'This allegation is a self-deluding myth.' Andreas Schleicher, head of education at the Organisation for Economic Cooperation and Development (OECD), which administers the PISA tests, has pointed out that the maths test requires creativity and problem-solving skills based on a deep understanding of mathematical concepts (see Box 2).<sup>10</sup>

The fact is that we now have a good idea from international practice of what works and what does not.<sup>13</sup> Spending money on more of the same is not the answer. A key finding from international work is that spending hikes per pupil in wealthy countries such as Australia or the United States show no correlation with improvements in student performance.<sup>14</sup>

**Box 2: 'League tables' of test performance**

Another line of criticism, expressed forcefully by Jennifer Buckingham, is that the top-ranking PISA and TIMSS countries are so different from Australia socially, culturally, demographically and linguistically that direct comparisons of international test results do not offer much meaningful guidance for policy.<sup>11</sup> On this line of argument, the Asian 'tiger' economies have made important educational reforms in the last decade, but the influence of cultural factors is a prominent determinant of their success. Best-known of these cultural differences is that students in high-performing territories such as Shanghai, Hong Kong and Singapore are subjected to punishing study schedules that Australian families would consider excessive. As a further example, non-school factors are also likely to influence the excellent Finnish results. Finnish society is highly equitable, and this is reflected in its schools, and there is low immigration in Finland so few Finnish students take the PISA tests in their non-native language.

OECD has carried out much work trying to tease out the multiple reasons for the inter-country differences.<sup>12</sup> There is no doubt that a whole host of factors influence these differences, some of which (such as intensive coaching) are not part of the

Australian cultural scene. But we need to distinguish between two arguments. First, the major implication of the Hanushek findings described earlier is that comparative test results *matter*. They matter because they affect the relative economic performance of high- and low-scoring countries. In this circumstance, it is entirely proper to directly compare test outcomes—league tables, if we want to use the pejorative term—*whatever their cause*. In other words, when we look at test outcomes, the fact that Australia scores quite poorly relative to most of its Asian neighbours in international assessments is important information for education policy. Identifying the reasons for those differences and ways to address them in the light of cultural factors is vitally important, but it is a separate and different question.

Many countries are now exploring ways of improving the quality of their educational performance. Worried by its dismal achievement scores, Brazil is using results from its national assessments to create an index of performance for every school in the country. In a truly innovative reform, that index is benchmarked to PISA scores, so that each primary school is given a target and trajectory for reaching average PISA performance by 2021.<sup>15</sup> Perhaps we don't want to go that far. Many countries are now experimenting with performance-based remuneration schemes for teachers. The balance of evidence is that performance-based pay can have a positive effect on student achievement.<sup>16</sup> Perhaps we don't want to go that far, either. If we are going to turn our nose up at reforms that other countries are prepared to consider, what do we have the courage to do? Some areas are beyond the remit of the curriculum review, but stand out as candidates for longer-term policy development.

First, greater school autonomy, more school choice, and a diverse and well-resourced non-government sector are proven instruments for improved performance. On the US evidence,

it is often disadvantaged students who benefit most from school choice initiatives such as vouchers and charter schools.<sup>17</sup> Public funding of the non-government sector is entirely consistent with the role of that sector in performance improvement, but the Gonski report and its aftermath can fairly be described as an example of how not to set expenditure policy for education (see Box 3).

Second, we must raise the quality of our teachers. The top-performing school systems consistently attract more able people into the teaching profession by recruiting teachers from at least the top third of each cohort graduating from secondary school. In some cases, such as Finland, teachers are drawn from the top 10%. In South Korea, primary teachers are drawn from the top 5% of their cohort in the National College Entrance exam.<sup>19</sup>

It is well known that in Australia, teacher education students are drawn on average from the lower ranks of school leavers. The answer is not more professional development or insisting on graduate degrees. These things will have a measurable impact on school outcomes only if there are policies for selecting

### Box 3: The Gonski report: An opportunity lost

The Karmel report (1973) was a milestone in replacing fragmentary programs with a systematic policy of public funding for non-government schools.<sup>18</sup> There have been many changes over the years since then. The system is very complex and has not always been uniformly applied, with funding dependent on a range of socio-economic criteria. It is a system that will always need regular updating and fine-tuning as demographics, enrolments and schools change.

The Gonski report would have been a useful contribution to public understanding if had been presented as a further step in refining a program that has been operating (and broadly accepted) since Karmel 40 years ago. It is foolish to pretend that public finance for non-government schools can be completely free from doctrinal differences, and the Labor government no doubt had painful memories of the furore that greeted Mark Latham's proposed reforms. Instead, 'Gonski' quickly became politicised into a mechanism for giving more public money to school education in general. The additional funding was alleged to have a beneficial effect on educational performance—a proposition for which there is not the slightest supporting evidence in the absence of clear specification of where the money was to be used. Whatever happens to the Gonski model in the short term, the necessary updating in years to come has been made even more difficult.



**Box 4: Teacher quantity, teacher quality, and teachers' pay**

The issues of quantity, quality and teachers' pay are directly linked through a simple but important relationship. At any given level of public expenditure on education, governments can choose to extend enrolment coverage or to hire more teachers. In other words, at a given budget level there is a policy choice—a trade-off—between wider coverage or a reduction in the student:teacher ratio (STR). There is also a second policy choice to be made. At any budget and enrolment level, a larger number of teachers (i.e. a reduction in the STR) means the average teacher salary is lower than would otherwise be the case. There is now a trade-off between class size and teachers' pay. If fewer teachers were hired, each teacher could be paid more for the same overall budget outlay. There would be larger classes and/or increased class contact time for teachers, but—the third aspect—higher pay might well improve teacher quality by attracting better qualified entrants or reducing the attrition of experienced and effective teachers.<sup>20</sup>

the right student teachers in the first place. High-performing systems such as Singapore do not have open entry into teacher colleges, with many students there because they have few other options. High-performing systems select for entry, with an extensive system of screening, testing and selection before entry and training. Enrolments are confined to those who show high ability, aptitude and motivation.

A radical reform of teacher training in Australia is long overdue. It remains unclear whether the inquiry into teacher education announced in January 2014 will tackle the issue of the generally low academic standard of student teachers. In wrestling with the issues of teacher quantity and teacher quality, the inquiry might find it helpful to build upon the relationships summarised in Box 4. Policymaking does not take place in the stylised fashion of Box 4, but a framework such as this can drive home the necessary policy choices that have to be made.

Third, student-centred learning, in which the teacher is seen not as an instructor but as a facilitator of each student's abilities and learning styles, has had a long run as the dominant classroom method. It has its place. Much of its emphasis on lively, interactive teaching is worth

keeping. It has, however, become hopelessly ideological, captured by those hostile to a content-based curriculum and to any form of external standardised testing.

It is now well past time to reconsider traditional methods: the teacher as instructor of a content-based program, whole-class teaching, and direct instruction. It is a complete furphy to suggest that this is inevitably limited to boring 'chalk and talk.' Nor is it remotely accurate to suggest that it cannot address the needs of less able students in a class. Direct instruction has been the dominant style in most Asian countries, and a major feature of their test results is that they do not in general have the long tail of non-performing students seen in Australia. If we are to adopt an evidence-based approach to reform, we ought to adopt the teaching method that has runs on the board.

If we are open-minded enough to take a fresh look at classroom pedagogy, we ought to learn other important lessons from high-performing school systems. The essence of these is a collaborative approach so that successful teaching practices are embedded and reinforced throughout the school. These practices involve coaching and mentoring of newly qualified teachers, joint lesson

**Box 5: Collaborative teaching in Shanghai**

In China, teaching and development teams, or JiaoYanZu, work together within schools and across schools to plan how the curriculum will be taught, to share learnings, and observe each other's practice. These teams serve as the pedagogical backbone of the school system. For example, within schools in Shanghai, subject-specific teams (e.g. all third-grade maths teachers) meet each week to reflect on the past week and plan lessons for the following week. Subject group leaders (e.g. for history, math, science) also meet weekly to discuss how learning themes can be reinforced across subjects. In addition, subject-specific team leaders across schools in each district are required by the District Education Bureau to regularly visit other schools within the district in order to observe demonstration classes and share learnings. The objective of the JiaoYanZu is to cultivate shared ownership of teaching practices, create consistency, and hardwire improved practices across the system.<sup>21</sup>

planning, observation, review and feedback of classroom practices, and team teaching. Box 5 describes practices in Shanghai.

Such practices already take place in some Australian schools,<sup>22</sup> but more often there is little more than lip service. Teacher education faculties like to think that they produce ‘reflective practitioners.’ Perhaps they do, but this tells us nothing about what happens in the classroom. ‘Never waste a good crisis’ is a well-known political slogan. Australian schooling is not in crisis, but it is expensive and it is performing well below potential. It would be a pity if the Donnelly and Wiltshire curriculum review and the inquiry into teacher education wasted the opportunity of setting the stage for reform.

### Endnotes

- 1 ACARA (Australian Curriculum Assessment and Report Authority), *The Australian Curriculum* (ACARA, 2013).
- 2 John Ainley and Eveline Gebhardt, *Measure for Measure, A Review of School Outcomes in Australia* (Australian Council for Educational Research (ACER), 2013).
- 3 The Club of Rome is a global think tank that sprang to prominence after the 1973 oil crisis with *The Limits to Growth* (Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III, *The Limits to Growth* (Club of Rome, Universe Books, 1972)). The work was Malthusian in both tone and approach, with population and pollution projected exponentially, and mitigating improvements taking place only in discrete increments. Its modelling lacked any awareness of the role of prices or improved exploration and extraction technology and its forecasts became rapidly discredited in serious policy discussion. The club’s latest work projects the state of the world in 2052. See Jørgen Randers, *2052: A Global Forecast for the Next Forty Years* (Club of Rome, Chelsea Green Publishing, 2012).
- 4 ACARA (Australian Curriculum Assessment and Report Authority), *The Australian Curriculum* (ACARA, 2013), 698–699.
- 5 As above.
- 6 Department of Education, *Strengthening the Australian Curriculum* (Government of Australia).
- 7 Eric A. Hanushek and Ludger Woessmann provide the most technically complete guide to this work. Eric A. Hanushek and Ludger Woessmann, ‘The role of cognitive skills in economic development,’ *Journal of Economic Literature* 46:3 (2008). See also Paul E. Peterson and Eric A. Hanushek ‘The Vital Link of Education and Prosperity,’ *The Wall Street Journal* (11 September 2013) for a more accessible source.
- 8 David H. Kamens and Aaron Benavot, ‘National, Regional and International Learning Assessments: Trends Among Developing Countries, 1960–2009,’ *Globalisation, Societies and Education* 9:2 (June 2011), 291.
- 9 Mona Mourshed, Chinezi Chijioke, and Michael Barber, *How the World’s Most Improved School Systems Keep Getting Better* (McKinsey & Co, 2010).
- 10 D.D. Guttenplan, ‘O.E.C.D. warns West on education gaps,’ *International New York Times* (9 December 2013); Ben Jensen, *Catching Up: Learning from the Best School Systems in East Asia* (Melbourne: Grattan Institute, 2012), 10.
- 11 Jennifer Buckingham, *Keeping PISA in Perspective: Why Australian Education Policy Should Not Be Driven by International Test Results*, Issue Analysis 136 (Sydney: The Centre for Independent Studies, 2012).
- 12 OECD (Organisation for Economic Co-operation and Development), *Strong Performers and Successful Reformers in Education, Lessons from PISA for the United States* (Paris: OECD, 2011).
- 13 As above; Mona Mourshed, et al. *How the World’s Most Improved School Systems Keep Getting Better*, as above; Ben Jensen, *Catching Up*, as above; Ben Jensen, *Turning Around Schools: It Can Be Done* (Melbourne: Grattan Institute, 2014).
- 14 The lack of a measurable relationship between spending and performance is one of the most durable and soundly based research findings in education. In its analysis of PISA results for 2009, OECD (as above, 28) found that expenditure per student explains only 9% of the variation in PISA mean performance between countries. Modest spending per student does not mean poor performance by education systems. Estonia and Poland, which spend around US\$40,000 per student, perform at the same level as Norway and the United States, which spend more than US\$100,000 per student. New Zealand, one of the highest-performing countries in reading, spends well below the international average per student.
- 15 OECD (Organisation for Economic Co-operation and Development), *Strong Performers and Successful Reformers in Education*, as above.
- 16 World Bank, *Does Linking Teacher Pay to Student Performance Improve Results?* (Washington, DC: World Bank Human Development Network, 2010).
- 17 Eric A. Hanushek and Ludger Woessmann, ‘Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation,’ *Journal of Economic Growth* 17:4 (2012).
- 18 Peter Karmel, *Schools in Australia: Report, Interim Committee for the Australian Schools Commission* (Canberra: Australian Government Publishing Service (AGPS), 1973).
- 19 *Teacher Numbers, Teacher Quality: Lessons from Secondary Education in Asia* (Bangkok: UNESCO, 2009).
- 20 As above, 8.
- 21 Mona Mourshed, et al. *How the World’s Most Improved School Systems Keep Getting Better*, as above, 79.
- 22 Ben Jensen, *Turning Around Schools: It Can Be Done*, as above.