

Responding to poor PISA results

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International test results released this week show Australian student learning is at an all-time low: today's 15-year-olds are more than a year behind their peers from a decade ago. Finger-pointing has already begun as we search for a scapegoat, yet the answer is not simple and there is no villain.

But there are things we can do, tangible things that will make a real difference to teachers and students.

We must not repeat the past. The history of Australian education is full of big new ideas, bold policy statements and visions for education. We don't need any more of these. They take us away from the questions that really matter: how are science, maths and reading being taught in our classrooms and how can teaching be improved?

What would the answer be if we were to look at our results and ask ourselves these questions: "OK, this is bad, what are we teaching in math classes that is and is not working? Are high-quality learning tasks being used in science classes? Are the best texts used to teach kids to read at grade level?" The answers would be: "We don't know."

The truth is the systems that improve performance and equity focus much more on these questions. The main way these systems do this is by providing high-quality comprehensive instructional materials for teachers in every key subject and every grade level. We do not.

What PISA results show

Student learning has declined across all states and territories in reading, science, and mathematics. In fact, the results of the OECD Program for International Student Assessment (which compares the academic performance of 15-year-olds in 79 countries) reveal that Australian student learning is at its lowest point. This is not just a question of other countries outpacing us (which they are); the results show a decline in learning outcomes. Our kids learn less now than they used to.

If you are reading this and hoping the decline is not in your school, or the schools that your family, friends and colleagues attend, then I am sorry to disappoint you — learning is reducing for everyone across the board. Those school fees that have been increasing every year? Well, they produce less learning than when school fees were cheaper. The school funding that keeps going up? Again, less learning.

What we typically do

Experts are working hard to determine reasons for the decline. There are four common types of proposals for improvement that we've tried before with little or no success. We should avoid spending too much time on these areas.

- The long pursuit. We spend a lot of time on policies that are highly aspirational but have little chance of immediate impact. In an ideal world, we could improve the status of the teaching profession, reduce maths teacher shortages, have more funding for schools and individualise instruction to each student.

We should continue to work on these issues, but decades of work in these areas have led to very little change and we shouldn't place all our bets on solving these problems for the future.

Many other systems in the OECD struggle with teacher shortages, low teacher status and classrooms with huge variations in student need, but most of these systems are not in decline.

- Speculation. We have an unfortunate habit of jumping into sweeping policy changes based on minuscule evidence. The focus on technology (do we want more or less in schools?) is a good example. The school autonomy agenda is another. Evidence should always come before reform.
- Attribution error. Some proposals are based on a misinterpretation of the situation. For example, many people believe Australia is fine on basic skills but is failing on the more advanced skills such as critical thinking. This leads to proposals to refocus teaching completely to -develop only these higher order skills. This is problematic for two reasons.

One, PISA shows about one in five Australian students struggle with foundational skills such as basic literacy; and two, research shows that one cannot be taught without the other — a strong foundation in the basics is necessary for advanced skills.

- Indirect and roundabout. Reviews and policy changes in Australia are always high level, -focused on large frameworks or general professional development. What we end up with are changes that affect teachers but not classroom teaching. It is understandable that teachers have become sceptical of new policies that mean more work for them without offering much benefit.

Every curriculum review we have had starts with an objective to declutter the curriculum and focus on “what really matters”, but there is little analysis of what is and is not working in classrooms. We don't observe classes. We don't examine learning tasks, texts or assessments. How can we understand what needs to change in the curriculum if we don't clearly understand how it is being implemented?

Fortunately, some Australian systems are starting to get more in-depth information on this. We shouldn't make them start again with another national review or bold policy reform.

What we need to do

The truth is, we don't know why Australia's results have declined because we do not actually know what is going on in classrooms. Every high-performing system in the world concentrates more than we do on the specifics of how science, maths, and reading are taught.

This work is not sexy; it's about implementation and getting into the weeds of, for example, how kids learn fractions in maths class. This is why Australia's history of policy initiatives that are mostly high level and subject agnostic aren't making a difference.

This is not about another curriculum review; this is about curriculum implementation. What are the most common textbooks used by maths teachers? How many primary school teachers are using evidence-based reading programs? How are biology teachers assessing what students have learned about living cells? These are the factors that have the most direct impact on student learning, yet we understand very little about what is going on.

Improving how science, reading and maths are taught does not have to involve an expensive development program or a curriculum overhaul. Research clearly shows there is a relatively easy, cost-effective way to improve student learning: give teachers high-quality instructional materials.

Instead of high-level, expensive policy changes, let's try something that will directly affect day-to-day classroom instruction. The results show declines across the board in reading, math and science, so let's start with answering the most important questions in schools on these subjects. We need to know these three things. What is being taught? How is it being taught? How is it assessed?

We should not make any changes until we can answer these questions for reading, science and maths. We need to collect this information so we can identify the best way to support teachers and schools to improve learning; what is working and what is not working.

As stated above, some Australian systems have started to do this and analyse their own curriculum and policies to improve classroom practice. Learning First has been lucky enough to do some of this work with them, visiting hundreds of schools, interviewing and surveying thousands of teachers and school leaders, observing classroom teaching and examining instructional and assessment materials.

This work has highlighted a big problem that is not getting enough attention: teachers are struggling with finding and developing the instructional materials they need to use every day.

This is difficult and complex work. Even teachers who have deep expertise struggle to do this because of a lack of time. But the reality is that many teachers do not have enough expertise — they are new teachers, teaching out of their field, or just feel let down by their initial teacher education.

These teachers are often left alone to flail in lesson planning — they have to seek resources on their own, evaluate the quality of those resources and figure out how to use them. They do this all with only a few hours a week, which means it is impossible in practice.

In countries with high teacher status, the system provides comprehensive instructional materials for teachers to use, adapt and improve on. In Australia, we somehow think that professionalism means not offering high-quality support and resources. Right now, our system expects teachers to write entire teaching and learning programs. It can take decades to develop deep expertise in the research-based practices in one subject — we can't ask teachers to have this expertise from day one and certainly not when they teach multiple areas (which many do).

Other countries that outperform us are much more specific about what is taught in classrooms. They provide more instructional resources to schools. They quality-check instructional materials. We don't. It is time to implement more direct ways to affect the daily instruction students receive.

This approach brings together the best way to improve high-order critical thinking skills and the fundamentals. Because we have a serious equity problem in Australia, that is being ignored. The sad reality is the PISA results show it is not just that fewer students are achieving higher-order skills (which is true), but it is also that many more students are not even gaining basic knowledge and skills needed for work and to be a productive citizen. About one in five students in Australia is a low performer in reading, mathematics and science. This is not just a problem for poor and remote areas — in fact, one in 10 students in

the highest socio-economic quartile is a low performer in reading (up from three in 100 in the year 2000).

From employment to general social participation these students will face huge barriers, and inequality across the country will widen. Where is the call to arms for these kids? Why do we not insist on significant change when during the past 15 years the percentage of low performers in Western Australia in maths has more than doubled to one in five students? Why is it not an emergency that now one in three Tasmanian students don't meet minimum maths standards (up from fewer than one in five students 15 years ago).

The media has been flooded with stories since the PISA results were released but I don't remember anyone talking about our alarming rise in inequality. Yet we demand radical change if a middle-class child gets stressed about their Australian Tertiary Admission Rank score. We are too willing to ignore equity problems in our system. We are much happier pretending that our problems are about higher order thinking and differentiation. The evidence does not support this. In fact, the -opposite is true.

Link to article in *The Australian*

<https://www.theaustralian.com.au/inquirer/its-back-to-school-for-the-instruction-guide/news-story/31a1a33f276423b74d4dafdef180fcef>