2 August 2023

Dear Lisa and members of the expert panel,

Please find below my submission in response to the consultation paper. The submission centres on the evidence of the impacts of a high-quality content-rich curriculum on student learning and on equity. The research shows that Australia will not significantly improve learning or reduce the inequality gap with the Australian Curriculum in place.

I reach this conclusion from the research on the impact of quality curriculum and our own analysis benchmarking and comparing the Australian Curriculum with high-quality curriculum around the world. Behind that work is many years working with schools and school systems on school improvement, teacher education and teacher development policies. In this work, I saw initiative after initiative, reform after reform, fall down on curriculum design and curriculum implementation in Australian schools. Any basic analysis of the instructional core shows that improvement can't occur without quality curriculum and assessment, and I have seen this time and again in Australian schools.

The development of the Australian Curriculum has been incredibly poor. Reviews of the Australian Curriculum are:

- Not based on a comprehensive review of the research on quality curriculum
- Not based on comprehensive benchmarking the content of the Australian Curriculum with curriculum around the world
- Not based on analysis of the curriculum taught and assessed in Australian schools.

I simply don't understand why this is acceptable practice. For a number of years, we at Learning First have conducted curriculum research, analysed and benchmarked different curriculum, and supported systems with data on the curriculum taught in Australian schools. Some of this research is on our website (www.learningfirst.com) and is discussed in the newspaper articles reproduced below. In the coming months we will publish detailed benchmarking of the content of the Australian science curriculum compared to science curriculum in other countries.

This review will influence large national policies with the goal of improving learning and equity. The research shows that these efforts will be wasted unless serious curriculum reform is undertaken.

I am more than happy to provide further information or elaborate on this submission if helpful. I wish you all well in your review.

Kind regards

[redacted]

Dr Ben Jensen
CEO Learning First

Article by Ben Jensen from the Weekend Australian, 29 July, 2023
https://www.theaustralian.com.au/inquirer/curriculum-research-shows-when-schools-dont-have-a-highquality-contentrich-curriculum-inequality-increases-in-exactly-the-way-it-has-occurred-in-australia/news-story/1e17eb921e062ef215dbc8b7766507b9

Federal Education Minister Jason Clare has made reducing education inequality a priority. In March the Minister announced the creation of an expert panel chaired by Dr Lisa O'Brien, "to inform a better and fairer education system". The panel's report, due by the end of October, will inform the next National Schools Reform Agreement, which will determine school funding and related policies. The Minister has instructed the panel to focus on inequality and students who are most at risk of falling behind.

Minister Clare has been clear and honest about the extent of the problem. Last year he pointed out that the inequality gap widens as children progress through school. While the gap between Year 3 students from high and low socioeconomic backgrounds is equivalent to two years of schooling, "that gap grows with every year of school. By the time they get to Year 9 that gap is five years".

It is easy to be pessimistic about how much we can address education inequality. Australia's education performance has declined, and inequality increased in international tests despite significant growth in expenditure, as the Productivity Commission recently highlighted. A long line of high-profile education ministers has failed, despite the best intentions, to shift the inequality needle.

But I am optimistic. While previous ministers faced school funding debacles coupled with policy options that were expensive and often unproven, emerging research highlights that Minister Clare has cost-effective reforms available to him right now that directly addresses the inequality growth he has highlighted. A growing field of curriculum research around the world shows that when schools (and school systems) don't have a high-quality content-rich curriculum then inequality increases in exactly the pattern that has occurred in Australia. This research also shows that when we make the shift to a high-quality content-rich curriculum then you can close much of the inequality gap that for years has plagued Australian education.

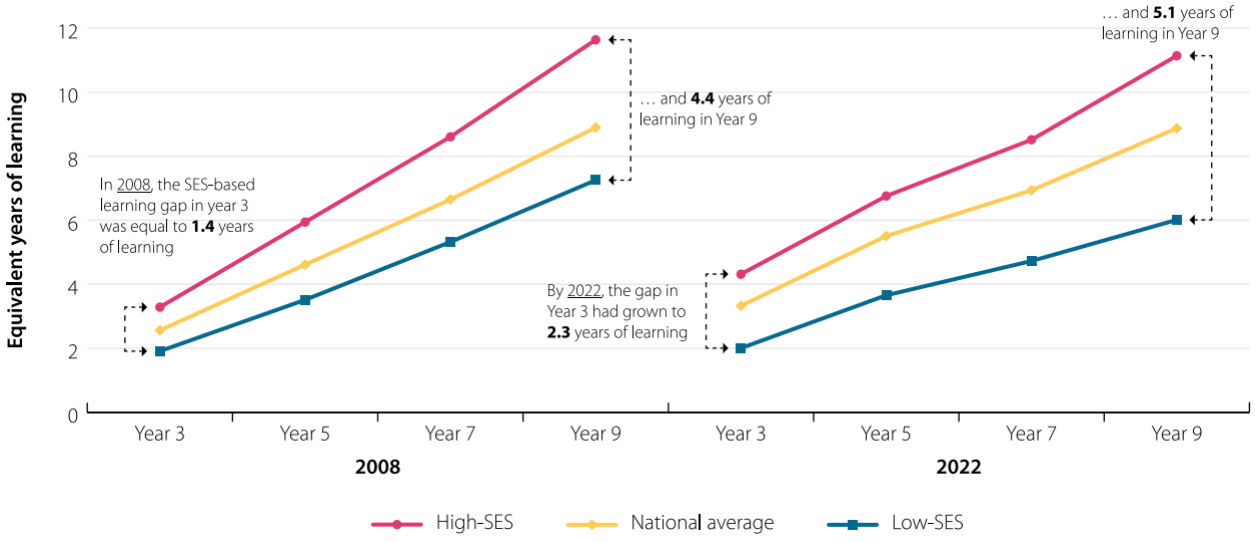
To illustrate what can be done, we need to go through a series of steps that are not discussed often enough in Australian education policy circles.

If inequality worsens the longer students are in Australian schools, as the Minister has rightly stated, then to reverse it we need first to be clear on what we are actually measuring.

The Federal government's own consultation paper for the expert panel says that "inequality is entrenched" in Australian education. NAPLAN data presented in the paper show that between 2008 and last year, the gap between poor and wealthy students in Grade 3 reading grew from 1.4 to 2.2 years of learning. By the time students reach Year 9, the gap is 5.1 years.

In other words, inequality worsens as students progress through school, and is getting worse over time. This is part of an overall decline in secondary school reading. In 2018, the reading performance of Australian 15-year olds in the OECD PISA assessments was around nine months behind the level of Australian students in 2003.

Achievement gaps in reading between high and low socio-economic status (SES) students



To understand how we got here, it is important to know that the way we assess students' reading ability changes as they move through school. In the early primary years, the focus is on assessing how much students have grasped the fundamentals of how to read. But in later years, the focus of reading tests change: students are assessed on their ability to comprehend increasingly complex passages in reading comprehension tests.

It follows, therefore, that what is required to improve reading scores in the early years of primary school is different from what is required in later primary and secondary school.

Reading tests in the early years assess the fundamentals -- students' ability to read. The research shows that the ability to decode words is the best predictor of high performance on these early reading tests.

Decoding and other aspects of learning to read form the basis of what has become known as the 'science of reading'. The evidence on the science of reading is now overwhelming. As the Australian Education Research Organisation states, "the science of reading provides the strongest evidence about how young children learn to read."

Reading is one of the most researched areas in education and we know a lot about effective practice in phonics, fluency, vocabulary and comprehension. These fields are all covered in the science of reading, but too often the public discourse focuses on phonics and core literacy skills, and much less on reading comprehension, particularly in secondary schools. Yet this is where inequality has greatly increased.

In assessments of reading comprehension, students are given text to read and asked questions that assess their understanding of it. A large determinant of how students perform on these tests is their background knowledge of the topic they are reading about. In brief, you will do better in understanding a passage in a reading test if you know something about the topic than if you don't.

Many research studies over the years have shown that students' background knowledge, in science, history, culture and other fields, determines reading comprehension more than whether students are 'good' or 'poor' readers.

In the most famous study, US students were asked to read a passage about baseball in a reading comprehension test. Researchers had previously tested them as either 'good' or 'poor' readers; they also measured their background knowledge about baseball. The test results showed that students who had been considered 'poor' readers but knew a lot about baseball outscored students who were tested as 'good' readers but didn't know much about the sport.

This finding also shows why providing different reading comprehension tests to the same group of students can lead to very different results. Students categorised as poor readers in one test can have entirely different results in another test with a different topic.

A key reason why is that to comprehend a text we have to process both its explicit and implied information. Background knowledge helps us to make meaning from all the information, and to fill the gaps in what is implied or missing. It therefore reduces what education researchers call the cognitive load required to comprehend a text.

The good news is that Australia is moving in the right direction on how to teach students the fundamentals of how to read in the early years of primary school. The success stories of systems and schools that have embraced the science of reading to teach students read in in the early years of primary schools is increasingly well-known.

It is terrible that some systems remain unclear on how to teach reading, and the students paying the highest price come heavily from disadvantaged backgrounds. Yet while Australian inequality in learning to read in the early years is still far too high, we are making progress.

However, when it comes to improving reading comprehension in the later years – the area where inequality is greatest – Australian systems are too often ignoring the evidence.

The research shows that to improve reading comprehension we have to improve students' background knowledge. But students are by no means all at the same level. Those from wealthier families typically have higher levels of background knowledge about different topics than poorer students do. They generally come to school with more knowledge about the world, and over the course of their schooling, the gap over students from lower socio-economic backgrounds grows significantly.

This finding -- well known amongst researchers -- explains why Natalie Wexler, a global leader in the field, refers to the inequality gap in reading comprehension in upper-primary school and secondary school as a 'knowledge gap'.

To reduce the growth in inequality that Minister Clare is highlighting, the knowledge gap between low and high-socio-economic students must be bridged. The way to do this is through a content-rich curriculum that enables *all* students to have the learning experiences that enable them to bridge the 'knowledge gap'.

Students get knowledge in school through the curriculum. A high-quality, content-rich curriculum builds deep knowledge in a clear and sequenced manner. It enables students to comprehend increasingly complex texts. In so doing, it can significantly reduce the impact of differences in socio-economic background. A low-quality curriculum, by contrast, prevents poorer students from building the knowledge that will enable them to bridge the inequality gap.

Sadly, the Australian curriculum could never be considered a content-rich curriculum. Compared to leading curricula overseas, it is astonishingly light on detailed content and the sequence in which it needs to be taught. Important content is either absent from the curriculum, optional for teachers to teach, or is discussed with such ambiguity that it can be interpreted in many ways.

Education systems with higher performance and less inequality have followed the research on content-rich curriculum. For example, Alberta, Canada performs much higher on international test and with less inequality than Australia. Their curriculum is explicit on the precise content to teach and when it needs to be taught. Whenever I show the Alberta curriculum to Australian teachers they are shocked by how much clearer and easier it would be to teach than the Australian curriculum.

Consider important content in the science curriculum such as the topic of body and plant systems, which the Australian curriculum introduces in Year 8. The precise content and sequencing of that content are not made clear. The curriculum says students are expected to “analyse the relationship between structure and function at organ and body system levels”. Teachers are left to decide which plant, animal or human systems to teach - should students be taught the human cardiovascular system in-depth, should they include the bovine digestive system, or should students be taught a little bit of a wide-range of plant, animal and human systems? These are complex questions that determine how students’ knowledge and understanding of the world builds in school.

Contrast this to Singapore’s curriculum that consistently produces some of the highest learning outcomes in the world. From primary school – years before it is made clear to teach in the Australian curriculum - Singapore’s science curriculum names which systems to teach in which organisms, and what content should and shouldn’t be covered at each grade level. This guarantees that all students receive the essential build of rich content to develop mastery of the topic. This follows every bit of research we have on how students learn.

In English (and across much of the humanities), the knowledge students gain is largely determined by the texts they read. The Australian Curriculum is largely silent on the texts students should read in English. Many parents are (rightly) shocked to learn that there is little curriculum guidance on the books that students should read, the sequence in which they should be read, or the learning tasks students should complete after reading the book. The research shows that to improve learning and bridge the inequality gap, all students need to be discussing and writing about complex texts daily to build knowledge in more equitable ways.

Recent research in the United States has highlighted how a high-quality curriculum can be introduced to education systems and bridge the inequality gap. The Core Knowledge curriculum is one such example that provides rich content in English, Science, History Geography, the Arts and other subjects. The content is clear and tightly sequenced, so that knowledge builds upon itself. It is impossible to read this curriculum and not be amazed by the breadth and depth of learning experiences available to all students. The differences with the Australian curriculum are stark.

A multi-year research study compared the outcomes of students in Colorado schools that used a high-quality, content-rich curriculum with those in schools that lacked such a curriculum. All students in schools in the first group significantly increased their learning and reading comprehension. Most importantly for Australia, students from poor backgrounds had the greatest gains -- gains so great that the inequality gap was largely erased.

Unfortunately, this research is not discussed enough in Australian education policy circles. When students do badly on reading comprehension tests in secondary school, for example, many Australian systems encourage schools to go harder on teaching students the fundamentals of how to read rather than building their background knowledge. Of course, these strategies can help students with very low levels of reading, but for all other students the research says they will be better readers if they build their knowledge through a high-quality curriculum.

Another example is a recent Harvard University study showed that providing students with a content-rich primary school science and social studies curriculum improved their scores on reading tests. Once again, this research identified the biggest improvements among disadvantaged students; the knowledge they built in science and social studies improved their ability to understand different and more complex texts.

Research shows that knowledge builds upon knowledge, it isn't learnt in a vacuum. Imagine, for example, the difference in a student's understanding and appreciation of reading *The Diary of Anne Frank* if they understand the geography of Europe (and especially The Netherlands), have been taught the history of World War II, the history of Jewish persecution, an understanding of persecution and what can happen to legal and justice systems under a dictatorship, the concentration camps and firing squads in WW2, and what happened to those caught hiding Jewish people or disobeying the Nazi regime. Now imagine a student who has had no, or only a cursory, opportunity to learn these things and how they might comprehend and appreciate *The Diary of Anne Frank.*

It is easy to imagine the differences between the learning experiences of these two students. One benefits from a careful sequencing of explicit content and the other doesn't. Unfortunately, if an Australian student was to read *The Diary of Anne Frank* in Year 8, the low quality of the Australian curriculum means we simply can't ensure that our students are the ones that have the rich learning experience. The critical building of content is simply not in the Australian curriculum; the content is often too high-level, optional, or simply missing altogether.

When the required content for deep learning experiences is not in the curriculum taught at school, the impact grows of what knowledge is gained outside of school. Decades of research has shown that wealthier students have more opportunities to access this knowledge outside of school so education inequality grows in the same way the Australia data shows.

This paints a terrible picture of Australian education but the silver lining is that it can be fixed. There are clear evidence-based steps to take, and examples from other countries to follow. Importantly, curriculum reform is much cheaper than the reforms we have tried in the past. An enormous amount is spent on curriculum resources but bad curriculum generally the costs the same as good curriculum.

To their credit, a number of states are investing in developing curriculum materials to better support schools. This is an important step forward. Unfortunately, when governments have done this in the

past they have developed huge banks of resources that allow teachers to pick and choose different units, lessons, assessments and other parts of the curriculum.

The research is clear that when teachers pick and choose from large and varied banks of resources the critical connections and sequencing of content are often lost. Many teachers tell us they struggle with this choice; that they can access thousands of curriculum resources online but they want guidance on which ones are high-quality, the precise content to teach and how to sequence content across subjects and year levels.

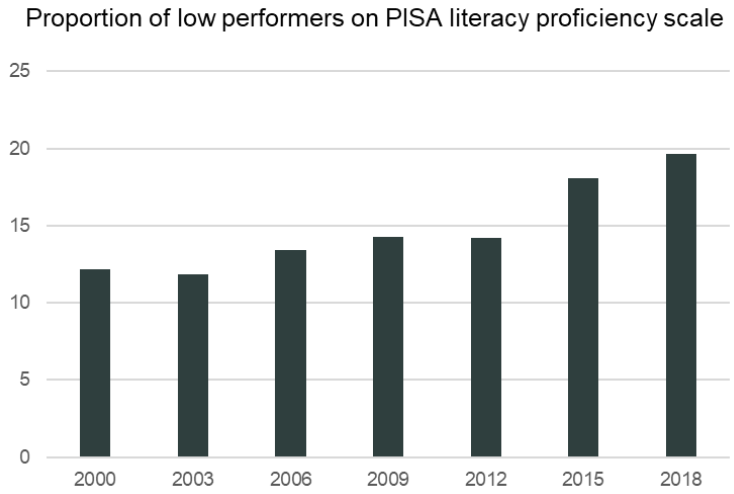
Curriculum reform is complex work but there are reasons to be hopeful. Minister Clare has shone a light on education inequality and how it increases across the years of schooling. It is rare that the evidence highlights such a tangible and cost-effective opportunity for policy reform. The Minister just has to seize it.

Article by Ben Jensen & Nicole Murnane from the Weekend Australian, 3 September 2022.
https://www.theaustralian.com.au/inquirer/four-reforms-could-close-the-education-inequality-gap/news-story/a99128aa1a3a94adf8d08f3db33ae1d9

When Australia's 15-year-olds began sitting the international PISA tests of reading literacy, in 2000 and 2003, about 12 percent were shown to have reading levels that OECD experts consider "too low to enable them to participate effectively and productively in life."

By 2018, that figure had become one student in five. By the end of this decade, it is on course to be nearly one in four. Translated across the school system, that means a million students, out of just over four million, who cannot read well enough to have a productive career and a full life. Similar results exist for scientific literacy. In maths, the results are even more bleak. Inequality in Australian education just keeps getting worse.

Of the 76 countries that took part in the latest PISA tests in 2018, Australia had the eighth largest gap in performance between the top and bottom 10 percent of students. We are on track to achieve a grim milestone: a million school children with an education too poor to enable them to participate effectively and productively in Australian society.



We cannot blame the problem on broader societal trends. When our children start school this level of inequality doesn't exist. Grattan Institute analysis shows that at Year 3 there is a gap of ten months in NAPLAN results between students whose parents have high education compared to low education. By Year 9 that gap has multiplied to two and a half years.

Blaming this problem on teachers is completely misplaced. The growing gap between high and low performers is baked into the design of the modern Australian school system. Teachers cannot easily identify gaps in students' knowledge as a prelude to closing them, because the system is no longer clear on what it means for a student to be at grade level – what specific things they need to know in any given year.

Worse, the system actively encourages teachers to meet students at their level. Teachers, who often went into education to fight disadvantage, are told that the best way to do that is by giving struggling

students different material or teach different subjects to everyone else. The research is clear that this is the wrong thing to do; it just increases inequality.

The good news is that policies and approaches that are increasing inequality can be stopped. The new Federal Minister, Jason Clare, must work with all education leaders to introduce evidence-based reforms that have been shown to work for disadvantaged students elsewhere, but that Australia has neglected for too far long. Our own history points the way.

As recently as the 1990s, education system leaders believed there was a moral imperative to provide students from poorer families the same education as wealthier students. Teaching all students the knowledge and skills that enable any person to navigate a complex society was the only way to ensure that all got a chance to succeed in it.

This dominant narrative rejected the history of secondary education, especially the senior years, as largely the privilege of the elite. And it produced tremendous improvements in equity.

In 1968, only about a quarter of students who started high school completed Year 12. By 1992 that figure was close to 80 percent. The figure is now 83% reflecting little improvement in the last 30 years.

Slowly and insidiously, the narrative of a common education producing a more level playing field of life chances has changed. We no longer talk about equality, we talk about adapting education to every child's needs. From government departments to key stakeholders to education faculties in universities around the country, teachers are exhorted to offer “individualised instruction”, “targeted teaching”, to “meet learners where they are ‘at’”.

While this approach sounds at first like an argument for equity, the evidence is clear that it leads to disadvantaged students being taught at a lower level than other students. In other words, every time we move away from the same knowledge and skills taught at the same level for all students, we increase inequality.

The problem of teaching to students’ perceived needs is highlighted in *The Opportunity Myth*, an influential 2018 report produced by TNTP, a US organisation dedicated to ensuring that poor and minority students get equal access to effective education. The report compared the education offered to poor African-American students with their wealthier, predominantly white counterparts. It showed that all students shared similar aspirations – 94 percent of students wanted to go to college, for example.

But teachers, in efforts to teach to the ‘needs’ of disadvantaged students, continually dropped content standards, provided lower quality and less complex books to read, and asked students to complete lower-level tasks. They also assessed poorer students differently, so that even though a student in a disadvantaged school might get a B average, that mark didn’t prepare them for life after school because a B in that school was a D or worse in other schools.

This is not just an American trend. Research from around the world shows that teachers – through no fault of their own – tend to drop standards for students from disadvantaged and minority backgrounds. The result is that a disadvantaged student may never in all their years of schooling get the opportunity to learn or to demonstrate grade-level material.

We know that students from disadvantaged backgrounds start school with less background knowledge, smaller vocabularies, and far fewer book-lined walls in their homes than other students. Therefore, if we 'meet students where they are at', we are effectively saying that we will never give the disadvantaged ones the opportunity to catch up to their more advantaged peers.

The evidence shows that when students who are behind are taught clearly identified and sequenced knowledge appropriate to their grade level, using high-quality instructional materials, they can accelerate their learning and make up huge ground.

But there's a catch. First, research from the Johns Hopkins University shows this can only occur when there is a high-quality curriculum that clearly defines what knowledge is to be taught in each subject and at each level. Central to this research is the understanding that skills are developed not in a vacuum but in the context of specific knowledge and understanding.

Second, effective instructional materials based on a high-quality curriculum need to be implemented in classrooms. Research from the Brookings Institute has shown that placing high-quality instructional materials in classrooms can have a greater impact on student learning than any initiative focused solely on improving teacher quality has ever managed to produce.

The Australian Curriculum, however, is not a high-quality, knowledge-rich curriculum. It doesn't guarantee the knowledge students are supposed to learn. It fails to provide teachers with comprehensive, high-quality instructional materials to be used in classrooms.

Instead, it is a skills-based curriculum; the standards for students to achieve are skill based. A skills-based curriculum includes knowledge but isn't specific about what knowledge should be taught, so there is no guarantee of what will be taught in each year level, let alone across the curriculum. For example, in Year 8 History, teachers are supposed to teach "the transformation of the ancient world to the early modern world, from the decline of the Roman Empire in western Europe through Medieval, Renaissance or pre modern Europe" It is incredible to think through the myriad of ways this 1200+ year period of history could be interpreted and transformed in the classroom. The curriculum also states that students studying history need to be able to "compare sources to explain the accuracy, usefulness and reliability of sources as evidence." No important primary and secondary sources, from any period, are specified as important for students to learn.

Teachers regularly say they are not clear on what to teach and what the standards are at each grade level. Yet both are essential to improving equity.

Teachers we speak to through our work at Learning First tell us that the standards in the Australian Curriculum in Science, for example, are so broad you could cover them in a day. In Grade 3 Biological Sciences, for instance, students are required to "compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals". Depending on the level of depth they wanted to cover and their scientific expertise, a teacher could spend a lesson, or a year, on this content.

By not being clear about what specific knowledge should be taught - which characteristics, which living and non-living things, which features of life cycles to compare and between which sorts of plants and animals -- the Australian Curriculum allows enormous variation in what is taught in classrooms.

The obvious result is great variation and therefore inequality in what is taught and what students learn in classrooms.

Knowledge begets knowledge. The more knowledge a child has about a topic, the more she will be able to understand what she reads, problem solve and think critically, remember new information, and gain new knowledge and understanding. Deep content knowledge underpins all educational skills we value, including reading comprehension, critical thinking, and problem solving. Across all disciplines, from reading and history to maths and science, these are well-established findings in the research about how humans learn.

Beyond the academic research, evidence from many education systems shows that when a system shifts from a knowledge-based to a skills-based curriculum, overall performance and equity both suffer. In the 1990s, France jettisoned its highly prescriptive, knowledge-based curriculum in favour of a skills-based curriculum. Twenty years later, reading results of primary school students showed a stark decline in overall performance, with the steepest decline among students from the least educated backgrounds.

The performance of Finland, once lauded for producing world-leading results in student tests coupled with high equity, has experienced three decades of overall decline and increasing inequality. Research identifies the fall as due to a shift from the provision of high-quality curriculum and instructional resources to a focus on greater autonomy, and therefore variation, in what can be taught to students at different schools.

Conversely, a new, granular national curriculum, with clear detail on the knowledge that students have the right to learn in each subject, has enabled Estonia to steadily improve its performance on international tests. Louisiana, one of the poorest, least-educated states in America, has shown impressive gains in students' reading levels after introducing a high-quality knowledge-rich curriculum and instructional materials.

But our country is heading in the other direction. The Australian Curriculum largely leaves decisions about what knowledge to teach to schools and teachers. This means the Australian curriculum doesn't provide equality in what is taught in Australian schools. This hurts disadvantage students more than anyone else as students from wealthier families will always have access to far more knowledge and cultural capital than disadvantaged students.

Moreover, the number of subjects offered in Australian secondary schools has grown enormously in recent years. These new subjects may have been added out of good intentions, but their introduction has also increased inequality.

Many schools in disadvantaged areas now don't offer the subjects that are considered essential in wealthier schools and in the broader community. The Centre for Sustainable Communities has shown that advanced subjects, including physics and specialist mathematics, are much more likely to be offered in socioeconomically privileged schools than in disadvantaged schools. The latter group are instead more likely to offer subjects that are supposed to better meet the 'needs and interests' of their students, but that in reality deny them the education wealthier students enjoy by birthright.

To turn current Australian practice on its head requires leadership at every level, starting with Federal Education Minister Jason Clare. Four reforms would anchor a new approach to fighting inequality.

First, restore a narrative of moral purpose, embodied in the careers of so many serving teachers and school leaders, that places equality above autonomy and flexibility. This means being clear on every student having the right to learn the necessary knowledge and skills to participate effectively and productively in life. And that this right should no longer be diminished because we perceive the 'needs' of disadvantaged students to be different from wealthy students.

Second, make it clear what knowledge and skills students have the right to learn in order to participate productively in life. Be honest and acknowledge that the Australian Curriculum does not offer this clarity.

Third, monitor what is actually taught to Australian students. Understand the inequalities embedded in what is taught to students in schools in poor communities compared to those in wealthy ones. It is a sign of how lost we have become that we have little idea of what is actually taught to students in disadvantaged communities.

Finally, help teachers and school leaders to provide the education that equips all students with the knowledge and skills they need. That means high-quality support and instructional materials. High-performing, high-equity systems around the world offer them. Australia does not.

During the recent election much was made of Anthony Albanese's background. It is easy to be cynical about personal narratives in politics, but we should be proud to live in a country where a kid that grew up in Housing Commission flats can become Prime Minister.

Change to our education system is possible, if we have the will. Without it, Anthony Albanese's story is unlikely ever to be repeated.

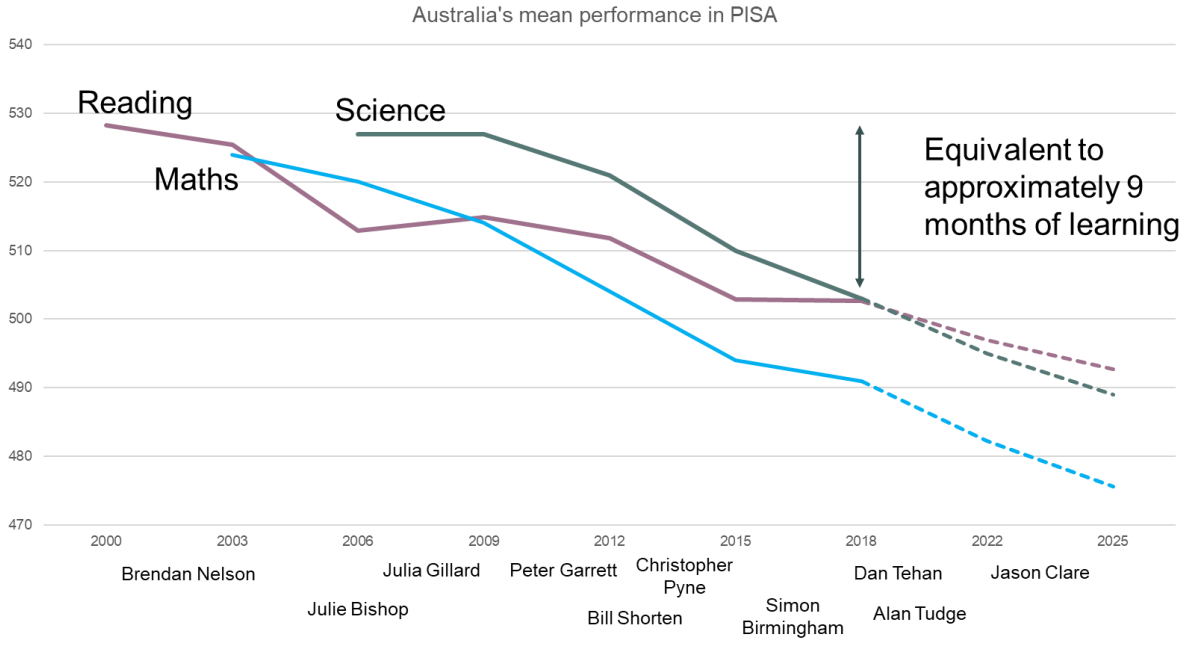
Dr Ben Jensen is CEO and Mailie Ross is Director of Learning First.

Article by Ben Jensen & Mailie Ross from the Weekend Australian, 12 August 2022.
https://www.theaustralian.com.au/inquirer/a-lesson-on-how-to-reverse-two-decades-of-failed-education-reforms/news-story/f8d6810a4fba45191933a40aabbf6400

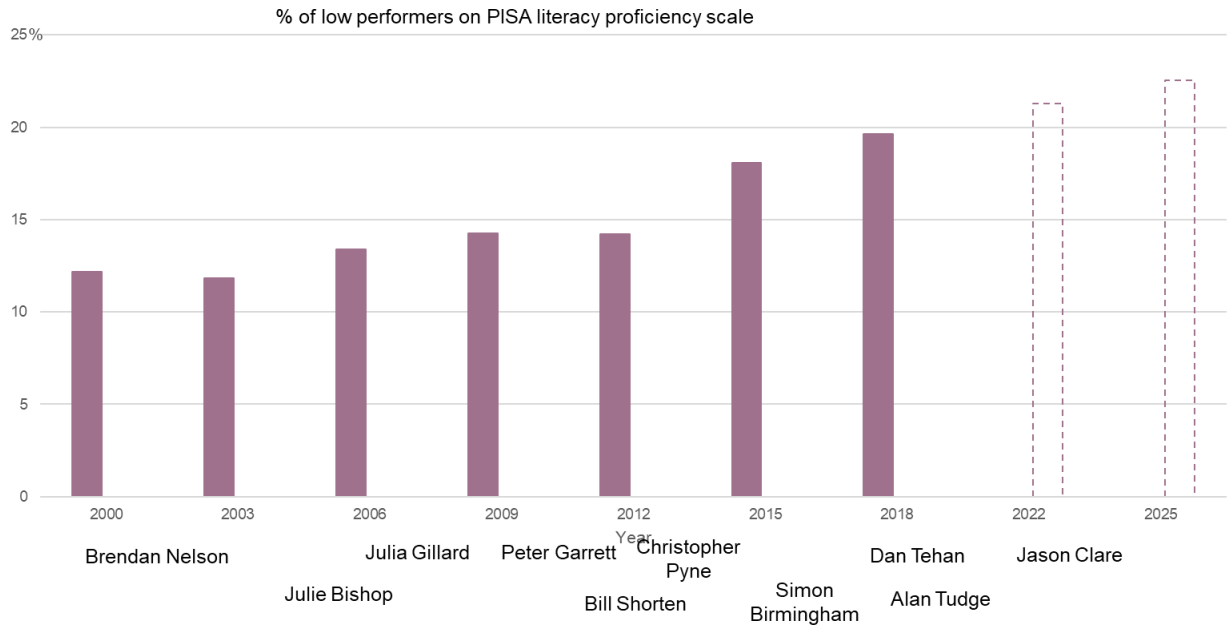
The new Federal Education Minister, Jason Clare, has an incredible opportunity to improve the lives of Australia's children. But to succeed, he must first recognise the lack of progress made by his predecessors and then have the courage to reject the status quo, ignore a series of irrelevant education debates, and focus on the one thing that matters: what happens in Australian schools and classrooms.

Over the last 20 years, ministers from across the political spectrum have presided over Australian education with the best of intentions and introduced some big reforms. Yet our students' performance has continued to fall. The decline is real, and it is consistent across three vital subjects: reading, mathematics and science.

The OECD's Programme for International Student Assessment (PISA) tests and compares students around the world every three years to determine how they are performing in these three subjects. In 2000, Australia was a high performer by international standards, 24 points ahead of the United States in reading, for example. Since then, we have declined in every subject area. In reading, the decline in our mean score over those decades is 25 points – roughly equivalent to nine months of schooling. Twenty years of reforms have wiped out nine months' worth of learning and put us on par with the US.



More alarming still is the proportion of students classified as 'low performers'; students whose literacy the OECD has calculated as "too low to enable them to participate effectively and productively in life." In 2000, 12 per cent of our students were in this low-performing category. By 2018 it was 20 per cent. One in five Australian fifteen-year-olds does not have sufficient literacy to participate effectively in life.



If these trends continue, at the end of Jason Clare's first term as minister, Australian students will have lost another 10 points in reading -- about a third of a year of school. In maths and science, where the decline has been slightly steeper, the results will be even worse. Come the next election, Minister Clare could walk through a school and almost every fourth child he meets will have learning at a level that is "too low to enable them to participate effectively and productively in life."

Clare's predecessors, shown in the chart above, include some serious talent. These ministers have introduced NAPLAN, developed the Australian Curriculum and reviewed it multiple times, developed teacher and school leader standards, introduced Gonski and Gonski 2.0, issued the Melbourne and Alice Springs Declarations, and championed STEM and literacy strategies, among other reforms.

They also established the Australian Curriculum and Reporting Authority (annual budget of over $30 million), Australian Institute of School Leadership (around $22 million), Education Services Australia (over $50 million), and, more recently, the Australian Education Research Organisation ($50 million budgeted over its first four years). There has been no shortage of hard work, policies and money dedicated to improving school education. And Australia's performance has continued to fall.

Why? It seems a truth too obvious to be repeated but it is constantly forgotten. Student learning will not improve unless you change what happens in classrooms. All the rest is simply hyperbole about initiatives that simply don't matter for children. While each recent education minister has brought differences in ideology and focus to the position, they all shared a broadly similar approach, one that has moved education policy further and further away from classrooms.

Consider the case of science education. A host of policies have sought to improve science and STEM education. All have been accompanied by high-level announcements and talk of preparing Australian children for jobs in a 'digital age'. Not one has significantly improved what happens in classrooms.

Research shows that improving learning and equity in science education boils down to how we answer three fundamental questions about what happens in schools and classrooms:

1. **What is taught?** This includes content and the skills developed, instructional materials used, learning activities, tasks and experiments undertaken, and so on.
2. **How is it taught?** The teaching methods and practices used to teach science, for example conducting experiments or addressing student misconceptions.
3. **How is learning assessed?** How learning of what is taught in science is assessed through the tests and learning tasks that students undertake.

If Jason Clare asks about current classroom practice in these three areas and how it needs to improve, he will find the answer confronting, as all Australians should.

The truth is that we don't know what is taught in Australia's science classrooms. Nor in maths, English – name your subject. We don't know how the curriculum is taught – what teaching practices are used or not used. And we don't know how learning is assessed.

We also don't know whether students in poor communities have access to the same curriculum as students in wealthy communities. In fact, Minister Clare will quickly learn that when it comes to what actually matters in education, he has no line of sight at all.

What, then, do we know? We know that compared to high performing systems around the world, Australia provides school leaders and teachers with little clarity, guidance and support on what to teach, how to teach it, and how to assess what students have learnt. We know that the professional development and training teachers receive is high-level and general, rather than focussed on the central question: how to teach the subjects in the curriculum.

This means, for example, that for a Year 5 teacher in a science classroom trying to teach reflection and refraction of light for the first time, there is limited support available about how to teach the actual topic; for example, how to use mirrors or prisms to help young students understand the concept, what everyday examples illustrate reflection or refraction, and what are the misconceptions that students commonly bring to the topic. Instead, the support provided is not aimed at what the teacher confronts in the classroom, it is generic. Generic professional development, teaching standards and practices.

In high-performing systems overseas, policy focuses tightly on the classroom making it specific rather than generic. Singapore reforms its science curriculum, for example, through a five-year cycle of review and incremental improvement. An expert team of academics and teachers work in schools and classrooms, collecting data and working with teachers and school leaders on what is actually being taught in science classrooms.

The team looks at the science experiments students are undertaking, the content they are taught, the instructional resources used, the student assessments and so on. It spends about four years documenting what is working well, and the challenges and barriers to improvement that teachers, school leaders and students face in classrooms.

In year five, the Singapore science curriculum is changed based on the expert team's recommendations. If teachers are having problems with specific instructional resources, those resources are changed. Teachers struggling with specific science content, the scientific method, or with conducting experiments, receive greater clarity and support. Once the five-year reform process is concluded, it starts again. The expert team continues to work with schools and in classrooms,

identifies what is and isn't working, then adjusts policy accordingly to prepare for the next cycle of reform.

Successful curriculum reforms in the Canadian provinces of British Columbia and Alberta and in some US states have followed a slightly different approach, but the core focus is the same: first understand what is happening in classrooms, make incremental changes to improve it, test the changes and start again. This approach is a constant in systems undertaking effective reform.

Australia could not be further from this global best practice. Curriculum reviews are high-level and recommended reforms are rarely based on the curriculum that is actually taught in classrooms. Education policy development plays out in a similar way. A group of senior policy makers, usually assisted by advisers from the large consulting companies, develop strategy and policy based on two inputs: the weight of research from academic journals, and the direction the government of the day wants to take policy. Data on what happens in classrooms – what is being taught in classrooms, how it is being taught and how it is assessed, are generally not collected or considered.

The strategy or policy is published with announcements, press releases and so on. It is then handed over to people working with and in schools and classrooms to implement. The policy runs its course and has no impact. The policy that wasn't developed based on what is happening in classrooms didn't improve what is happening in classrooms.

The reason this keeps on happening is that when policy doesn't impact classrooms, senior policy makers and consultants invariably explain the failure as a result of poor implementation or communication issues. Except after an election, when a new government blames the policies of the last one, it is vanishingly rare to hear education ministers or senior leaders say a policy was wrong.

The process is not sinister; it is just how Australian education works. Our narrative is that the policy is always doing well, there are just some implementation issues. Given that implementation is what happens in schools and classrooms, when senior leaders say a policy is correct but has implementation issues, they mean that a policy intended for schools and classrooms is correct, except for what is happening in schools and classrooms.

The whole sorry process is about to unfold again. In coming months, Jason Clare will be inundated with stakeholders telling him that the current overall approach and policy settings are correct, minus a few 'implementation issues' to sort out. He should see this for the absurd admission it is.

Instead, Jason Clare should lead by example and turn the focus of education policy to the classroom. This doesn't have to mean overreaching on Federal powers. School education is largely run by the states. But there are several key issues where he would get strong backing; where he could support initiatives and policy development in states. Here are four key initiatives to improve Australian education that Jason Clare could initiate:

- Identify and document what Australian students are actually being taught, what they are reading, what learning activities and tasks they complete, and what assessments of their learning are undertaken. This means focusing on what is actually being taught in schools and classrooms. Importantly, it would include comparisons of what is being taught to children in disadvantaged communities compared to wealthier students. Without these data, we cannot improve what happens in classrooms. From this, better support can be provided to school

leaders and teachers to help them decide what to teach in classrooms. This doesn't mean dictating to schools what must happen, but it includes guidance and high-quality resources to help teachers choose the best instructional materials available.

- Be clear that all Australian children have a right to a quality education. Disadvantaged students should have the right to learn the same knowledge and skills as wealthy students. By not focusing on classrooms, previous ministers and education leaders have been able to dodge this issue. The Australian curriculum is so high-level and vague that large differences in the curriculum taught to disadvantaged students are never identified or discussed. We have not made it clear what each child – regardless of their background - should have the right to be taught in Australian schools. This is not an implementation issue. It is simply wrong and must end.
- Address gaps in the support and guidance we provide school leaders and teachers by developing world-class curriculum materials and instructional resources and ensure they are provided for free to all schools. The federal government should not compete with the work some states are already doing in this area, but it must ensure the work gets done across the country. This is the biggest single gap in Australian education and is expensive and resource intensive to do well so states will be eager for Federal support.
- Shift the focus from generic teaching advice to how to teach subjects and topics in the curriculum. This can complement the development of world-class curriculum materials by focusing on how to teach them. This means the Year 5 teacher teaching reflection and refraction of light for the first time has a complete set of world-class resources to use and adapt. It means they have guidance and support on the best way to teach these curriculum materials and the best way to assess student learning. Australia's failure to properly support teachers and school leaders adds to their workload and makes our school systems both less effective and less fair than high-performing systems overseas.

All these initiatives would improve Australian education, potentially dramatically. All reflect the research of what matters most to improving learning and equity. All are the bedrock of education policy in in better performing and more equal systems overseas. All fit into the federal government's role in education, strengthening rather than replicating or undermining the role of states.

Above all, the minister must ditch the damaging myth that what happens in classrooms is just an 'implementation issue,' and shift the policy focus to the three fundamental questions: what is taught in classrooms, how is it taught, and how do we assess student learning?

If Jason Clare takes on this task, he will be remembered as our greatest education minister, the one who finally confronted inequality in our schools and fundamentally improved the learning of all Australian children.

Dr Ben Jensen is CEO and Mailie Ross is Director of Learning First.