

Australian Learning Lecture Submission to the *Review to Achieve Educational Excellence in Australian Schools*

Overview

The Australian Learning Lecture (ALL) is a partnership between the Koshland Innovation Fund and State Library Victoria. ALL believes that new approaches are needed for education in Australia as we are reaching a crisis point. However, there are also many new developments that could lead to a higher more equitable achievement level than ever before.

ALL is committed to creating a national culture of learning, so that all Australians are confident, committed and capable learners.

In our view, educational success is driven by evidence-based research to:

- build **deep learning** around each child's interests and passions;
- focus on **problem solving, social skills, critical thinking, creativity character,**
- ensure **growth at every level,** (through diagnostic tools) allowing top students to zoom while assisting all students in areas where they are struggling.
- achieve **broader** measures of success

Australia's narrow measures of student worth and achievement are constantly undermining the purpose of schooling. Australia should move to measuring students against skills, knowledge and character where the emphasis is on skills and scores, not merely scores. Skills such as problem-solving and critical thinking are already within the Australian curriculum but are not being implemented at scale or in sufficient depth.

The most important data to understand learners is **diagnostic data** because it helps teachers identify a student's point of need and, if used well and alongside other data, enables teachers to deliver personalised learning in the classroom and facilitate improved learning outcomes, and engagement for all. Classroom diagnostic data also provides feedback on a regular basis. Our own research identifies that when schools adopt data to inform teaching, learning and wellbeing practice, enormous academic and social benefits follow.

ALL concurs to using funding to "invest in cost-effective, evidence-based policies and practices."

What should educational success for Australian students and schools look like?

The Australian Learning Lecture's second lecture *The New Success* was delivered by global education thought leader Charles Fadel who stressed that education success is about transforming education to give young people the skills and qualities they need to succeed.

ALL's view is that narrow measures of student worth and achievement constantly undermine the purpose of schooling. "*The New Success*" is about ensuring that children have a strong foundation in the 3Rs and they also embrace the transferable skills they need, such as problem-solving, collaboration and communication.

In our view, educational success is driven by evidence-based research to:

- build deep learning around each child's interests and passions;
- focus on problem solving, learning from mistakes, engaging with challenges and creativity;
- schools knowing each students' interests to engage deep learning;
- ensure growth at every level, allowing top students to zoom while assisting all students in areas where they are struggling.

Education success is about making it clear to teachers, students and parents that both learning and assessment should be purposeful, engaging, flexible, fair and accessible if it is to give all students the opportunity to demonstrate and retain what they have learnt.

Educational success is about ensuring the system fits the child instead of trying to make the child fit the system. The safest option we have for our students is to educate them to learn, unlearn and relearn in our fast-changing world.

What capabilities, skills and knowledge should students learn at school to prepare them for the future?

The Australian Curriculum already set out capabilities, skills and knowledge that each student is meant to acquire at school. In addition to the foundation skills of literacy, numeracy, IT, there are critical thinking, personal and social capability, ethical and cultural understanding.

The Business Council of Australia highlights that all potential employees must have more than a qualification. They require attributes including values, behaviours and skills¹.

Internationally The 4D model, advocated by Charles Fadel from the Center for Curriculum Redesign, says 21st Century learners require:

- Knowledge: what we know and understand: interdisciplinary, traditional (Maths), Modern (entrepreneurship), themes (global literacy).
- Skills: how we use what we know: creativity, critical thinking, communication and collaboration.
- Character: how we behave and engage in the world: mindfulness, curiosity, courage, resilience, ethics and leadership.
- Meta-learning: how we reflect and adapt.

There is overlap in all these ideas, the issue remains there is limited implementation.

How should school quality and educational success be measured?

ALL recommends that Australia moves to measuring students against character, skills and knowledge. As noted above, the Australian curriculum, BCA and international expertise contains these three elements but the measurements are not being implemented in their entirety.

ALL recommends that consideration is given to the development of **a dashboard model** which indicates the skills and knowledge that students have mastered at each year level. ALL believes that a dashboard approach will, encourage teaching and assessment of the skills and dispositions that matter most in equipping our students for today's changing world.

It will provide a common message to students, schools, parents, universities, and employers of the components (see above) that are needed for success.

¹ Being Work Ready: A guide to what employers want; Business Council of Australia.

What can we do to improve and how can we support ongoing improvement over time?

We note the points made by Andreas Schleicher (OECD) on a recent visit to Australia, namely:

- Australia is not prioritising high conceptual skills. Although surveys show 90% of teachers say that individual inquiry is the most effective teaching tool, Australia ranks very high on memorising in its teaching;
- Memorising is helpful for simple tasks but a hindrance to complex problem solving;
- School organisation is core to capacity to deliver transformation: for example, China and Australia have the same Student Teacher ratio but China allows much larger class sizes. Teachers in China only teach in class for 11-16 hours a week. They work longer hours but their other hours are spent observing other classroom teaching, working with parents, helping individual students and designing learning.

ALL's view is that Australia needs to move from relying on achievement tests as the sole indicator of an effective educational system, which currently is the status quo. For example, the current reliance on Australian Early Development Census and NAPLAN is limited. The AEDC is a cross-sectional population level tool, and does not allow for individualisation. Moreover, if children are absent on the NAPLAN testing day their results are not included. Depending on the child, their performance on the testing day may not represent their actual literacy and numeracy levels. At the year 12 level, the ATAR merely focuses on knowledge, and is a ranked score. This needs to change.

ATAR

To make ongoing improvement a goal for students, teachers, parents and schools, Australia must replace the ATAR score as the sole measure of schooling achievement. ATAR has a downward effect on the final years of school, and continues the overall 'teaching to tests' approach, that emphasises memorisation test capacity. These are not the capabilities that will serve students well in post school life.

Both business and educators have recognised this, saying the ATAR is losing its relevance, and that it does not indicate the skill sets and character that is needed in today's world. For example, PWC has instituted the "higher apprentice" program for Year 12 leavers², while Swinburne University of Technology has teamed with Templestowe College³ to offer an alternative entry to university.

We also defer to the University of Western Sydney which recently announced it would offer early entry based on HSC results not ATAR.⁴

² <http://www.smh.com.au/national/education/pwc-to-end-university-degree-employment-requirement-20170424-gvrb7c.html>

³ <http://www.afr.com/leadership/swinburne-university-is-pioneering-a-no-stress-route-to-uni-for-year-12-students-20171011-gyyntq>

⁴ (<http://www.dailytelegraph.com.au/newslocal/fairfield-advance/western-sydney-university-offers-early-entry-based-on-hsc-results-not-atar-under-new-program/news-story/5973f601423f8856cef30c0f5df48c73>)

Altering ATAR would also be a positive step as it currently has significant damaging impact on student and family well-being, with up to 30 per cent of students suffering anxiety, stress or depression.

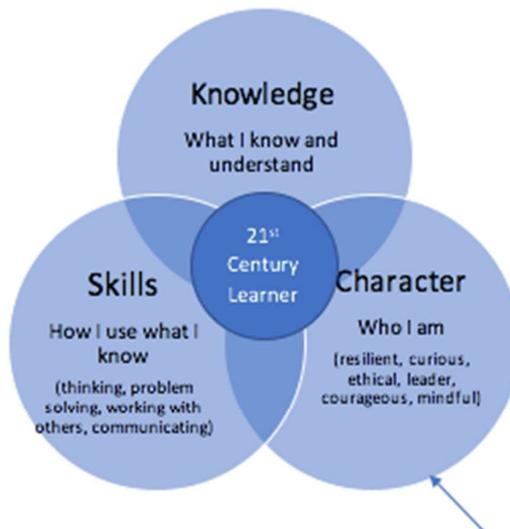
Imagine a New World of Tertiary Entry Requirements

ALL recommends consideration of a new dashboard approach to university entrance requirements with a focus on personalised learning and measures. This would be provided on a single page the assessment of knowledge, skills and character.

Each heading is supported by verifiable measures. For example, character could be verified by Community Service (e.g. the IB measure of creativity, activity and service); the Duke of Edinburgh award; certificates of extra curricula activities such as sport or orchestra. All these demonstrate resilience, team work, critical thinking and so on.

Imagine a New World of Tertiary Entry

Measurement matters but new 21st Century Learner has more to offer a university or employer than a ranked ATAR score:



Character can be measured already through verifiable programs and activities such as:

- Community Service (60 hours each of creative, action and service over 2 years)
- Duke of Edinburgh awards
- Orchestra (AMEB certificates)
- Sport (awards, member of club)
- Part-time job

A similar approach is being pioneered in the USA by the Mastery Transcript Consortium (see below). While the concept is young, it has been well received and has been taken up by more than 100 schools and universities. (<http://www.mastery.org/a-new-model/>)

How could schools funding be used more effectively and efficiently (at the classroom, school or system level) to have a significant impact on learning outcomes for all students including disadvantaged and vulnerable students and academically advanced students?

ALL believes that we need funding to support and drive an Australian culture of learning to support the work of schools, and to help those outside the education system to understand what the new needs of today's and tomorrow's learners are (**see our animation**)⁵.

In our view, any funding or investment into education must be evidence-based AND diagnostic-data driven if Australia is to have a world leading school system where all students can flourish.

The use of diagnostic skills in the classroom will enormously benefit struggling students and disadvantaged schools. Teachers are often overwhelmed by a 7-year level gap of skills in their classrooms. A personalised approach using digital tools will benefit addressing the individuals points of difficulty for each student. This is exemplified in The Maths Pathway Case Study (see attached).

What actions can be taken to improve practice and outcomes? What evidence is there to support taking these actions?

In addition to the responses above, Australia must work to a greater diffusion of knowledge of best teaching, through teachers observing each other's best practice. There should also be greater recognition and support for schools which do think outside the square, often with outstanding results.

What works best for whom and in what circumstances?

Research shows that evidence-based practice and using data to inform teaching and learning can be adapted to suit different school contexts. ALL has developed case study videos – practical examples of how joy and data can come together in learning – that can be shared across the Australian education system.

⁵ <https://youtu.be/w3eeus5Yn6w>

What institutional or governance arrangements could be put in place to ensure ongoing identification, sharing and implementation of evidence based good practice to grow and sustain improved student outcomes over time?

ALL believes that there are already systems and arrangements in place and these should be used better.

How can system enablers such as targets and standards, qualifications and accreditation, regulation and registration, quality assurance measures and transparency and accountability provisions be improved to help drive educational achievement and success and support effective monitoring, reporting and application of investment?

The Productivity Commission report on Evidence-based Enquiry identified that capabilities was one of three key data gaps, and that although more work needs to be done, Australia is progressing towards better measurement.

Some assessment methods exist. Measures have been developed using self-reports, teacher-reports, performance in specific tasks (including through experiments and psychometric observational studies) and administrative records of student behaviours (OECD 2015b). However, the subjective nature of some of these measures means they could be affected by bias. As a result, it has been suggested that they are ill-suited to use for school accountability, but that there is scope to develop them further for use in program evaluation and practice improvement (Duckworth and Yeager 2015).

We defer to ACARA which is investigating the possibility of embedding some general capabilities contained in the Australian Curriculum (ACARA, sub. 62, sub. DR147); to the Victorian Curriculum and Assessment Authority which is working in partnership with the Mitchell Institute on a project to develop teaching and assessment strategies for these same general capabilities (Mitchell Institute 2016, sub. 31).

Australia is not alone in attempting to find appropriate measures for 'soft' skills but ALL notes the urgency to determine measures rather than continue debating semantics.

Are there any new or emerging areas for action which could lead to large gains in student improvement that need further development or testing?

Our own research identifies that there are some schools with programs that exemplify the best learning possible. The research also shows that when schools adopt evidence-based practice which uses data to inform teaching, learning and wellbeing practice, enormous academic and social benefits follow. The results are stronger still when schools learn how to collect and use data effectively.

Following from the Australian Learning Lecture - Joy and Data - delivered in 2015 by Sir Michael Barber, ALL has developed case studies on six schools delivering exemplary results highlighting the combination of Joy and Data and The New Success.

Each case study tackles an issue where Australia is doing poorly and many Australian students struggle with - low literacy and numeracy understanding; well-being; building critical skills and problem solving – and how data is helping to solve the problem.

These examples can all be scaled up and adapted to suit individual schools, each shows the power when diagnostic data is applied to personalised learning and appropriate interventions.

Case study: numeracy

Bacchus Marsh College had Year 7 students with a wide variety of levels of maths understanding (Grade 2 to 8) and many students hated maths.

Solution: Maths Pathways is about overcoming the practical problems of skill differentiation in a class. By using a digital tool to assess exactly where each student is, the teacher is able to personalise what is needed next. Bacchus Marsh has developed a classroom culture in which students are constantly analysing data to improve, a more effective approach than sharing test results with students a few times a year.

Positive outcome: This has allowed good students to soar and struggling students to overcome problems, succeed and like maths.

Case study: Building critical skills

Rooty Hill High School has over 1,100 students, half of whom are from non-English speaking backgrounds, 60% to 80% of each Year 7 cohort is below grade average. The school's goal is help each student do their best so that they can become effective employees and active citizens?

Solution

The school has developed the Creative Inquiry Cycle, a model for problem-solving and creative-thinking. The CIC is a capability-driven curriculum, underpinned by strong literacy and numeracy programs. Each student has digital portfolio, to which they upload examples of their work, which they assess and map against the capabilities. The 2016 cohort of Year 10s were below average on literacy and numeracy measures when they arrived in Year 7. By the end of 2016 over 70% had reached state average on the NSW VALID science examination.

The other four case studies are:

- Collaborative Problem Solving: a skill for the 21st Century (Eltham High School, Vic)
- Positive Education – using data to bring joy (Mount Barker High School, SA)
- Creating active learners: Visible Learning and SeeSaw (Hilltop Road Public School, NSW)
- The Taranganba Way of Reading (Taranganba State School, Qld)

(<http://www.all-learning.org.au/resources/case-studies>).

Are there barriers to implementing these improvements?

As has been highlighted already, the top-down effect of the ATAR limits the capacity of schools to teach capabilities and skills. Other barriers include:

Barriers	Enablers
Focus on test scores limiting measures of success particularly on skills and character – the very things that students need for future work and life.	A move to measuring skills through broader assessments focusing on skills and character, as well as scores ACER: multiple measures are better than single Broader measures of success to monitor students' capabilities
Poor diffusion of best practice in the teacher profession	Teachers given more hours to watching and learning from other teachers; designing learning, and focusing on personalised learning sharing proven approaches.
A concentration on a heavy content laden curriculum which encourages memorisation rather than higher cognitive skills and problem-solving.	Personalised learning supported by diagnostic data.
Parents who continue to look at learning through their lens of experience of schools	Parents who understand what success looks like today and tomorrow and who understand the concept of lifelong learning
Limited entrance requirements to university (such as the ranked ATAR)	Universities that broaden their entrance requirements to reflect the capabilities that matter to future success. More use of portfolios, face to face interviews,
Short-term planning (based on election cycles) and a focus on funding which is not evidence-based.	Politicians with the understanding and courage to plan and fund long term