Professional Voice
Volume 13 Issue 3 | Summer 2021 | RRP $10
ISSN: 1445-4165

THE new basics

AUSTRALIAN EDUCATION UNION
AEU

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Published by
Australian Education Union Victorian Branch

Printed by
Printgraphics

Printed on FSC paper
Cover: 300 GSM Pacesetter Gloss
Text: 113 GSM Pacesetter Satin

Subscription
Professional Voice is free to AEU financial members who can become subscribers by emailing **marlene.mclean@aeuvic.asn.au** "Request Professional Voice subscription".

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ISSN:1445-4165

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The new basics: equity, wellbeing and technology

John Graham

The slogan 'back to basics' has become an entrenched part of the political lexicon, particularly in education. It falls into the category of 'thought-terminating clichés' which are "typically short, generic truisms that offer seemingly simple answers to complex questions or that distract attention away from other lines of thought".[1] In her article in this edition of *Professional Voice*, Naomi Barnes writes about the string of politicians in Australia who have employed the back to basics catchcry over the past 30 years to justify everything from curriculum reviews, NAPLAN, and My School, to funding cuts and John Howard's school flagpoles policy.

More recently, the former federal Minister for Education, Dan Tehan, used the 'thought-terminating cliché' approach when he told the media that Australia's "disappointing" PISA results were due to a drift away from "the basics" and people had to "step back and admit there has been too much focus on other things and they are wrong". So, what did he mean? He offered no evidence that schools had neglected the basics or even what he meant by "the basics" (the 3Rs taught by rote methods?) and no explanation of what the "other things" are that schools shouldn't be focusing on. Instead his message acted to shift any blame for the results from himself and his government's policies to unidentified bad practice in schools and, faced with the complex and contested nature of modern education, to claim he had a simple common-sense remedy to fix the problem.

The article by John Graham points out that a decade of NAPLAN-coloured back to basics in Australian schools has seen no overall improvement in either achievement or equity. By locking schools and teachers into standardised test-based accountability and top-down targets, the NAPLAN culture has distorted the curriculum and pedagogy and taken away most of the oxygen to innovate. NAPLAN results are used to identify 'effective learning' at the expense of capacities such as critical-thinking, creativity and aptitude for continuous learning, which are not easily measured, able to be compared or become the data for accountability regimes. The CEO of ACER, Geoff Masters, has warned that the central role of NAPLAN has promoted an undesirable focus in schools on basic skills rather than the high-level capacities which students will increasingly require in their post-school lives.

> *Future employees will require more than basic skills such as literacy and numeracy. They will need to be able to think, solve problems, create new*

solutions, draw on deep understandings – in short, to do what machines cannot – or risk long-term unemployment.[2]

Literacy and numeracy have always been central to the school curriculum in terms of the way it is enacted in the classroom. They are a necessary but not a sufficient condition of a good education. If they become linked to high stakes testing however, they can desiccate the curriculum by reducing or eliminating other important areas of knowledge and skills. Leon de Bruin's article makes the case for music education in schools. Despite its centrality to our lives and our wellbeing, it has become marginalised in schools through a lack of resources and a lack of understanding about its benefits to the overall education of students. Rather than being treated as a basic skill and an area of knowledge which should be developed by all students, instrumental music education is seen more as a luxury add-on, particularly for students from disadvantaged backgrounds who attend government schools.

Understanding student achievement in all areas of the curriculum depends upon the conditions of their learning - student background, school resourcing, levels of teacher and student wellbeing and the impact of technology. In her article, Sue Thomson sets out in stark contrast the differences between the educational experience and outcomes of students from disadvantaged and advantaged backgrounds in Australian schools. She finds that students from disadvantaged backgrounds whose achievement levels may be up to three school years behind their more advantaged counterparts, report significantly lower levels of support and feedback. These differences are compounded when the schools they are more likely to attend are compared. Principals report that 'instruction is hindered' by a range of factors such as a lack of teaching staff (34% in disadvantaged schools, compared to 3% in advantaged schools), a lack of physical infrastructure (45% compared to 6%) and a lack of educational material (21% compared to 1%).

Trevor Cobbold, an ex-Productivity Commission member and the head of Save Our Schools, is our interview subject in this edition of the journal. His passion is to make Australia a fairer society. He has written extensively about the way in which governments in Australia perpetuate and extend the gap between students from advantaged and disadvantaged backgrounds. This is most obvious in government school funding policies which enable private schools to have a huge resource advantage over public schools, despite public schools enrolling the majority of high needs students. Cobbold argues that school funding in a fair society would be based on social justice principles such as reducing social segregation and a commitment from schools that, in return for public funding, they will adopt inclusive, non-selective enrolment practices and provide access to a comprehensive curriculum.

Concerns about teacher and student mental health, wellbeing and safety were exacerbated in 2020 as the pandemic drastically changed the conditions of work and learning. Cathy Sheehan's article describes a major research study of AEU members carried out by Monash University in the second half of 2019. While the study pre-dates the impact of COVID, its findings highlight the poor welfare and wellbeing situation of education staff during 'normal' times. Survey respondents reported high job demands, low job control, and significant levels of stress associated with the management of workplace change and manager support. Using international norms, the study found that the sense of well-being was low and educators showed increasing resistance to speaking up as an outcome of fear of consequences and also due to a sense of hopelessness. Despite these negative experiences, educators were still committed to learning and improving, and were engaged in what they do.

In her previous article for *Professional Voice*, Erica Southgate wrote about the ways in which technology is becoming more 'intelligent' and less transparent as it integrates itself into classrooms and school administration through artificial Intelligence (AI) and machine learning (ML). In this edition of the journal she concentrates on how artificial intelligence is now challenging the authentication of student work and commonly held notions of originality. Increasingly AI is like the fabled Ouroboros consuming its own tail as it is used both to detect plagiarism and to produce imitations and false representations in the form of 'deep fakes'. It is also blurring the lines between student original work and 'machine-augmented' original work.

> *Imagine a future where a student uses an AI application to produce an AI product (music, text, visual art) that could gain a pass or credit grade. AI could produce work where no two responses would be the same because it would learn to check against what it and other AI had already created: in other words, to check its original work against other AI original work. No doubt an AI will be developed to detect or authenticate AI-generated work but as machines continue to learn by themselves they may very well learn to avoid such detection.*

'Machine-augmented' learning in schools through online resources and a plethora of software applications and packages which has been around for some time will, according to Southgate, only grow over time as AI takes this process to a whole new level of sophistication. Faced with these developments, teachers need to be given the resources to understand the use and direction of AI and its impact on their professional work.

Collectively, the articles in this journal make a case for reinterpreting the basics of schooling to ensure that education is fit for the sort of evolving society and economy we want to live in. Equity, wellbeing and technology should be integrated into the base of school education.

They are part of what could be termed 'the new basics' which are essential to realise the learning potential of all students.

End notes

1 Kathleen Taylor (2006), Brainwashing: The Science of Thought Control, OUP. p. 21.

2 Geoff Masters (2019), Focus on basics leaves schoolkids short in essential deep thinking, Research Developments, ACER, 4 December **https://rd.acer.org/article/focus-on-basics-leaves-schoolkids-short-in-essential-deep-thinking**

John Graham is editor of *Professional Voice* and works as a research officer at the Australian Education Union (Vic). He has been a secondary teacher, worked on national and state-based education programs and in the policy division of the Victorian Education Department. He has carried out research in a wide range of areas related to education and training. He has had particular responsibility for the many issues impacting on teachers and teaching as a profession, teacher education, curriculum change, and the politics, organisation and funding of public education.

How do Australian students see their teachers?

Sue Thomson

In a year that has seen a great deal of disruption to classes, the relationship between students and their teachers has become far more important. Data from the OECD Programme for International Student Assessment (PISA) gives us some insights into this relationship, as most students that were surveyed for PISA 2018 were in the final years of their secondary schooling in 2020.

An important facet to this discussion is the impact of disruption on different types of students and, in particular, this article examines differences between advantaged and disadvantaged students in Australia. A primary goal of every Declaration on Schooling up to and including the most recent Mpartntwe Education Declaration (Council of Australian Governments Education Council, 2019) has been that "The Australian education system promotes excellence and equity", and commits that "governments and the education community must improve outcomes for educationally disadvantaged young Australians … such as those from low socioeconomic backgrounds" (p. 17).

What is disadvantage in PISA?

The primary measure used by the OECD to represent socioeconomic background in PISA is the index of economic, social and cultural status (ESCS), which was created to capture the wider aspects of a student's family and home background. The ESCS is based on three indices: the highest level of the father's and mother's occupations, which is coded in accordance with the International Labour Organization's International Standard Classification of Occupations; the highest educational level of parents in years of education; and home possessions. The index of home possessions comprises all items on the indices of family wealth, cultural resources, and access to home educational and cultural resources and books in the home. The ESCS is then split into quartiles: the highest are what are referred to as "advantaged" students, and the lowest quartile as "disadvantaged" students. While it is acknowledged that there are many exceptions to this characterisation, generally there is a strong correlation between socioeconomic background and achievement in PISA (Table 1).

Table 1 Average score by socioeconomic group, PISA 2019

	Reading literacy		Mathematical literacy		Scientific literacy	
	Mean	SE	Mean	SE	Mean	SE
Disadvantaged students	460	2.3	451	2.3	462	2.2
Advantaged students	549	2.3	532	2.8	545	2.6

So, how does this play out in the classroom, and in particular, how do student perceptions of the level of support and the quality of feedback they received from their teachers at that point of time influence how students adapt to the current learning environment?

Teacher support

The teacher-student relationship plays an important part in creating a positive learning environment. When teachers show care and concern for their students, it is more likely that their students will likewise show care and concern in a manner that is reflected in a supportive classroom environment (Lei, Cui & Chiu, 2018; Klem & Connell, 2004). Support from teachers is associated with higher achievement (Koir & Tement, 2013; Malecki & Demaray, 2006), and can have a moderating effect contributing to the success of students from disadvantaged backgrounds (Becker & Luther, 2002).

PISA investigated student perceptions about the extent of the support they receive from their English teachers (or language of instruction teachers in non-English speaking countries). Teacher support was measured by asking students how frequently the following behaviours occurred (every class, most classes, some classes, never or hardly ever) in their English classes:

- The teacher shows an interest in every student's learning.
- The teacher gives extra help when students need it.
- The teacher helps students with their learning.
- The teacher continues until the students understand

On average, Australian students were generally very positive about their teachers. Australian students reported an aggregate score on the teacher support index that, while lower than that of students in the UK, was similar to that of students in New Zealand, Singapore and Finland, and higher than that in the United States, Ireland and most of the East Asian countries.

However, students in disadvantaged schools did not report the same level of perceived support from their teachers as did students in advantaged schools (Figure 1). The largest difference lay in students' perceptions that *the teacher shows an interest in every student's learning*, with positive (every class, most classes) responses given by 76 per cent of disadvantaged students and 83 per cent of advantaged students. For each of the other teacher support items, there was about a five percentage point difference between the proportion of advantaged and disadvantaged students who said the behaviours occurred in most or every English class.

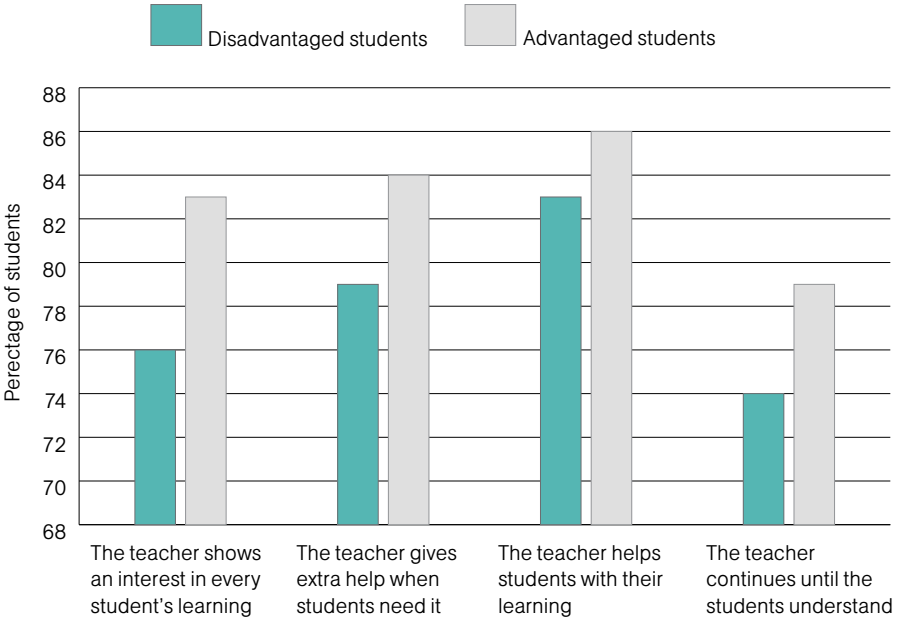

Figure 1. Levels of perceived teacher support by student socioeconomic background

Teacher feedback

Teacher feedback is also critical to students' success. Teacher feedback is an essential part of the learning process that provides students with information about their performance or understanding (Hattie & Timperley, 2007). Feedback is associated with stronger performance and higher levels of motivation (Hattie, 2009).

Teacher feedback was measured in PISA by asking students how frequently (every class or almost every class, many classes, some classes, never or almost never) the following behaviours occurred in their English/language of instruction classes:

- The teacher gives me feedback on my strengths in this subject.
- The teacher tells me in which areas I can still improve.
- The teacher tells me how I can improve my performance.

While Australia's score on the teacher feedback index was much higher than the OECD average and that of Japan, Finland and Ireland, among many, it was significantly lower than the average score in the United Kingdom, New Zealand and Singapore. Figure 2 shows students' positive (every class, most classes) responses to the three teacher feedback items for Australia, the OECD average and the United Kingdom, which achieved the highest score on the teacher feedback index among OECD countries.

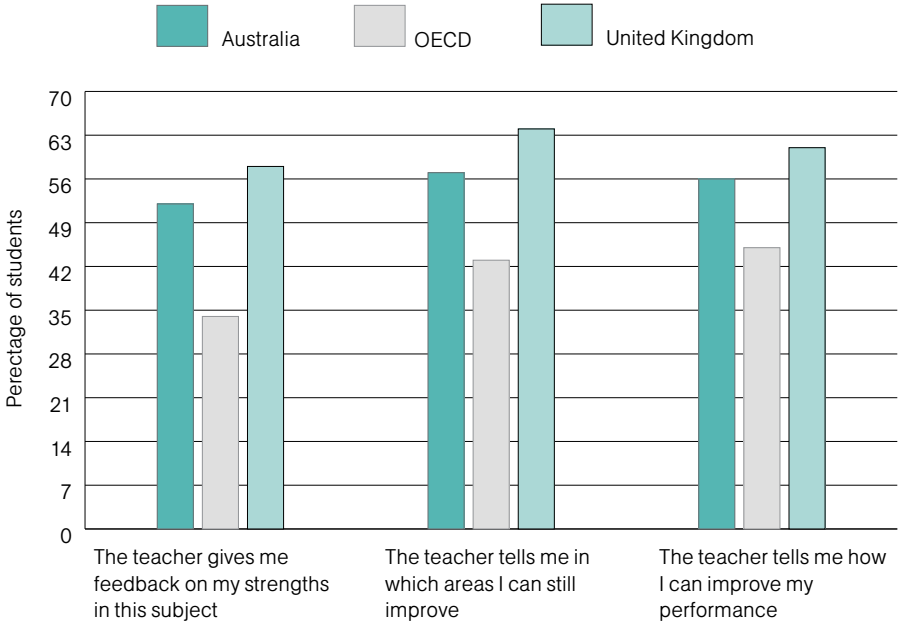

Figure 2. Levels of perceived teacher feedback: Australia, United Kingdom and OECD average

Australian teachers seem to be perceived to be relatively good at telling students how they can improve their performance, as the difference between teachers in Australia and the UK is smaller on this measure than on the other items in the scale.

Interestingly, there were some gender differences on this scale, with male students reporting higher levels of feedback than female students. The explanation for this extra support likely rests in the fact that students were asked to report the frequency of teacher feedback received in English classes, a subject in which traditionally females significantly and substantially outperform males. While the differences were fairly minimal on *the teacher gives me feedback on my strengths in this subject* (50% of female and 53% of males said this happened in most or every English class), they were larger for *the teacher tells me in which areas I can still improve* (54% of females and 60% of males) or for *the teacher tells me how I can improve my performance* (53% of females and 59% of males).

The logic of higher levels of teacher feedback being reported by groups with lower achievement fails, though, when examining the differences between Australia's socioeconomic groups. Instead, far more support is perceived to be offered to students in the *advantaged* group, which would in effect boost their already substantially higher performance (Figure 3). The differences between socioeconomic groups, which ranged from 8 to 9 per cent, were substantially larger than the gender differences (3 to 6 per cent).

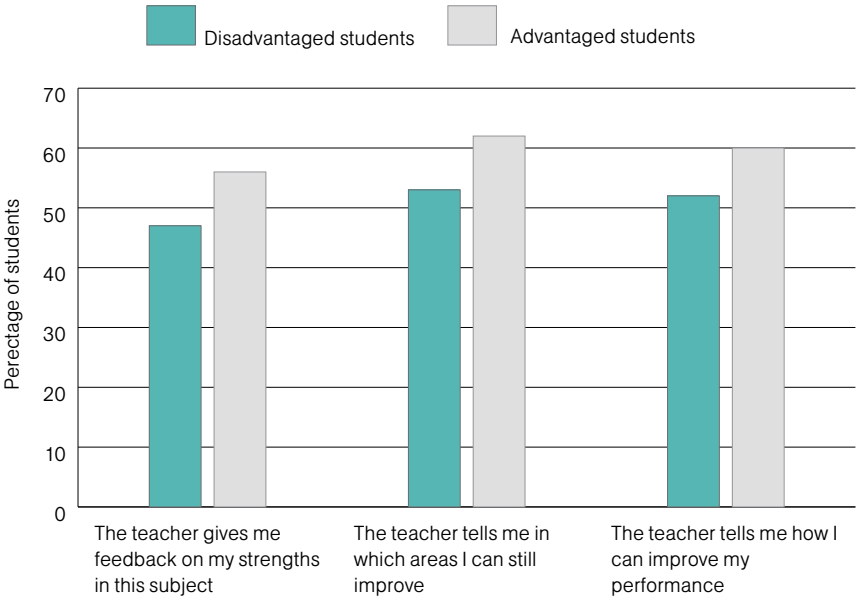

Figure 3. Levels of perceived teacher feedback by student socioeconomic background

Reasons for these differences?

Unfortunately, data from point-of-time studies such as PISA are unable to provide us with answers to questions such as "why do we see these differences?" However, there are further data analyses that can be done that may help shed light on this question.

More than one quarter (28%) of disadvantaged students also attend disadvantaged schools, compared to just 8 per cent of advantaged students. Table 2 shows a very brief overview of some of the differences between advantaged and disadvantaged schools from PISA 2018.

Table 2 Principal's views on hindrances to providing instruction (Australia)

		Disadvantaged schools (%)	Advantaged schools (%)
Percentage of students in schools whose principal reported that the school's capacity to provide instruction is hindered at least to some extent by:	Lack of teaching staff	34	3
	Inadequate or poorly qualified teaching staff	21	0.3
	Teacher absenteeism	28	5
	Teachers not well prepared	18	5
	Lack of educational material	21	1
	Inadequate or poor educational material	21	0.3
	Lack of physical infrastructure	45	6
	Lack of student respect for teachers	16	0.3

From Australia's participation in the OECD's Teaching and Learning International Study (TALIS) in 2018, we also know that Australian teachers in schools with a higher proportion of disadvantaged students spent less time on actual teaching and learning than their colleagues in more advantaged schools. The difference in Australia (of 9.8 percentage points) is the highest in the OECD, and equates to about 6 minutes per hour. With over 1,000 hours of face-to-face time at school, this is substantial. They also spend more time on individual planning or preparation of lessons, and more time counselling students. Given the compounding effect of these problems, as well as the increased workload they have, it's perhaps not surprising that teachers in disadvantaged schools in particular are somewhat overwhelmed by their job.

Conclusions

Whilst overall the level of support and feedback provided to Australian students from teachers is good, the findings from this report that disadvantaged students perceive lower levels of support and feedback compared to advantaged students is very concerning. The large achievement gaps (approximately three years of schooling) between students from advantaged and disadvantaged socioeconomic groups will only ever be breached if extra support is provided to those who really need it. With disruptions to the 2020 school year likely to have a stronger negative impact on disadvantaged students, providing increased support for these students is more critical than ever before.

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The politics of ‘back to basics’

Naomi Barnes

During 2020 NSW Premier Gladys Berejiklian described the NSW curriculum review as a signal to go *back to basics* despite Professor Geoff Masters, who headed up the review, insisting it was more about decluttering the curriculum. The phrase *back to basics* has signalled different education reforms over the years so chances are her use of the term was signalling yet another.

Since the 1950s and earlier, at every level of government, politicians have touted their versions of *back to basics* reforms in education as a way of showing their political leadership and to assure us of the stability of their governments. The catch-cry taps into widespread, ever present, cultural fears about literacy and numeracy standards. It signals that a simple and easy solution to educational problems is achieved by just ‘reforming’ the sector responsible for teaching reading, writing and arithmetic.

However, in 2020 when anxiety over education was particularly heightened, a *back to basics* move also appeals to nostalgia for a time before the pandemic, before a decade of constant reform, before precarity, before everything got so scary.

The trouble is we know from looking at our past experience of politicians talking about going *back to basics*, this phrase can refer to whatever ‘reforms’ they want to introduce.

What does the phrase *back to basics* actually mean?

The phrase is what linguists call an empty signifier, or what the D-Generation might call a “hollow” phrase. These phrases are the basis for policy writing jokes in Utopia and The Hollow Men and other comedies about political life. In other words, *back to basics* is clear enough to have passing meaning, but vague enough to mean nothing in particular or to have multiple meanings attached.

It can mean cuts to funding for public schools

The term emerged in the 1950s in the United States but has been used since the 1970s to signal Australian education reforms. In 1977, the Fraser government used *back to basics* to reform the vocational education sector. In 1988, Nick Greiner swept the Coalition to victory

in NSW promising a *back to basics* approach to education, but this time the signal was for massive cuts to education including defunding the public system, raising class size and complexity by introducing composite classes, closing smaller schools and sacking 2,400 teachers and 800 support staff.

It can mean flagpoles and teaching 'values'

Back to basics was base line rhetoric for the Howard government's approach to education and shifted its use from simple system and curriculum reform to ideological reform. The phrase signalled moves to neutralise the 'left-wing' his government claimed had infiltrated the teaching profession. The National Framework for Values Education in Australian Schools and the flagpole program in 2005 linked federal funding to the display of "traditional" Australian values. Howard's government also opposed diversifying the curriculum by using sources other than white colonial history texts.

It can mean "removing the black armband of history" and always involves phonics and grammar

Conservative commentators were surprised at the Gillard government's appropriation of their spin when the Australian Curriculum was finally released after over two decades of negotiations and drafting. Following the Howard government's definition of basics referring to traditional values and combining it with solid literacy and numeracy practices, the Australian Curriculum removed "the black armband view of history", which taught students the nature of British colonialism in Australia, specified the teaching of sound-letter phonics, and re-introduced grammar.

In 2010, *back to basics* was used to signal a return to the "golden age" of grammar. The phrase worked to signal both nostalgia and reassurance about basic reading and writing in the emerging era of social media. Professor Peter Freebody, who led the drafting of the Australian English Curriculum, explained that literacy levels in Australia had actually improved since grammar was removed. The hearkening back to days where children were remembered to be obedient and do their homework tapped into alluring, if false, white Australian cultural memories of the 1950s.

In 2008 it meant NAPLAN and in 2014 (another) curriculum review

Back to basics was also used by politicians to describe the introduction of NAPLAN in 2008 by Julia Gillard. This bipartisan agenda, which started when Brendan Nelson was federal Minister for Education, was a 'transparency' move to publish literacy and numeracy results

and collect data about schools on the My School website. The review of the Australian Curriculum by Christopher Pyne in 2014 was also touted as *back to basics*.

It can mean a focus on PISA scores and the dismantling of education authorities

The present federal Education Minister, Dan Tehan, insisted in December 2019 that Australian education needed to go *back to basics* because of our declining PISA scores. What Minister Tehan was really signalling was the introduction of learning progressions, the collapsing of two of Australia's largest education authorities (Australian Institute for Teaching and School Leadership and the Australian Curriculum and Assessment Authority) into one body, the development of an evidence institute, and the reform of teacher education.

Each time we have heard the *back to basics* catch-cry we have seen major political moves that seem to use education, in one way or another, as a political pawn. Each time this occurs, there has been a push back from literacy, numeracy, and assessment experts who argue that *basics* is never the point. They argue that the needs of our widely disparate education systems in Australia are complex and any problems that arise need complex solutions. If the history of the phrase is any indication, you can bet it is about more than just reading, writing and arithmetic.

Literacy and the 'Reading Wars'

The use of the term *back to basics* by politicians has not developed in a vacuum. There have been specific political movements within the education industry that are caught up in how the term is defined. Regarding the literacy side of *basics*, the so-called Reading Wars are a key source of political information.

While the debate over the best way to teach reading is more than a century old, it has not always been central to the political sphere. In Australia, literacy researchers Bill Green, John Hodgens and Allan Luke, who wrote the book *Debating literacy in Australia : a documentary history, 1945 - 1994*, trace the moment literacy became political to the enshrining of it as an object of policy at the federal level. In other words, *reading* and *writing* became *literacy* and literacy became something that accounted for the economic health of the nation.

Making literacy an object of policy allowed the Australian government to have a measurable item that could be used to link mass youth unemployment to failures in education. Green and his colleagues argue that the media's constant recycling of the Reading Wars reinforce that link in the public mind. This means that the continuous advancement of research into reading and into the complexity of unemployment gets reduced to a single NAPLAN or PISA score.

This score can then be deployed to "reform" education using the common-sense phrase *back to basics*.

Why is the language we use important?

I asked a question of my followers on social media not so long ago. What words are used in education that are hollow? What words are policy words that have loads of meanings and at the same time have none? These are the words that were offered up:

- Common-sense
- Transparency
- Innovation
- Catch-up strategies
- Data digging
- Disruption
- Authentic
- Engagement
- Drilling down
- Data-driven or informed
- Deep dive
- Professional learning community
- Creativity
- Pivot

One of the marvellous things about the teaching profession is its ability to fully embrace a word like *innovation* but also open it up to interrogation. What does it mean to be innovative? Does it mean using new technologies or adapting to a lack of resources? What does my school mean by innovation when we have staff meetings about pedagogy? Can the meaning be resisted? Redefined? Discarded and replaced?

This habit of critical engagement around the language of teaching is a good thing, even if it feels exhausting to be subjected to a new buzz word every year. It means that teachers are engaged with conversations around practice, are ensuring the new ideas that come into schools are rigorous and informed. It means that they are *quality* teachers.

Using a word like 'quality'

The difference between me using a word like *quality* as opposed to *innovation* is that I have used it to pass a judgement on teacher practices. I am not a teacher, rather a teacher educator and it is my job to train *quality* teachers. I have more than a passing interest in what

the word *quality* means. The Australian Professional Standards for Teachers (APST) imposed it on me and now I am imposing it on teachers. You could ignore it, or you could do what teachers do well and interrogate it. And quality has been subjected to quite a lot of cross-examination since it popped up in the APST.

Words and phrases that are imposed on the teaching profession need to be questioned because they have rhetorical power. In other words, they are designed to elicit action. The action might be to automatically do what the term or phrase is asking, or to resist it through critique or rephrasing.

There are some terms though, that teachers have very little control over because they are imposed from outside of the industry. *Back to basics* is one of those. It is a political phrase, and while it might be a difficult one to resist, it still needs to be interrogated and made to show what it really is. By shining a light on *back to basics* teachers can be forewarned, because experience has shown that when politicians start using this phrase nothing very good for the profession follows on from it.

Dr Naomi Barnes is an education communications and policy analyst interested in the history of literacy education. She teaches English and History at Queensland University of Technology. Naomi was a teacher and curriculum leader for 13 years in government, Catholic and Independent secondary schools.

The decline and fall of NAPLAN's objectives

John Graham

Prelude

In 2008, in an attempt to highlight the virtues of a new Australian national testing regime known as NAPLAN, and a new consumer market mechanism for schools, known as My School, the New York City schools Chancellor Joel Klein paid a visit to Australia sponsored by the Swiss multinational investment bank UBS.

The Minister for Education at the time, Julia Gillard, had invited Joel Klein to Australia to "share his reform experience" with the Australian public. Whether Ms Gillard was fully aware of Klein's record during his eight years in charge of New York's education system, or was bamboozled by his PR on her visit there, is unclear. However, by the time he arrived in Australia his claims to having achieved huge gains in achievement and equity in New York schools were subject to growing scepticism.

At the centre of the Klein reform recipe was high stakes standardised population testing. This was used to grade schools, teachers and principals. The consequences of low scores included school closings and the replacement of principals and other school staff and performance-based pay. As a result, schools narrowed their curriculum, spent more and more time on test preparation (including scripted curricula) and in some cases manipulated student scores.

Klein's assertion that his reform strategy was a roaring success and had led to record gains in his administration's standardised population literacy and numeracy tests was shown to lack any real substance when the American nationally-administered sample-based tests showed that little or no progress had been made between 2002, when Klein came into office, and 2009.[1] Achievement was static or declining and the equity gap for disadvantaged students showed little change.

In other words, the high stakes decisions made by the Klein administration in rewarding or punishing schools and school staff using standardised test results were not only flawed in theory and research, but were also shown to be based on defective standardised test

data. One year later in 2010 Klein left his position as Chancellor and went to work for Rupert Murdoch selling schools tablets and a tablet-based approach to curriculum and instruction.

Achievement, equity and visibility

NAPLAN was introduced into Australia in 2008 as a cornerstone of the Rudd-Gillard 'Education Revolution'. This linked increases in school funding for the states and territories and non-government authorities to education 'reform' through a National Education Agreement and National Partnerships in teacher quality, literacy and numeracy, and low SES communities. The additional investment was wrapped around standardised testing and the publication of its outcomes on a consumer website comparing school results. it was claimed that these carrot and stick measures would improve student achievement and equity.[2]

The idea behind this claim, borrowed from New York and other American education jurisdictions, was that greater transparency and accountability would kickstart improvement in a complacent education system. Schools, classrooms and teachers would become more 'visible', and improvement would be achieved through "...practices of 'auditing' schools and teachers through the production of (largely) quantitative data, and to the creation of systems that use data to steer or manage institutions, individuals and practices at a distance."[3] Using NAPLAN as the school quality metric on My School would force 'underperforming' schools to face a market mechanism ('... if some (parents) walk with their feet that's exactly what the system is designed to do ...'Kevin Rudd, 2008[4]) with consequences for the viability of the school, its teachers and its principal. The new 'NAPLAN culture' would galvanise schools to try harder to improve their achievement.

Achievement outcomes

There is little evidence that the introduction of NAPLAN, and the publication of its results on My School, have in any way fulfilled the stated original purpose of improving student achievement and equity across Australia.

One of the ways of calculating the achievement progress of Australian students during the NAPLAN years is to examine the attainment of the country's 15 year-olds in the sample-based international PISA testing program held every three years. Geoff Masters, the CEO of ACER, has contrasted the emphasis on low level basic skills in NAPLAN testing with PISA's assessment of the ability to transfer and apply learning to new situations and unseen problems. "This requires an understanding of fundamental concepts and principles, as well as the ability to think. It is in these areas that Australian 15-year-olds' performances are

declining."[5] The central role of NAPLAN, according to Masters, promotes an undesirable focus in schools on basic skills rather than the high-level capacities which PISA evaluates and which students will increasingly require in their post-school lives.

Between 2009 and 2015 the mean performance score in reading for Australian students in PISA steadily declined from 515 in 2009, to 512 in 2012, to 503 in 2015. In 2018 it remained at 503. In contrast, the mean performance score in reading for the OECD as a whole between 2009 (491) and 2018 (487) saw very little change.

In mathematics the mean performance score for Australian students steadily declined from 514 in 2009, to 5004 in 2012, to 494 in 2015 and to 491 in 2018. As with reading, the mean performance score in mathematics for the OECD as a whole between 2009 (496) and 2018 (494) saw very little change.[6]

The results also show between 2009 and 2018 an increase in both reading and mathematics in the proportion of Australian students who were classified as 'low performers' - this means they did not reach Level 2 out of the six PISA proficiency levels. In 2009 there were 14 per cent of low performers in reading. This rose to 20 per cent in 2018. In 2009 in mathematics 16 per cent of students were classified as low performers. This rose to 22 per cent in 2018.

The student achievement gains in NAPLAN itself have been inconsistent, insignificant and limited to certain areas. Many of the assessment domains show no improvement. As the Gonski Institute reported in its submission to the 2019 review of aspects of NAPLAN:

> *Significant gains are only seen in Years 5 and 9 numeracy, Years 3 and 5 reading, Years 3 and 5 spelling, and Years 3 and 7 grammar, all of which are significantly above the NAPLAN 2008 average. Thus, many year groups and domains show no significant progress. In particular, significant and consistent declines are evident in writing test results across Years 5, 7 and 9, since the first year writing was assessed in 2011. It is fair to say that the learning outcomes measured by NAPLAN have not improved over time. In some areas, like writing, they are disturbing.*[7]

Equity Outcomes

The flaws in the idea that a NAPLAN – My School strategy could address equity were obvious to all but its backers from day one. Alan Reid has pointed out that extending the education market and improving equity are incompatible polices.

> *Education markets lead to greater segregation and exacerbate achievement gaps in schooling. They provide an illusory choice for many, and inevitably residualise public education by leaving public schools with the largest numbers of students in need of special attention, and thus to do the heavy lifting on behalf of all schools. This is not an argument against accountability. It is an argument against forms of accountability that reduce quality and widen inequality.*[8]

The cumulative evidence from more than a decade of NAPLAN testing shows no improvement in equity outcomes for Australian school students. Students who have been through four cycles of NAPLAN over time and participate as 15-year-olds in the OECD PISA sample-based testing program in reading, maths and science, display the same poor equity outcomes which existed ten years earlier.

The 2018 PISA mean score differences between high and low SES students and between Indigenous and non-Indigenous students represent differences of two to three and a half years of schooling, roughly the same as in 2009. The OECD labels students who have not reached the baseline level of proficiency (https://www.oecd.org/australia/PISA-2012-low-performers-Australia-ENG.pdf) required to participate fully in modern society as "low performers" (below Level 2 of the six PISA proficiency levels). The proportion of low performers in each category - SES and Indigenous/non-Indigenous – also display a lack of any change over ten years of NAPLAN. (see Table 1).

Table 1: Australian students' PISA performance 2009 to 2018: SES quartiles, Indigenous/non-Indigenous[9]

	Lowest SES quartile	Highest SES quartile	Indigenous	Non-indigenous
2009 Reading				
Mean score	471	562	436	518
% Low performers	25	5	38	13
2018 Reading				
Mean score	460	549	431	507
% Low performers	31	10	43	18
2009 Maths				
Mean score	471	561	441	517
% Low performers	28	5	40	15
2018 Maths				
Mean score	451	532	426	495
% Low performers	37	11	48	21

When the Grattan Institute analysed NAPLAN results in 2016 it found that the gap between the performance of students from disadvantaged backgrounds and those from more advantaged circumstances significantly widened as students proceeded through school: when capabilities are similar in Year 3, disadvantaged students fall between 12 months and 21 months behind more advantaged students by Year 9; many regional and rural students make up to two years less progress than students in inner city areas between Years 3 and 9; students in disadvantaged schools make around two years less progress between Year 3 and Year 9 than similarly capable students in high advantage schools; high achievers in Year 3 make about two-and-a half years less progress by Year 9 if they attend a disadvantaged school rather than a high advantage school; high achievers in disadvantaged schools make less progress than low achievers in high advantage schools over the six years.[10]

Visibility outcomes

NAPLAN, like its New York template, has become the major yardstick to measure the quality of Australian schools. The media (publicly) and education departments (under the cloak of school improvement strategies) have used NAPLAN results to create school league tables. High performing schools are those that do well in NAPLAN and low performing schools are those that do poorly on this same measure, and the 'hard evidence' of school improvement is increases in NAPLAN scores. For central education bureaucracies, NAPLAN scores become the light switch that can illuminate the quality of learning at each school. The performance of every school can be cut and sliced and summed up under the same performance microscope and through the same data analysis software. Schools, and by implication their principals, teaching staff and students, become 'visible' locally, regionally, at a statewide level and nationally through a single annual literacy and numeracy basic skills testing program.

Outside of the political and bureaucratic bubble, the shortcomings of this form of educational 'visibility' have been shown to be many and varied. Margaret Wu has written extensively about the misuse of NAPLAN as a valid and reliable assessment of student and school performance. Statistically NAPLAN scores contain large margins of error and as such "do not provide sufficiently accurate information on student performance, student progress or school performance".[11] There is also a substantial body of research identifying the curriculum and pedagogical distortions created in schools and classrooms by high stakes standardised population testing such as NAPLAN. When the rise and fall of basic skills test scores become the official metric for school quality, more educationally important measures such as a balanced curriculum and the motivation and wellbeing of students as learners lose their precedence. Teaching-to-the-test has been rife, and often implicitly sanctioned by authorities,

so any improvements in NAPLAN scores are as likely to be due to an increase in test-taking capacity as an accurate picture of student gains in literacy and numeracy.

Warnings about teaching to the test often go unheeded because the stakes associated with NAPLAN's status as the fundamental measure of school quality remain and encourage an excessive focus on the tests, which in turn distorts the measure. "Put another way, the higher the stakes, the more likely it is that the construct being measured has somehow been changed. High stakes, therefore, lead inexorably to invalidity" (Nichols & Berliner, 2007, p. 1)[12]. Hargreaves and Braun identify risks of an obsession with test-based data giving rise to Campbell's Law, where test results themselves become the goal of education rather than acting as indicators of educational progress.[13]

Campbell's Law' was created by Donald T. Campbell the American social scientist and states:

> *The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor.*

In 1976 Campbell applied the 'law' to standardised testing and stated:

> *Achievement tests may well be valuable indicators of general school achievement under conditions of normal teaching aimed at general competence. But when test scores become the goal of the teaching process, they both lose their value as indicators of educational status and distort the educational process in undesirable ways.*[14]

The NAPLAN spotlight makes the standardised test results of schools and their students visible at the expense of leaving other more important measures of school quality and learning progress in the shadows. In 2020 when COVID switched off the NAPLAN light the various education bureaucracies, rather than using these circumstances to re-evaluate their addiction to standardised population testing, began scrabbling around to find a NAPLAN-lite alternative.

The alternative to NAPLAN

In September 2020 the AEU published the results of a national survey of over 12,000 teachers across Australia. The views of the teaching profession about the value of NAPLAN were overwhelmingly negative. 75 per cent of teachers did not believe NAPLAN is effective

for measuring school performance or for school comparisons. 85 per cent did not believe that NAPLAN improves student outcomes and 94 per cent indicated that they believe it contributes to student stress and anxiety. NAPLAN was not only seen by the teaching profession as not contributing to student learning progress and affecting the wellbeing of students, but there was a frustration that its political and bureaucratic primacy was diverting attention away from what is able to do this and wasting valuable classroom teaching time.

The alternative to NAPLAN is a fit-for-purpose assessment system which has as its first design principle not market-based data or bureaucratic visibility but the improvement of education outcomes for all students. Research indicates that such a system should be curriculum-based, incorporate the professional expertise of the classroom teacher and have a diagnostic and formative orientation - in other words the antithesis to NAPLAN. The basis of a valid and reliable classroom-based system of assessment is already there, corresponding to the quality practice that can be found in schools around Australia outside of the NAPLAN spotlight. The new system would provide school communities and education authorities with authentic and quality information about student achievement and progress and, at the same time, the legitimate needs of system self-monitoring for equity and policy purposes could be met by scientific sampling methods which can provide accurate and useful information without any of the negative outcomes of mass standardised testing.

The new post-NAPLAN assessment system designed to improve achievement, equity and wellbeing outcomes for students would be supported by:

- Technology-based resources to: make 'visible' and disseminate through the public system quality school assessment practices; provide free and accessible online assessment materials linked to the curriculum for classroom use; improve reporting systems for school community and departmental use;
- Conditions of teaching and staffing resources providing the time for teachers to address the broad spectrum of individual needs in government schools and meet community expectations about school outcomes for all students;
- Restoring trust in the capacity of the teaching profession as experts in developing student learning and the reliable and valid assessment of that learning;
- A new funding deal for public schools from the federal government to energise school improvement in the wake of the failed NAPLAN culture. Australia is presently one of the most segregated education systems in the world. According to the OECD, Australia has the biggest proportion of disadvantaged children going to disadvantaged schools compared to any other country.[15]

What the OECD is now saying is that when equity doesn't improve, improving the quality of learning outcomes becomes very difficult. That's why I say that, for Australia, investing heavily in improving equity probably will be the best way to improve the learning outcomes for everyone in the system and make the country better as an education nation.[16]

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Music education in Australian schools: An essential place for all students.

Leon de Bruin

Teaching in 2020 confronted schools with unique adjustments as they organised to engage students through COVID-19. These circumstances compelled all teachers to re-align their teaching, and instrumental music teachers utilised extensive creative and adaptive capacities to engage students in online learning for much of the year. Many schools maintained their musical learning communities and commitment to music education by trusting the creative and resilient capacities of music teachers, who continued to support weekly lessons, ensembles, performances and their community. Instrumental music teachers in Victoria reported operating on more relational levels, engaging in terms of insightfulness, empathy and responsiveness that maintained enriching student connection and well-being where many students felt isolated and disconnected (de Bruin, 2021).

Principals in Victoria, perhaps reflective of a national trend, found school events fostering school community and social cohesion had a significant impact on student learning (Wilkinson et al., 2020). Music, and indeed the arts, played a significant and vital role in maintaining connection, dialogue and communication with students despite remote learning. Music education provided an avenue for engagement, well-being and connection between students, peers, teachers and families at a time when the arts, and in particular music, existed precariously, as teachers traversed teaching remotely, at school, then after school, and then outside of classrooms to meet various state government requirements.

The role of music education in the school curriculum reflects the evolving and contested nature of music's place within state and national curricula. Instigated in Victorian government secondary schools in the 1960's, instrumental music in Australia has become an intriguing aspect of the creative /performing arts subjects. For many years designated as a specific standalone subject, it now resides within the arts 'collection' of subjects (ACARA, 2015). The 'arts' curriculum today is designed to induct students through practitioner lenses of inquiry that allow learning, teaching, and assessment to be authentic, dynamic and creative. A unique aspect of instrumental music is that students can access this subject via solo, ensemble or special investigation streams. Despite this well-conceived arrangement, music remains an underfunded aspect of educational opportunity able to be accessed by far too few students in Australia.

Music makes you smarter in music

We know playing music for its own sake can bring lifelong wellbeing, pride, identity and accomplishment. Music is a rigorous discipline and a joyous form of expression that enriches us through personal endeavour. Music promotes a complex knowledge system that synthesises language, mathematics, physics, history, aesthetics, ethical responsibility, artistry, and creativity. Our current educational landscape is littered with aims and outcomes assuming critical thinking that require neither criticism nor depth of thought. The cognitive and sensory perception it takes to drive an instrument and make music with others, places critical thinking as an essential and constant skill required for enduring success in learners. All students deserve an education rich with these experiences.

First and foremost, learning music makes you smarter at *music*. However, the spin-offs of this contribute to students' cognitive, regulative, emotional and expressive capacities. They enrich not only music learning, but students' capacities to focus and learn and accomplish more deeply and effectively in other subjects.

Greater benefits of learning music

Learning an instrument and playing in any form of ensemble (band, orchestra, and all possibilities) supports students to become better learners. The time that they spend with an expert, skilled professional teacher supports students' capacity for goal-setting, self-evaluation, and planning of process and procedures - 'learning how to learn'. Notably, both the instrumental music method and environment contribute to hot-housing specific strategies and behaviour for planning, monitoring and self -evaluation of learning *to get better* (McPherson, 2012). This promotes developing maturity of cognitive and personal impulses in primary and secondary school students.

Engaging in instrumental music lessons also supports students' capacity to concentrate deeply and with focused attention. Whether accomplishing a simple melody, or creating spontaneously through improvising, music develops concentration because students work through learning processes with a music teacher who provides an interpersonally and cognitively turbocharged learning environment. Formative assessment is a national 'go to' for school professional development and student learning (Wiliam, 2010). While it may happen to a student in a class of 26 two or three times in a 40-minute lesson, recent research in Victorian instrumental music lessons suggests it may happen three to four times *a minute* in an instrumental music lesson (de Bruin, 2021).

Habits of mind

Consistent involvement in music contributes to learners sustaining the benefits outlined above. They cultivate '*habits of mind*' - dispositions that include persistence, critical thinking and communicating with clarity and precision, listening with understanding and empathy, creating, thinking flexibly and interdependently (Costa & Kallick, 2008). The importance of fostering adaptivity, creativity and practising habits like persistence and being open to processual learning is not new to educators. Sequential years of music learning immerses learners in such cognitively charged environments.

Compelling evidence

Sustained music learning develops students' capacity to be aware of their own concentration, resilience and focus and draw upon these cognitive tools across other subject areas (Corrigall, Schellenberg & Misura, 2013). Research has demonstrated that musical training leads to noted transfer effects in other areas like mathematical skills, creativity and interdisciplinary awareness, and languages via phonemic awareness (Forgeard et al., 2008). A recent 2019 Canadian study published in the *Journal of Educational Psychology* of over 112,000 secondary students found that students who participate in instrumental music between years 7-12 achieved significantly higher scores on science, maths, and English exams in high school than non-musical classmates. So, school administration processes and parental choice which lead to a selection between maths and science education and music, may be an ill-considered approach to children's' schooling. The researchers asserted:

> *...the irony that music education—multiple years of high-quality instrumental learning and playing in a band or orchestra or singing in a choir at an advanced level—can be the very thing that improves all-around academic achievement and an ideal way to have students learn more holistically in schools.* (Guhn, Emerson & Gouzouasis, 2020).

Music tuition provides powerful learning relationships and learning

Learning instrumental music from a qualified teacher and practitioner provides learning that is both unique and powerful. Music students grow accustomed to connecting with an adult expert in a culture of scaffolded learning that fosters goalsetting, problem solving and achievable successes. Instrumental lessons are one-to-one, or small group, in which the teacher models, scaffolds, coaches and formatively primes the student to think clearly and with purpose.

The instrumental lesson is one in which expert teaching is central to a relationship that may exist over the full 6 years of secondary school life. Education scholars' current emphasis on 'spaced practice' – the structuring of learning experiences so that students have the opportunity to receive instruction, perform a task, receive immediate feedback to improve their performance and then complete the task again is an endemic and enduring quality of instrumental music education (de Bruin, 2018; Dunlosky & Rawson, 2015). The music learning environment here is unique - both in lessons and ensembles. Reeves notes that:

> *Research shows the value of deliberate practice across fields such as music: … children and adults need deliberate practice in order to achieve their objectives … The components of deliberate practice include performance that is based on a particular element of the task, expert coaching, feedback, careful and accurate self-assessment, and – this is the key – the opportunity to apply feedback immediately for improved performance.* (Reeves, 2010)

In fact, instrumental music tuition applies much more than feedback. It fosters refinement of students' capacity for accurate *re-calibration* of thinking that is more educationally effective than mere repetition – the prevailing method of learning engineered in classes of 20 or more students. Further, music immerses learners in authentic interdisciplinary learning by integrating languages, maths, science and other arts in a sequential, creative, reflective and purposeful arrangement of learning. The unique learning environment found in instrumental music tuition aligns with recommendations about excellent teaching that :

> *makes the learning intentions and success criteria transparent, having high, but appropriate, expectations, and providing feedback at the appropriate levels … is critical to building confidence in successfully taking on challenging tasks. Educating students to have high, challenging, appropriate expectations is among the most powerful influences in enhancing student achievement.* (Hattie, 2011, p.53).

Music teaches students to think in interdisciplinary and collaborative ways

Music brings together the individual with the collaborative; experiencing teamwork and an understanding of collective good and how to develop it, shared goal-setting, motivation and ambition and how to attain it, and artistic creation for its intrinsic value. Learning is further enhanced through music ensembles that allow cross-age and peer to peer learning, and concomitant belonging and identity within a musical community striving to create art together.

Music offers rich connections and supports students' capacities for 'syntegrating'' deductive, hypothetical, expressive, embodied and aesthetic/affective abilities and dispositions. Learning music threads together mathematical possibility, probability, languages, art, aesthetics, emotion and creativity in the one lesson (Dewey, 2006; Viladot & Cslovjecsek, 2015). Music's capacity to enhance STEM/STEAM initiatives activates students' logical thinking with creative and conceptual thinking (Burnard, 2012) that enriches a school's sophistication of interconnection and whole-school creative ecology (de Bruin & Harris, 2017).

Eisner (2002) argued that a curriculum with music in it provides connection, meaning and sense-making of our place in the world. Music promotes this transformability of skills and knowledge. The educational benefits lie not just in musical performance, but in the processes of synthesising knowledge and cultivating learning skills and dispositions. The benefits are not just for 'in-school' learning, but apparent and effective in the development of a person over their lifespan.

Critical times for music education

Despite compelling research asserting these benefits, instrumental music in schools has become increasingly impoverished, with Australia's 2005 *National Review of School Music Education in Australia* (Pascoe et al., 2005), and the *2013 Victorian Parliamentary Inquiry into the Extent, Benefits and Potential of School Music Education* (Parliament of Victoria, 2013) both remaining patently ignored. The numerous recommendations to improve music education, including a development strategy to ensure greater access, equity, and organisation for students allowing them the opportunity to experience a quality school music education program, remain abandoned. Instrumental music funding has remained static for over 20 years leading to a decline in the number of schools offering any instrumental music tuition at all. Regional network hubs are now defunded and disbanded.

Many Australian students are unable to access a quality and sustained music education, particularly those emphasised as vulnerable or disadvantaged in national educational goals (Mpartnwe declaration, 2019). For example, such inequity in access is visible in the stark differences between music education offerings within public and private schools, or within urban and rural locations. Given the overwhelming evidence for the academic, cognitive, emotional and social impact and benefits of music education for students, the urgency for redressing this inequity is clear.

Once a vibrant aspect of many school cultures, government indecision and misunderstanding of music education and how it works is reflected in the ad-hoc and

'low-rent' approaches to music education. Longstanding visionary droughts have reduced primary and secondary teacher education programs to barely minimal capacity. Lack of implementation and support knowledge for principals within an increasingly self-autonomous landscape means administrators – who already have a tough job – make short-term economic choices that do neither music education nor their school culture any good. The prominence of music departments in private schools highlights their clients' academic, cultural, and community awareness of music education benefits, yet even these are under threat in this current climate. Government attitudes seem to be that music, and the arts in general, are a luxury for the financially able – perpetuating a societal cognitive poverty. This is exacerbated by myopic policy decisions that allow schools to employ unqualified music staff, perpetuating a systematic devaluation of music - and the school.

It is time to end the malaise in long-term governmental policy direction and inaction toward music education reform, and to ensure that music is seen as central to core teaching and learning. The cultural imperative of developing and recruiting specifically trained instrumental music teachers as part of an expansionist and wide-scale access to instrumental music and regional infrastructure needs to be addressed, understood and acknowledged. The proven benefits of access to an instrumental music education need to be acted on. If we are to develop adaptable, innovative and dynamic thinkers in our schools, instrumental music is a central and significant catalyst. Education for only the chosen few should be relegated to the past. All our students should have a right to the opportunity for a quality music education.

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Victorian teachers: stressed but still dedicated

Cathy Sheehan

The job of an educator is challenging. Along with the requirement that educators impart knowledge and meet diverse needs while managing group dynamics, we look to educators as a blueprint for aspirational life values.

Although there has been thorough investigation of the OHS concerns that face school principals, notably the work of Philip Riley[1], less attention has been given to front line Australian educators. In recognition of the complex demands that face this group, recent research conducted by the Monash Workplace Health and Safety Team (https://workhealthsafetyresearch.org/) aimed to provide an overview of Australian Education Union (AEU Vic) members' views of occupational health and safety (OHS) in their working environments.

The research is a follow up to the Monash team's 2014 study. It presents a similar analysis of union members' perceptions of OHS, their safety behaviours within the workplace, along with new information related to work demands and levels of incivility, aggression and violence for the Victorian educator workforce. The latter inclusion aligns with the priority being given to the issue by the Victorian Government, recognised in 2019 by the establishment of the Protective Schools Ministerial Taskforce[2]. Overall, the findings of the research are that although our educators are engaged and thriving in some areas, they are experiencing relatively high levels of workplace stress.

The study was launched in August 2019, when AEU (Victorian branch) members were invited, via the AEU newsletter, to participate in an online OHS survey. A total of 47,712 members had the opportunity to participate in the survey and usable responses were received from 1,109 members. The researchers recognise that the response rate is very low, at 2 per cent, compared to a 10 per cent response rate in 2014. The results should therefore be considered with some caution. Nevertheless, the sample still captures a large cohort and represents a wide cross-section of members with respect to workplace type and size.

A key area of investigation in the research has been to track OHS lead indicators, or positive steps organisations take to prevent an incident occurring in the first place. Examples include everyone in the workplace valuing OHS improvement, being involved in decisions that

impact OHS, having necessary information and authority for decisions about safety and receiving positive recognition for safety initiatives. A higher overall score reflects agreement that OHS leading indicators are present in the workplace. In 2014, the score for the AEU members group was lower compared to other industry groups such as construction, mining and employees working in the arts and recreation services area. In 2019 the OHS leading indicator score for AEU members dropped by 6% indicating that, not only are OHS conditions less favourable for those working in the education setting, these conditions are weakening rather than improving.

Incivility aggression and violence

As mentioned above, a new area of investigation in 2019 was to provide base line information about levels of incivility, aggression and violence. Participants reported that over the past twelve months these interactions included intimidation (78%), obscene remarks (71%), verbal threats (60%) and obscene gestures (59%). A substantial proportion of respondents (55%) also reported experiencing having objects thrown at them. The most likely source of these interactions was students or clients. The exception was the case of intimidation where supervisors and colleagues were listed as roughly equal to students or clients as the source.

Interestingly, when asked about whether they reported the incidents, respondents indicated that on the whole they did not report events. The main reasons given were that they accept these interactions as part of the job and they want to defuse the situation rather than make it worse. These justifications possibly reflect the vocational dedication that educators have to the well-being of their students and clients.

Workplace bullying

Consistent with the reported high level of intimidation outlined above, when asked about workplace bullying (WPB), 41 per cent of respondents experienced these interactions in the last year. The source of WPB was most likely colleagues and superiors. These incidents are distinguished as situations where individuals persistently experience, over a period of time, ongoing negative actions from one or several persons. Unlike incidents of incivility, aggression and violence from students, where incivility and possibly aggression may be justified by educators as a normal part of the challenges involved in student and client learning, WPB interactions may be perceived as more harmful. WPB situations are ongoing and the involvement of peers and superiors may present more challenging circumstances than interactions with students who are acting out and testing boundaries.

Violence prevention

In response to other questions about the general violence safety climate in their workplaces, 63 per cent of respondents indicated that the reporting of physical violence is encouraged compared to 48 per cent for the reporting of verbal violence. Importantly, once reported, only 43 per cent considered that reports of violence were taken seriously. In terms of structures and policies to prevent violence from occurring, approximately only a quarter of respondents reported that there were aware of violence prevention policies and around two thirds reported that they had not been provided with violence prevention training from their employer. It seems therefore that although there are perceptions that some reporting systems are in place, there was less agreement about the presence of violence prevention policies and training initiatives.

Workplace stress

Another new inclusion in the 2019 research was the measurement of workplace stress as used by the UK Health and Safety Executive (HSE)[3]. The measurement was used so that outcomes can be compared to UK norms. On average, scores across a number of subareas that contribute to workplace stress indicate that AEU respondents were experiencing high levels of stress. Compared to the UK norms, all these average scores fell into the lowest 20th percentile, indicating an urgent need for attention. The subareas of job demand and the management of workplace change were the most severe. Clarity around roles at work was the most highly-rated subscale followed by peer support and relationships. This means that these specific work stressors were slightly lower than job demands and the management of workplace change but again, the ratings were still below the 20th percentile, the zone that requires urgent attention.

Wellbeing

Additional information was collected for member well-being and emotional burnout. With respect to well-being, using the World Health Organization's measure (WHO-5[4]) across member groups, where a score of 0 represents a very low level of wellbeing and 25 represents a very positive sense of wellbeing, the average score for all respondents was 11.8. The score is below the threshold of 13 and indicates poor levels of wellbeing. Burnout was also assessed and considered to be at a moderate level. Although this is encouraging, respondents' average experience of emotional burnout between 2014 and 2019 shows a substantial increase.

Other comparisons between 2014 and 2019 show an increase in quiescent silence where employees choose to say less because of their fear of the consequences of speaking up. There was also an increase in acquiescent silence which is where employees are not willing to exert effort in speaking up because they have given up hope for improvement.

More promising results were reported for thriving as reflected by moderate levels of vitality (a sense of feeling energised and alive), and high levels of learning whereby members were committed to continually improving and getting better at what they do. These outcomes were reflected in a high level of engagement as well.

One interpretation of these outcomes is that although educators are stressed and relatively low in terms of well-being and preparedness to speak up, this has not detracted from their engagement in the job or preparedness to keep learning and improving. Arguably this reflects the vocational commitment of our educators. Set against relatively challenging work stresses, they continue to engage in the work and commit to learning and improvement. This is further substantiated by moderate levels of intention to leave the job and relatively low intention to leave the profession. A final note however is that levels of intention to leave the profession although quite low, have increased since 2014.

Conclusion

When looking at these results overall, the picture is one of a vocationally committed educator workforce operating in stressful work conditions. Compared to 2014, 2019 results show that there has been a drop in positive steps taken to prevent an OHS incident from occurring in the first place. Using UK norms, respondents reported high job demands, low job control, and stress associated with the management of workplace change and manager support. Well-being, as measured by the World Health Organization measure of wellbeing (WHO-5), is low and educators are showing increasing resistance to speaking up as an outcome of fear of consequences and also due to a sense of hopelessness. Set against these negative experiences, educators are still committed to learning, engaged in what they do and are not actively looking to leave the profession. These findings profile a group of educators who prioritise learning and caring.

As well as the findings connected with general OHS conditions and responses, the study provides a good baseline for experiences with respect to incivility, aggression and violence. While most respondents reported incidents of obscene remarks and gestures from students, the high reporting of intimidation was confirmed by bullying that came from sources other

than students and clients. Importantly, the results show a resistance to reporting incidents of incivility, aggression and violence. It seems that the resistance to reporting is connected with professional identity: the educators saw it as part of the job and they wanted to diffuse the situation rather than make it worse. Again, these results show the level of commitment of our educators to continue to do the job and accept negative interactions in view of a greater sense of commitment to education priorities.

In sum, there is a lot to be proud of when looking at our educators. They continue to stay in the profession, care for students and clients and excuse incivility and aggression. It would seem that there is room however, to improve their safety and well-being when at work.

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4 World Health Organization. (1998, February 12-13). *Wellbeing measures in primary health care/the DEPCARE project: Report on a WHO meeting.* Stockholm, Sweden.

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Deep fakes, authenticity and authentication in the age of artificial intelligence

Erica Southgate

For a while now I've been pondering the concepts of authenticity and authentication of student work within the context of a new machine age where educators rely on software powered by artificial intelligence (AI) to detect plagiarism, and where AI is capable of producing 'deep fakes'. Deep fakes are AI generated new content or the manipulation of existing content to make new images, videos, audio and text (https://www.aspi.org.au/report/weaponised-deep-fakes). In this article I provide some observations on this topic, teasing out concepts such as originality, authenticity and authentication in education — both what they mean now for educators and what they might mean in the future. This article draws on research, industry insights, contemporary debate, and my own experience as a teacher-educator. As thoughts-in-progress my hope is to prompt dialogue on the implication of AI for foundational ideas of originality and authenticity across education sectors.

Originality and authenticity

To begin, it is worth identifying a key assumption on which contemporary Western education rests. While there are philosophical, disciplinary, and ideological points of difference, one of the common assumptions is that growth and transformation is evident when learners create their own work to demonstrate mastery of knowledge and skills. This is especially true for the humanities, social sciences and creative and performing arts as they are taught and learnt within educational institutional contexts[1]. Even though there are literary and creative movements that have homage, bricolage, pastiche, parody and mash-up at their core, in formal Western education systems the idea of originality as a yardstick for (assessment of) intellectual and artistic accomplishment remains salient[2].

The Merriam-Webster dictionary (https://www.merriam-webster.com/dictionary/originality) defines originality as "the power of independent thought or constructive imagination." Originality is a hard-to-define concept. In different fields and contexts, it can mean different things. For example, there is a whole legal field devoted to protecting copyright and intellectual property (Margoni, 2016), and in PhD research it entails the creation of new knowledge in relation to existing knowledge (although there is often fuzziness about its definition as Clarke and Lunt 2014 demonstrate). In history and heritage studies, originality "is a temporal concept: it implies a relationship with a point of origin that, by definition, was

in the past and preceded any later versions or copies" (Wain, 2011, p.496). The concept of originality is also inextricably linked to the way we understand divergent and creative thinking with its association to both novelty and authenticity (Corazza, 2016).

The idea of originality is assumed in the enactment of influential educational frameworks such as Bloom's taxonomy of educational objectives and its revised version (Krathwohl, 2002). Bloom's revised taxonomy describes the cognitive processes by which thinkers encounter and work with knowledge (https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/) along a continuum. Even if the initial categories of the taxonomy — remembering, understanding and applying knowledge — are not immediately evocative of original thought, pedagogically learners are often asked to demonstrate their thinking processes by paraphrasing (or putting the original ideas of others in their own words) or through transferring knowledge and understanding to novel problems (application and evaluation) which requires some inventive or divergent thought.

The concept of originality is associated with authenticity which has been defined by the Merriam-Webster dictionary (https://www.merriam-webster.com/dictionary/authentic) as both "true to one's own personality, spirit or character" and "not false or imitation". In education, at a common-sense level this translates to students undertaking and submitting their own work for formative and summative assessment even if it is a paraphrase, application, or analysis of an original artefact. It is worth noting that there is also a U.S. tradition known as authentic pedagogy (Newmann, Marks and Gamoran, 1996) which has spawned many pedagogical variants with its emphasis on higher order thinking, depth of knowledge, social support for student achievement, substantive communication and, connection beyond the classroom. This pedagogical model uses the term authentic to differentiate between achievement that is meaningful not trivial and useless beyond the classroom. Authentic achievement occurs when: "(1) students construct meaning and produce knowledge, (2) students use disciplined inquiry to construct meaning, and (3) students aim their work toward production of discourse, products, and performances that have value or meaning beyond success in school" (Newmann and Wehlage, 1993, n.p).

The next part of this article examines how older ideas about originality and authenticity in pedagogy and assessment are being both informed and challenged by the rise of AI.

A quick guide to artificial intelligence

The new machine age has well and truly arrived. It is powered by AI which permeates and profoundly influences our everyday lives. From smart phone assistants and chatbots, to online advertising suggestions and facial recognition tagging technology in social media

platforms, to internet search engines that can sort millions of sources in seconds, AI is both user-facing and working behind-the-scenes in the applications and platforms that we depend on for communication, work and education. AI can be defined as:

> *a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy.* (OECD, 2019).

I have written elsewhere (https://www.aeuvic.asn.au/professional-voice-1322) about AI and education, especially its ethical implications (Southgate et al. 2018; Southgate, 2020a), and so the following is a very brief explanation of the technology and how it works. AI has been a field of study since the 1950s. Today AI usually needs 'big data', harvested from the internet, sensors, and the geolocation signals from devices, to train and develop statistical models. These models can predict or make forecasts about phenomena (including human behaviour), provide recommendations for future action, or adapt to personalise content. These functions are increasingly being integrated into educational applications (Berendt, Littlejohn and Blakemore, 2020). At present, we are in an era of narrow AI. This means that AI are only able to do the focused task they were designed to do and that sometimes their effectiveness at doing these tasks can outperform humans. This leads people to think that AI are smarter than they are and both children and adults anthropomorphise AI (or project human characteristics on to it). It is worth noting that there are no AI who have the general intelligence that can be characterised as having a theory of mind that humans possess. That is, AI are incapable of forming (and re-forming) representations of internal states of knowledge, thoughts, expectations, beliefs, motives and emotions, or of appreciating the internal states of others (Southgate et al., 2018).

An important subfield of AI is machine learning (ML). Maini and Sabri, (2017) define this as:

> *(A) subfield of artificial intelligence. Its goal is to enable computers to learn on their own. A machine's learning algorithm enables it to identify patterns in observed data, build models that explain the world, and predict things without having explicit pre-programmed rules and models* (p.9).

The field of ML involves getting algorithms to learn through experience (an algorithm is instructions that tell the computer or machine how to achieve an operation). Computing systems with ML learn as they receive data but do not need to be explicitly programmed to do this. There are many types of ML and you can find an explanation of these and AI in education more generally in my recent article (https://www.aeuvic.asn.au/professional-

voice-1322) (Southgate 2020b). To briefly summarise some types of ML, there is: (1) supervised learning that involves humans initially labelling data to teach the algorithm to recognise phenomena; (2) unsupervised learning where algorithms create their own structure (features) that can be used to detect patterns in and classify unlabelled data; (3) reinforcement learning where the machine learns through trial and error within an environment; and, (4) deep learning which is based on feeding data through algorithmic layers similar to neurons in the brain to create outputs. it is important to understand how machines learn because this demystifies AI and allows us as educators to understand where it is appropriate to use the technology and where it is not, and its benefits and limitations.

Originality and authenticity in the age of AI

So why talk about AI in relation to originality and authenticity? AI powers online applications to authenticate student work *and* presents the greatest future challenge to authentication and commonly held notions of originality. Let's unpack these statements in relation to three areas: (1) detection of plagiarism and contract cheating; (2) online proctoring services; and, (3) AI generation of original work.

1. Plagarism and contract cheating: Plagiarism refers to the process of taking someone else's work or ideas and passing them off as your own work. There are different types of plagiarism (https://www.ed.ac.uk/files/atoms/files/10-types-of-plagiarism.pdf) from cut-and-pasting text straight from an article or the internet without using quote marks or paraphrasing without referencing, to the more sophisticated and time-consuming mosaic or patch writing (https://www.bowdoin.edu/dean-of-students/judicial-board/academic-honesty-and-plagiarism/common-types-of-plagiarism.html) where other people's text is used without referencing but words are replaced with synonyms or the structure of each sentence is rearranged. Contract cheating involves buying or commissioning academic work and passing it off as your own. This work is bought from an online 'essay mill' or a private contractor. Although contract cheating is illegal (https://www.education.gov.au/tackling-contract-cheating) in Australia it is still occurring and there is excellent Australian research and pedagogical initiatives (https://cheatingandassessment.edu.au/) designed to address it in higher education.

Platforms designed to assist educators detect plagiarism and contract cheating, such as Turnitin (https://www.turnitin.com/), are powered by AI. ML is used to detect patterns between a student's work and other sources such as the platform's database of student work, online research articles and books, and other internet sources. When taught to use Turnitin as a tool for review of work, students can check their "originality report" before a due date to correct referencing or fix inadvertent plagiarism. A quick search of the internet

reveals many sites that suggest ways of "fooling the Turnitin robot". While Turnitin refutes these suggestions, there are limitations to AI pattern detection especially when students take chunks of text from different sources and painstakingly reconstruct sentence structure without changing meaning. Even if students use referencing correctly, you can still read essays that substantially consist of quotes from different sources that have been strung together into paragraphs and that really do not demonstrate depth of understanding. Depending on the settings that instructors specify for each piece of assessment, the platform will not detect what is arguably a lack of original interpretation and certainly synthesis because the essay uses correct quoting conventions and referencing. Turnitin also has an option that is said to detect contract cheating (https://www.turnitin.com/products/originality/contract-cheating) using ML to create a probability score based on a writing style comparison related to prior student work (which needs to be wholly original) and the metadata of the document (although the latter is not without issues (https://www.turnitin.com/blog/when-document-metadata-goes-awry)).

2. Online proctoring: The coronavirus pandemic has seen a massive rise of online proctoring services where students can undertake examinations in their own home under the supervision of a human and monitored by software. In an opinion piece for MIT Review, Swauger (2020) explains how online proctoring works and some objections to it:

> *When you begin (the exam), the software starts recording your computer's camera, audio, and the websites you visit. It measures your body and watches you for the duration of the exam, tracking your movements to identify what it considers cheating behaviors. If you do anything that the software deems suspicious, it will alert your professor to view the recording and provide them a color-coded probability of your academic misconduct....(I)t will use some combination of machine learning, AI, and biometrics (including facial recognition, facial detection, or eye tracking) to do all of this. The problem is that facial recognition and detection have proven to be racist, sexist, and transphobic over, and over, and over again.* (n.p.).

To elaborate on some of the issues, AI-powered biometric technology such as facial recognition still have difficulty recognising darker skinned faces especially women's faces because the ML models have historically been trained on photos of white faces particularly male faces (Simonite, 2019). In the U.S. there have been reports of black students being asked to shine a light on their faces (https://www.insidehighered.com/digital-learning/article/2017/05/10/online-exam-proctoring-catches-cheaters-raises-concerns) so the algorithm can recognise them. The algorithm can also flag a person's behaviour as suspicious if they look away from the screen or not look at the screen enough or talk

aloud (https://www.insider.com/viral-tiktok-student-fails-exam-after-ai-software-flags-cheating-2020-10) and this can have negative effects for women with caring duties who might respond to a situation at home, neurodiverse students or those who are differently abled, and for students who do not have quiet living conditions (https://www.nytimes.com/2020/09/29/style/testing-schools-proctorio.html) to undertake an online exam. Surveillance, privacy and data security (https://www.eff.org/deeplinks/2020/08/proctoring-apps-subject-students-unnecessary-surveillance) issues have also been raised (proctoring software may record and analyse not only the person but their surroundings). There is ongoing and warranted debate concerning the ethics of online proctoring and this highlights the tension between institutional reliance on traditional assessment practices such as exams as a yardstick for authentic knowledge acquisition and the role of algorithms in flagging behaviours through the collection and automated integration of biometric and contextual data.

3. AI-generated student work: Since releasing new software in 2019/20, the company OpenAI (https://openai.com/) has caused a lot of debate about the ethics of an AI that can auto generate extended text, music and images. It's GPT-3 (Generative Pre-trained Transformer 3) software uses unsupervised ML algorithms that create new texts from prompts and it can be 'programmed' to respond by showing it a few examples of what you would like it to do with varying degrees of success related to the complexity of the task (Open AI, 2020). As Simonite (2020) explains:

> *GPT-3 was built by directing machine-learning algorithms to study the statistical patterns in almost a trillion words collected from the web and digitized books. The system memorized the forms of countless genres and situations, from C++ tutorials to sports writing. It uses its digest of that immense corpus to respond to a text prompt by generating new text with similar statistical patterns.*

Open AI also create image (https://openai.com/blog/image-gpt/) and music (https://openai.com/blog/jukebox/) generators. While subject to critique (https://thenextweb.com/neural/2020/10/28/facebooks-yann-lecun-says-gpt-3-is-not-very-good-as-a-qa-or-dialog-system/), GPT-3 and its companion software should prompt serious dialogue (https://www.theverge.com/21346343/gpt-3-explainer-openai-examples-errors-agi-potential) about the machine as 'author' and how to detect this when applications such as these become commercially available. Imagine a future where a student uses an AI application to produce an AI product (music, text, visual art) that could gain a pass or credit grade. AIs could produce work where no two responses would be the same because it would learn to check against what it and other AI had already created: In other words, to check its

original work against other AI original work. No doubt an AI will be developed to detect or authenticate AI-generated work but as machines continue to learn by themselves they may very well learn to avoid such detection. Although this sounds dystopian, there is a recent story of a computer science college student who created an entire credible blog using GPT-3 (https://www.technologyreview.com/2020/08/14/1006780/ai-gpt-3-fake-blog-reached-top-of-hacker-news/) by working with topics that did not require systematic logic such as productivity or self-help.

Will current concerns about contract cheating be replaced by an AI panic in education? Rather than revert to an over-reliance on the great 'sorting hat' of the handwritten exam, educators will need to understand how to design assessment in authentic and rigorous ways that are not optimal for AI-generated responses and to create curriculum that cleverly engages with ML-generated products in critical and creative ways.

Concluding thoughts

This article provides an initial exploration of the concepts of originality, authenticity and authentication of student work in the age of AI. The introduction of technology has challenged educators to think differently about the intersection of technology and teaching; for example, the introduction of calculators in mathematics, word processing programs and hand-writing, and reading in the multi-media age of the internet. It could be argued that AI represents a different type of challenge. To reflect on the Merriam-Webster dictionary definitions of originality and authenticity provided above, AI does not have either independent thought or imagination related to conventional conceptions of originality and yet machines can produce what would commonly be regarded as new work. Can some AI products be conceived of as less authentically original even if the technology is used to produce imitations and false representations in the form of deep fakes? If machine algorithms can learn, through the massive harvesting of existing online artefacts, to produce a piece of work that has not previously existed does that make it unoriginal or inauthentic? Do we need another language or 'truth' paradigm to distinguish and understand AI-generated artefacts or would it be better to shift our conception of human learning as (from lesser to greater degrees) machine-augmented? While these seem like philosophical questions, education is a philosophical project with a material foundations and effects. Education is about ethical conduct, ontology (being and reality) and epistemology (the nature of knowledge and knowledge production). AI provides both tools for supporting traditional ethical, ontological, and epistemological ideas of original, authentic student work and is a potentially powerful challenge to this. As educators we need to talk about this state-of-play because the new machine age of AI is already upon us.

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End notes

1 For an exploration on the social construction of 'originality' in humanities and social science research see Guetzkow et al. 2004.

2 Buelow (1990) provides an historical perspective on the relationship between the idea of originality, genius, plagiarism

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Trevor Cobbold on equity, public education and the role of private schools

Interview by John Graham

JG *What is your professional/ work background and how did you come to be such a strong advocate for public education?*

TC I worked as an economist for the Productivity Commission and its predecessors for over 30 years before retiring. In this role, I gained a lot of experience as a researcher and policy analyst.

I got involved in public education by joining the Parents and Citizens Association at our local public school when our first child started school. I then became a delegate to the ACT P&C Council on which I served for 20 years representing our local primary school, high school and college over those years (students in Years 11 and 12 in ACT public schools attend colleges). I was a member of the Council Executive from 1987 to 2005 and was honorary Secretary of the Council from 1988 to 2000 and Vice-President from 2001-2003. I believe parents should have a strong voice in public education issues and policy.

JG *What is the background to Save Our Schools? When and how and why was it established?*

TC Save Our Schools was established in July 2006 in response to a proposal by the ACT Labor Government to close 39 public schools and pre-schools and sell-off the sites for development. SOS ran a vigorous public campaign against the proposed closures which saved 18 schools and pre-schools and 16 of the closed sites were retained for community use.

The campaign meant SOS had a huge public profile in Canberra and after the school closure issue died down we decided to take advantage of this to advocate for public education and greater equity in education locally and nationally. We took on this broader role in 2008.

SOS is a purely voluntary organisation and does not have any formal ties with other education organisations.

JG *How does Save Our Schools view equity in education?*

TC Save Our Schools has adopted a unique concept of equity in education. We reject the widely used principle of equality of opportunity in education as a meritocratic concept that legitimises inequality in education. Equality of opportunity means equal chances to become unequal and is therefore a recipe for continuing inequality. It serves to mask continuing privilege because it is children from families with the financial, education and cultural resources behind them or with position and power in the society that benefit the most from the application of this concept.

In contrast, SOS has adopted a dual concept of equity in education outcomes that incorporates both an individual and a social group aspect.

The first principle of equity in education is that all children should receive a minimum level of education that gives them the capacity to function as independent adults and to participate effectively in society. All children have the right to a high quality education that equips them with the knowledge, understandings and skills to create their own meaning in the world, to choose their own path in society as adults and to take an active part in shaping the development of society. This is a matter of justice for all individuals. Achieving an adequate education in today's society means at least completing Year 12 or its equivalent.

However, achieving an adequate education for all children is not a sufficient condition to achieve equity in education. Even if all children achieved an adequate education there could still be vast differences in outcomes between children from different social groups. For example, average outcomes of students from high income families could still be much higher than for low income and Indigenous students.

The second principle of equity in education means equality of outcomes between children from different groups in society (gender, class and ethnicity). While it is unreasonable to expect that all children will achieve the same education outcomes because, as individuals, they have a range of abilities and talents which lead to different choices in schooling, it is reasonable to expect that these different abilities and talents are distributed similarly across different social, ethnic and gender groups in society. Therefore, education outcomes for children from different social groups should be broadly similar. For example, low income and Indigenous students should achieve similar average results and a similar range of outcomes as do high income students. There should be no achievement gaps between rich and poor. This is a matter of social justice.

Social inequality in education matters because it contributes significantly to the social reproduction of privilege and disadvantage. It deepens social divisions and social

hierarchies. It leads to social discrimination in access to high status occupations and positions of power and influence in society.

JG *How does Save Our Schools further its agenda of educational equity? For example, I know people in our organisation find your summaries of the latest research on various aspects of education very useful in our own advocacy.*

TC The fact that the AEU Victoria finds our research valuable is re-assuring. It shows that we are fulfilling the role we set ourselves which is to provide resources for public school organisations and others. Many regard SOS as a lobby group but in fact we don't do much lobbying. At the time our role changed, we recognised it was more important to concentrate on providing high quality research and policy analysis than continuing as a campaign or lobbying organisation.

We try to influence the policy agenda by highlighting the extent of inequity in education and the factors sustaining inequity as well as proposing policies to reduce inequity.

JG *What can be done to strengthen the advocacy base for public education?*

TC Research and policy development are important to any advocacy, but one of the biggest problems as I see is the neglect of long-term alliance building for public education between teachers, parents and other community organisations. Too often it is ad hoc and therefore not sustained beyond a particular issue or election campaign.

This problem will not be solved by a top-down approach, by just issuing joint statements at the national or state levels, although this can serve to show unity. Effective advocacy for public education in the long term depends on building alliances at the local school level – it means sub-branches of teacher unions and P&C Associations talking to each other. It means working at overcoming policy differences and emphasising what teachers and parents can agree on to further public education and improve equity in education. Improving equity in education can also be furthered by teachers and parents engaging with other community groups around education and social policy issues. All this requires organisation at the local, state and national levels.

JG *The level of educational equity in Australia would seem to be directly linked to the health of the universal public education system. What's your view about how our public schooling system has been travelling over the past few years?*

TC The public education system in Australia has done an incredible job despite the perennial lack of resources. Public schools do as well as private schools when differences in their socio-economic profile are taken into account. This success demonstrates the commitment public school teachers have to their students.

JG *What do you see as the greatest threats (actual and potential) to public education?*

TC The current funding regime. Government (Commonwealth and state) funding increases have massively favoured private schools over the past 20 years and more. For example, since 2009 government funding (adjusted for inflation) for Catholic and Independent schools increased by over five times that for public schools. Catholic school funding increased by $1,620 (21%) per student and by $1,603 (25.4%) for Independent schools compared to only $306 (2.9%) per student in public schools.

As a result, Catholic and Independent schools are far better resourced than public schools in every state even though public schools enrol over 80% of all disadvantaged students and 95% of all disadvantaged schools are public schools. In 2018, the average total income per student in public schools in Australia was $14,940 compared to $23,029 per student in Independent schools and $16,401 in Catholic schools.

This resource gap is set to widen dramatically. The Morrison Government has abandoned public schools and is blatantly favouring private schools with special billion-dollar funding deals over the next decade. Commonwealth funding for Catholic schools will increase by five times that for public schools and funding for Independent schools will increase by nearly three times that for public schools.

The current Commonwealth/state funding agreements ensure that public schools will only ever be funded at 91% of their Schooling Resource Standard (SRS) at best while private schools will be funded at or over 100% from 2023.

JG *What do you think now needs to be done to sustain and enhance public schools around the country?*

TC Setting a clear policy objective is a key first step. The fundamental challenge facing the Australian education system is to increase equity in education – to ensure that all children receive an adequate education to effectively participate in adult society and to ensure social equality in education outcomes between different social groups. We must aim to ensure that

low income, Indigenous and remote area students achieve the same average and range of results as high income students. This goal provides a measure of progress for education systems.

Better funding for public schools is fundamental to achieving this goal. Funding is not the whole answer, but it is fundamental to employing teachers and support staff as well as adequate educational materials and infrastructure. This means more funding directed at disadvantaged students and schools to enable them to employ more teachers, better qualified teachers, student welfare professionals and the educational materials and infrastructure necessary to better support the learning of these students. It also means ensuring that all children have access to quality pre-school education.

JG *A clear policy goal should be greater equity –What do you think the role of non-government schools in Australia is? What is the problem with their existing role?*

TC Private schools, with government funding assistance, serve to socially segregate the population and to provide a differential status system in education. The so-called elite schools serve to reproduce wealth and power in society. They aim to educate future leaders in government, business, law, etc.

Private schools also segregate children by religion. This undermines social tolerance, understanding and cohesion.

Government funding should aim at reducing social segregation in society not promoting it as it does now. Government funding of private schools should be restricted to supporting under-resourced schools to an accepted community standard. It should only fill the gap between the income from fees and other sources of income and the community standard.

However, the full difference between private sourced funding and the community standard should only be provided to private schools that meet similar social obligations as public schools - that is, schools that adopt inclusive, non-selective enrolment practices and provide access to a comprehensive curriculum.

Government funding should not enable private schools to have a resource advantage over public schools as is the case now. Private schools have a huge resource advantage over public schools because of government funding. This over-funding amounts to billions of dollars each year and should be re-directed to supporting disadvantaged students and schools.

JG *What's your view about the interconnection between government social and economic policies and educational equity?*

TC While a high-quality public education is critical to the achievement of social equity in education outcomes, it cannot be achieved without change in other factors that affect school outcomes. Education policy must proceed in conjunction with economic and social policies designed to reduce inequality. Disadvantage is constantly reproduced in society through poverty, low incomes, unemployment, lack of affordable housing, poor health, inadequate access to early childhood services and education and other factors. Schools are in a constant battle against the reproduction of inequality and poverty in society. Their efforts must be supported by economic and social policies to reduce growing inequality and poverty.

JG *You keep up-to-date with relevant educational research being carried out in Australia and around the world. What are some of the particularly important research findings you have come across this year?*

TC The OECD's PISA 2018 results on the distribution of human and material resources between schools is a veritable gold mine for highlighting inequity in education resources between advantaged and disadvantaged schools, public and private schools and metropolitan and rural schools. These results reveal that Australia has one of the most inequitable education systems in the OECD.

Several new research studies on school funding have demonstrated that funding matters for education. In particular, new studies confirm that increasing funding for disadvantaged schools improves school outcomes. Some 27 research studies published since 2015 show that funding matters for education outcomes.

Trevor Cobbold is National Convenor of Save Our Schools. He worked as an economist for the Productivity Commission and its predecessors for over 30 years. His research publications on school funding, the public education system and private schools are widely used across Australia by a range of organisations and the media.

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The new basics