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ASSESSMENT, technology and the impact of social concerns



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Assessment, technology and the impact of social concerns

John Graham

This edition of *Professional Voice* is largely about the ways in which controversies and dilemmas in society and the political world become important issues in the operation and curriculum of schools and pre-schools. Schools are seen as both the medium for addressing social concerns and, in some instances, an important location of these concerns. For example, the harmful issues around sexual consent and racism in the wider society have become part of the compulsory school curriculum, and school policies are implemented to address their manifestation in school playgrounds and classrooms. The scourge of family violence is brought into school and early childhood communities through its impact on individual students, individual staff members and their families, while the ongoing project of enabling and ensuring gender equity, from broad awareness to fine-grained actions, encompasses everything in education; taking in school and classroom culture, student health and wellbeing and curriculum content and practices.

The fact that schools and pre-schools have been identified as fundamental to solving social problems is a testament to the importance of education in our society. There is now a common understanding that societies improve and progress through the education of their younger members. There are, however, certain drawbacks to education being used in this way. If there is an add-on rather than an integrated approach, the curriculum can become crowded with issue-based problem-solving which distorts its structure and balance. There are also the political wars over what some groups see as controversial issues. In the era of social media, divisions in the community are stretched even further through processes such as 'confirmation bias' so that teaching mainstream science about matters such as climate change (or even vaccinations) are seen by some parents and commentators as provocative and unproven.

The other theme of this *Professional Voice* is tracking and reassessing two of the longstanding and still current debates within schooling – assessment and technology. Grades and numerical scores have long obfuscated the assessment of learning

and worked against the development of measures to encourage student learning progress. In the first decade of this century external standardised testing of student performance in primary and lower secondary was promoted by politicians and the media as the only 'reliable' means of judging student achievement. Whatever learning was happening in classrooms and schools was seen through the lenses of national, and increasingly international, testing programs. Political goals for education became improving these testing results rather than valuing and endorsing, and resourcing, the sort of classroom and school environments which research evidence indicated improved the learning outcomes of all students.

The substantial increase in the uptake of technology in education ranks alongside the renewed focus on mental health and wellbeing and the willingness to act collectively in the interests of the community as a whole, as one of the defining characteristics of the pandemic environment in Australia in 2020 and 2021. Technology provided a convenient quick fix as face-to-face schooling became too risky with the COVID virus spreading through the community. Initially, the value and benefits of having the option of online learning when confronted by an unprecedented health hazard were widely supported. Once implemented on a mass scale however, the limitations of this form of learning became increasingly evident. It tended to exacerbate the existing inequities in society and create inferior teaching and learning conditions, all of which made teachers, parents and most students appreciate the worth of the existing model of in-person school learning.

Assessment

After outlining the flaws in relying on NAPLAN as the yardstick measure for education in Australia Rachel Wilson and Pasi Sahlberg propose a new national assessment system "...that puts students' interests first and prioritises supporting them, and their teachers and parents, so that teaching and learning can flourish." Their contention is that NAPLAN has proved itself incapable of doing this. Rather than meeting student, teacher and parent needs it has been "preoccupied with system monitoring and accountability". Claims that it has diagnostic or formative value for student, teacher and school performance lack any credibility and have been refuted by research. The new assessment system would replace NAPLAN population literacy and numeracy tests with sample-based testing across the curriculum, together with classroom assessment linked to national standards. The system would bring back respect for professional classroom assessment work by utilising "teachers' professional wisdom and collective expertise".

Geoff Masters contends that assessment grades are poor indicators of where students are in their long-term learning progress. "This is because grades are always specific to a particular piece of work or a particular course of learning. They are ratings of how students performed on a defined and limited body of curriculum content." Despite their apparent clarity (A means A, E means E etc) grades are far from transparent indicators of student learning achievement and progress and the meaning of, and distinctions between, grades are often lost on parents. And because they are specific to each year's curriculum some students receive the same grade each year, and are potentially labelled as a 'D-student', despite their progress. A useful school report identifies and explains where students have reached in their learning and what the next steps should be and how parents could assist them in making those steps.

Consent education

Amanda Keddie outlines the research that shows while young people are critical of the sexuality education in schools, they would welcome the opportunity to explore sexual relationships, the negotiation of consent and sexual violence. Providing these opportunities however, is difficult as schools "...are adult-centred in their authority and regulatory structures and tend not to be conducive to encouraging open and critical discussions about issues of sex and sexuality". Classroom discussions tend to be controlled and young people's sexual behaviours are often infantilised so that the complex realities of these behaviours are not part of the conversation. Many teachers feel ill-equipped and uncomfortable discussing the gendered dimensions of sexual consent with students, while students themselves are also likely to feel unsettled and uncomfortable in such conversations. While schools may find this work difficult when they do it they create "...safe and inclusive spaces where students feel able to share their views and ask questions about sexual consent without judgment and shame".

Family violence

One of the consequences of the COVID lockdowns in 2020 was an increase in family violence. Jodi Dorney provides a summary of the research about the negative impacts of family violence and relates this to early childhood education. The effects on children living with family violence can be psychological, physical and behavioural with negative impacts on cognitive development and social and emotional development and functioning. Children in these circumstances can often find respite and relief from the abusive and violent family environment they live in when they attend their early childhood centre. Such children benefit from predictability, routine and structure throughout the day so they feel safe and more able to participate and learn. It is also important for these children to have choices about where they play, the times they

eat, and the ways in which they use materials or resources. This gives them a sense of control and autonomy, something often missing in their intrafamilial environment.

Racism

Niranjan Casinader supports the inclusion of intercultural understanding in the Australian Curriculum as a strategy for dealing with racist behaviour and language, but believes this should be seen as only a first step. He writes: "To be subject to the continual presumption that skin colour other than white is country-specific and non-Australian is humiliating, no matter how subtle it may be." The best way to change children's attitudes towards race is to introduce them to "pedagogies of discomfort" where they are made to feel uneasy through experiencing the negative feelings people of different races, and with different skin colours, can feel. Research suggests teachers who have learned from personal and professional experiences involving "cultural displacement" are more likely to have developed the kind of expertise required to manage "pedagogies of discomfort" in the classroom.

Girls and ADHD

According to Rachael Murrihy, the way ADHD presents in girls can be quite different to the way it manifests itself in boys. While symptoms of hyperactivity-impulsivity are present across genders (with some studies showing more hyperactivity in boys), symptoms of inattention, which can be easier to overlook, are seen more frequently in girls. Because symptoms of hyperactivity tend to present early in school life and inattentiveness has a slightly later onset, girls with ADHD can often go undetected until late primary and high school. For many girls, ADHD is a serious and debilitating illness and they are at higher risk of developing depression and anxiety than boys. Long-held stereotypes of an ADHD child as a disruptive and hyperactive boy with difficulties staying still and keeping on-task means parents and teachers are less likely to refer girls to treatment. Ensuring girls are identified early and accurately and that they receive evidence-based treatment is crucial.

Technology

Neil Selwyn wants teachers to retain a healthy level of scepticism in their use of digital technologies. In the *Professional Voice* interview he expresses a hope that after their experience of remote learning everyone in education will be more willing to push-back against future promises and hype around ed-tech. Once schooling moved online, the yawning digital divide became glaringly obvious with "...middle-class families rushing out to buy extra devices, desks and learning resources, hire private tutors and generally make sure that *their* children remained engaged and learning" while

other families had three children sharing one smartphone. He wants teachers to have greater agency in dealing with AI and know who is accountable for the decisions that the software is making. If teachers end up being directed rather than supported by digital technologies then "...they are not really teaching." More fundamentally, he sees the present use of technology creating an unsustainable environmental burden on the Earth and that: "From now on, our conversations around ed-tech need to be about ecojustice just as much as efficiency and effectiveness".

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 written extensively about the many issues impacting on teachers and teaching as a profession, teacher education, curriculum change, and the politics, organisation and funding of public education.

Putting NAPLAN to the test: Towards a new national assessment system

Rachel Wilson and Pasi Sahlberg

The famous American psychologist Abraham Maslow (1966) once said that "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail." Sufficient proof of this practical wisdom is right before us: Give a hammer to young children and before too long they find many things in need of hammering around them.

What does this have to do with education? Well, when important education policy decisions are made, and stockpiles of data from standardised student assessments like PISA and NAPLAN are available, most likely these data are somehow used to justify proposed decisions whatever they are. But just like a hammer is not always the right tool, an assessment system can also hit the wrong target. Indeed, they have and, unfortunately, they will.

In this article we will outline the problems with the current NAPLAN tests and what an alternative national assessment system in Australia could look like. Before doing that, we must answer an intriguing question: What are appropriate as well as inappropriate uses of national student assessment tests? Surprisingly, despite the number of previous reviews of NAPLAN this question hasn't had the attention it deserves.

First, we believe that using standardised student assessments, e.g. NAPLAN, for one or more of the following purposes can be considered as appropriate:

- 1. Informing teachers and parents about their students' relative achievement.
- 2. Informing education system leaders about, and holding them accountable for, education system performance.
- 3. Informing policy decisionmakers about how to allocate supplemental resources to schools; and
- 4. Selecting students for special programs.

There is a strong shared understanding among assessment experts and researchers that "no one test can serve several purposes equally well" (Popham et al., 2014), so there needs to be a priority order for the purposes – and the assessment needs careful

design to meet them. If national student assessment data is used for more than one of the above purposes, it is advisable to decide what is the most important purpose and invest most efforts to get that done as well as possible. Otherwise, the quality and validity of serving any of these purposes is put in jeopardy.

Second, we believe that standardised student assessments, e.g., NAPLAN should not be used for the following purposes for the following reasons:

- Judging the quality of schools or teachers using data from standardised student
 assessment tests. Evidence suggests that schools or teachers don't have
 significant influence on aggregate measures of students' performance in school,
 for instance average test scores of the school or groups of students in the
 school.
- Deciding the quality of curriculum, instructional programs, or teaching in schools. Standardised tests are not designed to be instructionally sensitive enough to differences in the teaching skills of teachers or instructional programs of schools.
- Grading individual students. Standardised student assessments are not designed to be end of the school year (or course) tests and they are therefore unfair student grading metrics.

In a recent report (https://www.gie.unsw.edu.au/sites/default/files/documents/Putting%20Students%20First_final.pdf) by the Gonski Institute for Education (https://www.gie.unsw.edu.au/) together with our colleagues we recommended scrapping the National Assessment Program – Literacy and Numeracy (NAPLAN) for a new National Assessment System that puts students' interests first and prioritises supporting them, and their teachers and parents, so that teaching and learning can flourish.

We are not suggesting that we should abolish all standardised testing altogether. Quite the opposite. We think that Australian students, their parents and teachers deserve much better ways of assessing learning and education that are less harmful and more informative to all of them. Here is what we have suggested.

A radical rethink?

After evaluating NAPLAN against its original stated aims (a C grade) and against a series of more contemporary aims (an F grade) we employed the now substantial mountain of research evidence on NAPLAN, including surveys commissioned

by ACARA, to go beyond critique and provide productive feedback on how our assessment system could be totally redesigned.

To ensure we got our redesign priorities right we used four questions to frame our thinking. First, we ask, what do students need? As a matter of priority students need a system that is developmentally appropriate to them, and which does no harm. They need assessment that reflects the breadth of learning that they have undertaken and supports them to become 'confident and creative learners'. Furthermore, students need an assessment system that is fair and accurate and able to support their teachers, schools and the broader education system.

The second question is, what do teachers and schools need to support students? For schools and teachers to meet their purpose, they need a system that is oriented to supporting students and their learning. In practical terms this means that the national assessment system should be instructionally useful, and in balance with classroom assessment. The system should be trustworthy and informed by the profession and it should support teachers by providing resources that are quality assured and strengthen professional practice.

The system must also consider parents. What do parents need to support their children and schools? Parents need to be confident their national assessment does no harm and promotes holistic development of their children; and trust that it contributes toward meeting national education goals. To be able to support their children at home they need a system with reporting across a broad curriculum, throughout the school year. For parents to understand their child's progress, effectively reporting should describe what has been learnt, and may be linked to standards and benchmarks.

Finally, we ask: what does the system need for monitoring and public accountability? Again, there is a need for assessment designed to promote learning, as that is the foundational goal of any education system and it must be the highest priority. Secondary to this are system needs for fair and accurate assessment for monitoring and accountability purposes. And further to this, the system must be efficient, with strong utility and imposing no unnecessary burdens. To ensure both accountability and learning goals are met, the system also needs thorough analysis and reporting on assessment data that is linked through to other system data and an effective policy response cycle.

These four questions could be used, more generically, to address any education goal. The answers our group came up with in relation to assessment are based on research literature and international expertise; and they reflect ethical principles (e.g. first, do no harm) and our national educational goals (https://www.dese.gov.au/alice-springs-mparntwe-education-declaration/resources/alice-springs-mparntwe-education-declaration) (on "excellence and equity" in learning and student wellbeing for "confident and creative learners").

It doesn't take much to conclude that NAPLAN is not able to meet these needs adequately. Indeed, it was never designed for student and teacher needs, gave brief attention to parents' needs for reporting and was preoccupied with system monitoring and accountability. As we mentioned above, no one test can serve several purposes equally well.

Make no mistake, system requirements for monitoring and accountability are always important. Therefore, our proposed new national assessment system must meet those aims. We argue that a sample-based assessment system, alongside local evidence from a new, quality assured, classroom assessment system linked to national standards, can do that and provide more purposeful accountability than NAPLAN, with:

- 1. Assessment of the broader curriculum, with all key learning areas, skills and wellbeing assessed.
- 2. Proper monitoring and reporting aligned to national goals (NAPLAN is currently not aligned) and a framework for policy action to meet them.
- 3. Significantly more chance of effective implementation, stakeholder engagement and the lifting of system performance.

According to ACARA's own research in 2017 (Colmar-Brunton, 2018), three of five parents value NAPLAN for providing "a comparable snapshot of their child's progress". Some recent media (https://www.afr.com/policy/health-and-education/naplan-vital-for-judging-schools-progress-20210518-p57ss5) commentary argues that our proposed new national assessment system would go soft on the monitoring and accountability intents or provide inadequate reporting to parents. Parents can rest assured that, unlike NAPLAN which suffered from poor articulation of its purpose, mixed messages on its capabilities, rushed implementation unaligned to other system elements, and poor design that has frustrated schools and teachers, the new system's customised design would meet system goals and ensure accountability and performance.

With students and teachers as the priority, a focus on assessment for learning and improved system performance is more likely. The new system would provide parents with more than just a snapshot of their child, by providing richer and more diverse assessment across a wide range of learning areas pegged against national standards. Parents will have the added satisfaction of knowing that, unlike NAPLAN, the new system is designed to support and promote their child's learning and development.

For teachers, the new national assessment system would ease the frustrations of the past decade and provide well overdue respect for their professional classroom assessment work. It would provide a range of resources and supports, including a national Assessment Resource System (ARS) with a curated library of diverse high-quality assessments mapped to the Australian Curriculum and pegged to national standards. Teachers would be co-designers and invited to submit their best assessment tools for inclusion in the library. A well organised library would provide quality-assured and convenient assessment, enriching teaching and learning across the full curriculum.

The ARS would also include a test item bank that teachers could draw on to generate classroom tests for their students, with the content and timing at the discretion of teachers, online automated marking, and reporting against curriculum and national standards. Such a system would strengthen classroom assessment, drive learning and enable richer reporting. It would enable assessment to be deeply embedded within teaching and learning. This stands in stark contrast with NAPLAN where a narrow focus on literacy and numeracy and poor timing has frustrated and defied teachers' efforts to link it to fulsome classroom practice.

Contrasting NAPLAN with a new assessment system

In meeting the needs of students, teachers, schools and the system, the proposed new national assessment system shows three key shifts from the current model.

Shift 1: From census to sample testing

First, there is a change from census-based to sample-based student testing for monitoring and accountability. Although there have been arguments against sample-based assessment for monitoring and accountability, many countries (e.g., The National Assessment of Educational Progress in the U.S.) have always utilised this approach successfully. Others have recently changed to this approach, in tandem with the focus on classroom assessment that we also propose.

Shift 2: From measuring to learning

The second shift, toward learning from stronger classroom-based assessment is a very logical progression, based upon a mountain of research evidence telling us that classroom-based assessment holds the greatest potential for learning gains. We need a national assessment system that promotes a balance between summative and formative assessment; and between external and classroom-based assessment. The OECD, for example, sees this as key to world-class education.

Shift 3: From accountability to trust-based responsibility.

The third shift is from NAPLAN's focus on accountability toward a system based on professional trust and responsibility. This lines up well with our focus on students and their teachers. We propose a system which utilises teachers' professional wisdom and collective expertise. Once again, this is supported by research evidence and a focus on utilising and strengthening professional expertise is a hallmark of recent international assessment system reforms.

Did NAPLAN pass the test?

After reviewing research evidence, we assessed NAPLAN against its stated aims, identified in the McGaw, Louden and Wyatt-Smith review (https://naplanreview.com. au/) (2020). These included aims to develop or strengthen:

- 1. national monitoring of programs and policies,
- 2. system accountability and performance,
- 3. school improvement,
- 4. individual student learning and
- 5. information for parents on student and school performance.

In the *Putting Students First* report (https://www.gie.unsw.edu.au/sites/default/files/documents/Putting%20Students%20First_final.pdf) we provide a detailed analysis of how NAPLAN has performed against these aims. It is obvious, for example, that NAPLAN falls short in helping teachers or principals to have reliable and valid information about their school improvement efforts due to its narrow focus and timing, and instructional insensitivity; in other words, the test's inability to provide results that would allow judgement of how well students were taught at school.

More surprising is how NAPLAN does not perform well against system monitoring and accountability aims. Although the move to national assessment was a substantial achievement, NAPLAN fails to assess, or even report against, many national goals

(https://www.dese.gov.au/alice-springs-mparntwe-education-declaration/resources/alice-springs-mparntwe-education-declaration). Many learning areas in the Australian curriculum are not assessed, and current research evidence included in our report suggests NAPLAN has led to a narrowing of the taught curriculum.

We can take this even further. There is no consideration of students as "confident and creative learners", and the reporting and policy cycle has failed to monitor, let alone redress, issues of inequity (Thomson, 2021). Although ACARA constructs the Index of Community Socio-Educational Advantage (ICSEA) (https://docs.acara.edu.au/resources/About_icsea_2014.pdf) the annual national report on schooling fails (https://www.acara.edu.au/reporting/national-report-on-schooling-in-australia) to consider how NAPLAN performance is related to this important indicator, or other indicators of socio-economic status. Neither does it provide adequate analysis on equity groupings, such as students in regional, rural and remote education, Aboriginal or Torres Strait Islander students, or students whose language background is other than English.

In the annual report on schooling, NAPLAN data are also mostly reported cross-sectionally, with limited transparency on trends over time. These analyses are left to the motivated individuals to tackle on ACARA's online data portal, or the 369 page NAPLAN national report (https://www.nap.edu.au/results-and-reports/national-reports). It is not surprising then that something has been amiss between the NAPLAN reporting and the policy response. NAPLAN's identification of students who do not meet national minimum benchmarks, has labelled them but not resulted in their improvement (Adams et al., 2020). Clarity is everything in monitoring and accountability and these omissions, and a lack of alignment between goals and monitoring, speak volumes.

Our suggested new national assessment system would build a better connection between national goals and assessment and evaluation of Australian school education. It would provide more accurate information about prevalent inequalities across the nation's schools and communities to enhance policy-making and targeted interventions. Furthermore, unlike NAPLAN which, despite numerous reviews, has never been officially evaluated against its stated aims, a new assessment system would have a plan for periodic review and evaluation, drawing on feedback from all stakeholders.

NAPLAN is outdated in light of other contemporary national assessment systems

A more contemporary evaluation of NAPLAN would put it against a series of eight challenges for all educational assessment systems, outlined by the OECD (https://www.oecd-ilibrary.org/docserver/9789264190658-en.pdf?expires=1585793615 &id=id&accname=guest&checksum=694B36926D66A157811A5A0838B74F01). These are considered very briefly below, a comprehensive account is provided in the *Putting Students First* report (https://www.gie.unsw.edu.au/sites/default/files/documents/Putting%20Students%20First_final.pdf).

Challenge 1: Aligning educational standards and student assessment

NAPLAN was created before the national Australian Curriculum and is pegged to a
series of national standards (https://www.nap.edu.au/results-and-reports/how-tointerpret/standards). Poor early alignment between NAPLAN and the curriculum
created ongoing confusion, particularly among teachers. Much of the Australian
curriculum is not assessed through NAPLAN, or the other elements of our national
assessment system. Instead of alignment with the broad curriculum, research
suggests NAPLAN has created a narrowing curriculum and increased teaching to the
test due to the privileging of those tests over the other National Assessment Program's
sample-based tests and non-assessed curriculum areas.

Challenge 2: Balancing summative and formative assessment

The original design of NAPLAN was as a summative assessment, however from the start there were mixed messages from political and educational authorities on the purposes of NAPLAN and its potential as a formative and diagnostic assessment. These led to confusion and frustration among many stakeholders. There is no evidence that NAPLAN has produced positive outcomes as a formative assessment, nor is it balanced with other formative assessments. Some research suggests that, far from being formative, NAPLAN's summative approach has had a negative impact on teaching and learning. The measurement framework for schooling in Australia (https://www.acara.edu.au/docs/default-source/default-document-library/measurement-framework-2020-for-pubafa92e404c94637ead88ff00003e0139. pdf?sfvrsn=1c3d4d07_0) does not mention formative assessment, it currently only considers summative data from NAPLAN, NAP and international student assessments (PISA, TIMSS, and PIRLS). A national assessment system without formative assessment misses out on the great opportunity to drive learning through assessment.

Challenge 3: Balancing external assessments and teacher-based assessments
NAPLAN was never presented as a testing system to be balanced with teacherled assessment and Australian policy makes scarce mention of teacher-based
assessment, yet this is the international recommendation. Furthermore, it could be
argued that the primacy of NAPLAN within Australian schools, has threatened teacherbased assessment.

Challenge 4: Developing fair assessments for all student groups
Research suggests NAPLAN tests are not suited, and are unfair, to substantial proportions of Australian students (Jorgensen, 2010; Macqueen et al., 2018; Wu 2008; Thompson et al., 2018; Adams et al., 2020; Davies, 2012). There are many students who are unable to participate in the tests and participation rates for NAPLAN tests have been declining, suggesting a lack of suitability and community engagement (Anderson & Boyle, 2015; Thompson et al., 2018). The appropriateness of high-stakes testing is different for different age groups, but NAPLAN's one-size-fits-all approach is used across years 3 to 9. Furthermore, the commercial nature of preparation for NAPLAN tests also creates unfairness; with more affluent families able to purchase prep materials, additional coaching and private tutoring for their children to do better in these tests.

Challenge 5: Designing large-scale assessments that are instructionally useful Many teachers report feeling pressured to teach to the test due to NAPLAN's role in accountability. Many also find student preparation difficult and challenging to their professional integrity, because NAPLAN is not clearly linked to curriculum, its timing limits its usefulness for broader classroom learning, and time spent on NAPLAN preparation detracts from time for other highly valued curriculum and activities. Outside of schools a wide range of commercial NAPLAN instructional material has evolved, including NAPLAN coaching centres, specialised private tutoring and home study programs. But there is little, or no, evidence to verify the instructional effectiveness of these programs. NAPLAN was not designed to be instructionally sensitive or provide information about how well students are taught at school.

Challenge 6: Ensuring fairness in assessment and marking across schools

Some research, including that by Wu (https://www.aeuvic.asn.au/sites/default/files/pv_8_1_complete.pdf) (2009, 2010) and by Perelman (https://www.nswtf.org.au/files/18116_towards_a_new_digital.pdf) (2018), makes concerning

analyses of NAPLAN's reliability and validity. Annual reports by ACARA show limited disaggregation of results, thus much 'fairness' and the potential for bias goes unexamined and unreported. While some national assessment systems, like the USA's SATs for example, have been subject to extensive research regarding bias and fairness. Much more research and design work is needed to ensure NAPLAN is fair to all Australian students, especially Indigenous students and those from language backgrounds other than English.

Challenge 7: Securing informative reporting of student assessment results

The Louden review (https://naplanreview.com.au/) examines the issues relating to reporting of NAPLAN and echoes widespread concerns that NAPLAN is producing unintended negative consequences; and is not well designed to support teaching and learning. The major barrier to informative reporting of NAPLAN is the long wait between the tests and reporting back to schools and parents. Unlike some innovative assessments, NAPLAN tests have no elements with specific design for lifting student learning through feedback and reporting to the students themselves. The focus on literacy and numeracy alone, means that reporting is limited and cannot reflect the full breadth of students' learning, nor many of the aspects laid out in our national goals.

Challenge 8: Ensuring the assessment is informed, valued and of optimal utility to the teaching profession

It seems self-evident that school assessment systems should be informed, valued and trusted by teachers. This is the most serious shortcoming of NAPLAN. Because of initial and ongoing confusion on the purpose of NAPLAN, much of the teaching profession has felt frustrated and disillusioned with it. This has been aggravated by the fact that their role in designing and using NAPLAN has been so limited. Frustrations among teachers and principals caused by NAPLAN have been loud and clear since the beginning. Still, each year before the winter comes most teachers put great effort into minimising negative consequences and maximising teaching and learning opportunities for their students despite the well-known limitations of NAPLAN.

Conclusion

We have suggested that a new national assessment system could be developed in partnership with the teaching profession, so that it supports teachers' professional practice, helps, not hinders, student learning – and is valued and trusted by all.

The proposed new national assessment system is neither radical nor risky. Sure enough, the change is substantial, but we wouldn't throw the accountability baby out with the bathwater; and the assessment for learning design, balancing formative and

classroom assessment with summative sample testing, is built upon solid logic and research. The real danger is that without swift change, NAPLAN's focus on system accountability, at the expense of student learning, will mean our education assessment system continues to shoot itself in the foot.

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How well do grades convey student attainment and progress?

Geoff Masters

A national survey of parents of Kindergarten to Year 8 students in the United States found that 90 per cent of parents believe their child is performing at or above year-level expectations (Hubbard, 2019). In reality, according to the US National Assessment of Educational Progress, the figure is closer to 37 per cent (National Center for Education Statistics, 2017).

The same survey found that almost all parents base this belief on school reports, which they overwhelmingly accept as accurate indicators of how well their children are performing. And while 90 per cent of American parents believe their child is on track in their learning, only 39 per cent of teachers say students begin each school year ready for the year's curriculum (Hubbard, 2019).

These findings raise interesting questions. Why is there such a mismatch between parents' beliefs and students' performances? Are American parents being lulled into a false sense of security by the information schools provide? Why are reported grades not better indicators of where students are in their learning? And to what extent would these observations also hold in other countries?

Clearly, the reports US students receive lead many parents to believe their children are doing better than they are. Part of the explanation is no doubt 'grade inflation' – a tendency over time to award more A's and B's and fewer low grades – which itself can be the result of using grades to reward effort rather than achievement. For example, teachers may believe that students who conscientiously complete most class work deserve something better than a 'C' (which is often interpreted as minimally satisfactory). Forty-eight per cent of US teachers say the grades they give reflect effort more than achievement (Hubbard, 2019).

But even if awarded solely for achievement, grades are poor indicators of where students are in their long-term learning progress. This is because grades are always specific to a particular piece of work or a particular course of learning. They are ratings

of how students performed on a defined and limited body of curriculum content. This is illustrated by the following grade descriptions developed recently for teacher use in the Canadian province of British Columbia.

All four grades relate to a body of 'expected learning', such as a particular year-level curriculum, and provide teachers with a scale for rating students' understandings of that content – 'initial', 'partial', 'complete', 'sophisticated'. Whether or not grades are accompanied by descriptive interpretations, they are always ratings of students' performances on a specific activity or body of taught content.

Emerging	Developing	Proficient	Extending
The student	The student	The student	The student
demonstrates an	demonstrates a partial	demonstrates	demonstrates
initial understanding	understanding of	a complete	a sophisticated
of the concepts and	the concepts and	understanding of	understanding of
competencies relevant	competencies relevant	the concepts and	the concepts and
to the expected	to the expected	competencies relevant	competencies relevant
learning	learning	to the expected	to the expected
		learning	learning

Several consequences follow from this observation. First, grades identify every student as successfully demonstrating at least some of the body of expected learning, with some students demonstrating more than others. (This is true even of students who do not demonstrate enough to be awarded a 'passing' grade.)

Positively worded grade descriptions like those above make this explicit and are sometimes described as reflecting a 'strength-based' approach to reporting. But whether described or not, for the vast majority of students, grades indicate a level of success on year-level learning expectations, leaving parents to infer that their children are generally on track and ready for the next year's curriculum. As the authors of the US parent survey observe:

Report cards are the primary source of information for parents and, in isolation, they are telling parents that everything is essentially fine, which is not sending families the signal they need to do anything differently (Hubbard & Rose, 2020, p.14).

Second, grades rarely provide detail that parents can use to support their children's learning. This is because grades do not indicate the points individuals have reached in their long-term progress. Instead, they are performance ratings on year-level expectations and, as such, often leave parents unclear about their substantive meaning (for example, the distinction between 'Developing' and 'Emerging', or between 'C' and 'D').

A more useful report might identify the stages individuals have reached in their learning; explain what this means in terms of their current levels of knowledge, understanding and skill; and make suggestions for appropriate next steps in each student's learning and what parents might do to assist.

Third, grades are incapable of revealing growth over time. Again, this is because grades are specific to each year's curriculum. A student can receive the same grade (such as 'D' or 'Emerging') year after year, failing to reveal the absolute progress they are making and potentially labelling them as a particular kind of learner – for example, a 'D-student'. Grades do not assist parents to see and monitor their children's growth in an area of learning across the years of school.

At the same time, they deny parents more general information about rates of progress. Other recent American research reveals substantial between-school differences in average rates of student growth – suggesting differences in school effectiveness that are likely to be of interest to parents, but that grades are incapable of revealing (Atteberry & McEachin, 2020).

Today's grades were developed as part of a particular approach to schooling that emerged with universal participation, large classes and the desire to treat all students equally. Under this approach, all students move along the same curriculum 'conveyor belt' at the same pace; are delivered the same year-level curriculum at the same time; and are then graded for performance before all moving to the next year's curriculum. On production lines, the grading of products is a common feature of the production process.

The problem is that learning is not like this. Instead, it is a continuous, ongoing process. Grades are based on an assumption that students make a fresh start in their learning every year – that all commence on an equal footing and that the grades they

receive reflect only their efforts and achievements during that particular year. This is almost always wrong. Students begin each year at widely different points in their long-term progress; in many countries, the most advanced students are six or more years of learning ahead of the least advanced.

And these very different starting points strongly influence the grades they receive. The production line approach and its associated grading processes might be appropriate if each year's curriculum were unrelated to any other year's curriculum. But in schools, this is almost never the case.

Parents deserve better information about where their children are in their learning. This information should:

- provide an accurate indication of the level of attainment (knowledge and skill)
 a student has reached in an area of learning, regardless of their age or year
 level –reporting this separately from rewards for effort and the conscientious
 completion of class work;
- interpret this level of attainment describing and illustrating what students at this level typically know, understand and can do, and perhaps suggesting appropriate next steps in learning;
- indicate how this level of attainment compares with common age-based or year-level expectations including information about readiness for what the student will be taught next; and
- make visible long-term growth allowing parents to see and students to appreciate the progress made in an area of learning over an extended period of time.

If parents are to be effective partners in their children's learning, they require accurate and usable information about the stages individuals have reached in their learning, and about the kinds of stretch challenges likely to promote further growth. By themselves, grades provide neither.

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Addressing issues of sexual consent: key considerations for schools and teachers

Amanda Keddie

Wesley College refers sexual assault and harassment complaints to police (ABC News, March 2021)

Abuse Scandal Shocks St Kevin's College (Star Observer, February 2020)

'Do they even know they did this to us?': why I launched the school sexual assault petition (The Guardian, 15 March 2021)

Outrage over Victorian high school's rape culture apology (NineNow, April 2021)

If recent media headlines are anything to go by, schools are floundering in their efforts to address the prevalence and severity of gender-based violence. For some school communities, there seems to be a general sense of surprise or shock that sexual harassment and assault happens in their schools. For others, well-intentioned attempts to address these issues have been met with a strong backlash. The reality in schools is far more complex. Most schools are inclusive spaces, and many principals and teachers are doing great equity work. But this work is difficult.

Schools have long been charged with addressing gender-based violence and it has always been fraught with contention and backlash. This is perhaps because the spectrum of gender-based violence has been so normalized that many find it difficult to see and name – whether through private school boy sexist chants, sexist language or jokes, inappropriate touching to more serious sexual harassment and assault. For a long time, the sexual harassment and abuse experienced in schools, particularly by girls and female teachers, has been trivialized and minimized. Perhaps now, with the strength and power of young women's voices such as Chanel Contos, Brittany Higgins and Grace Tame and the sustained public and media interest in gender justice issues (post #MeToo) there will be real change in how schools are supported to address gender-based violence (Keddie, 2021).

The prevalence and gravity of sexual abuse

Recently activist and former school-girl Chanel Contos started a campaign to draw attention to the prevalence and gravity of sexual abuse in private secondary schools in Sydney. To date, her campaign has collected over 6,500 testimonials of sexual assault from females (teachusconsent.com). The stories are not restricted to private schools and the women vary in age (e.g., there is a story from a woman who graduated in 1965 and there are stories from girls who are still attending school). What is common across these stories of sexual abuse is male perpetration. The stories are harrowing. They tell of countless experiences of rape and sexual assault, of girls being raped when they clearly said 'no', of girls being plied with alcohol before being raped, of girls being raped when unconscious (either asleep or intoxicated), of girls being bullied or forced into performing particular sex acts such as oral sex on boys, of being coerced into sending nude images to their boyfriends, only for them to be shared without permission, of being groped in clubs, being felt up at school, of being called frigid by refusing to have sex, or more often, slut-shamed for having sex.

What is also harrowing about these stories are their long-lasting negative impacts. The women express their feelings of fear, devastation, shame, humiliation, betrayal and rage at being objectified, trivialized and used, of being over-powered physically and forced to submit, of their bodily integrity and autonomy being taken away. Some speak of the social and mental health costs arising from their abuse and their subsequent fear of men and intimate relationships.

The petition associates the high prevalence of sexual abuse within and beyond schools with inadequate sexual consent education. In many of the testimonials the young women remain silent about their experiences, blaming and shaming themselves or only coming to realise they had been victims of sexual coercion later in their lives when they were in more healthy and equal intimate relationships. The petition calls for better and earlier sexual consent education in schools that defines what constitutes sexual coercion and consent within the contexts of toxic masculinity, rape culture, slut-shaming, and victim-blaming (SBS News, 2021).

Sexual consent education in schools

Young people are critical of how sexuality education is currently delivered in schools and would welcome opportunities to explore sexual relationships, the negotiation of consent and sexual violence (Carmody & Willis, 2006; Ollis & Dyson, 2017). Integrating these opportunities into the programs, curriculum and everyday relations of schools, however, is far from simple or straightforward. Schools are adult-centred in their

authority and regulatory structures and tend not to be conducive to encouraging open and critical discussions about issues of sex and sexuality (see Naezer et al. 2017). This adult-centric climate tends to control and infantilize young people's sexual behaviours rather than recognising and addressing the complex realities of these behaviours (Ringrose, 2013; Gilbert, 2018). There is also the reality that many teachers feel ill-equipped and uncomfortable engaging in conversations about sexual consent with students. They may not feel they have the necessary knowledge and sensibilities to navigate these issues in safe and gender sensitive ways. For students, as the testimonials above make clear, such conversations are likely to be unsettling and uncomfortable for girls and boys (albeit in different ways).

The experiences recounted in the Contos' petition highlight the significance of addressing the gendered dimensions of sexual consent. Research in this space has long expressed concern about how these dimensions position girls and women without sexual agency or desire other than to be moral gatekeepers who (through no-saying or yes-saying) restrict or allow boys' and men's access to their bodies (Coy et al. 2016). Young people are well aware of this 'sexual double standard which rewards young men for having sex while passing negative judgment on young women who do so' (Coy et al. 2013, p. 10). Challenging these gendered dimensions is crucial within the context of teaching about sexual consent. Also crucial is challenging the hetero-normative dimensions of sexual consent which do not only work to undermine the agency of girls and women but also of same-sex attracted youth who suffer high levels of gender-based violence and abuse (Hillier et al. 2010).

There are many excellent resources designed to support teachers to deliver sexual consent education. One such resource is *Stepping Out Against Gender-Based Violence* (Ollis, 2014). This is a comprehensive DET (Victoria) resource that broadly aims to address gender-based violence by examining issues of gender, power and respect. It is designed for Years 8-10 to accompany the Victorian *Resilience*, *Rights and Respectful Relationships* resources within a whole school approach to Respectful Relationships Education. A whole school approach to addressing gender-based violence is important given that institutions like schools send powerful messages about gender and sexuality through their culture and climate, their leadership and staffing, and their teaching and learning. A gender-inclusive school will greatly support gender inclusive sexual consent education.

Safe and supportive environments

Central to broaching any conversations with students about issues of sexual consent

are inclusive, safe and supportive relationships and spaces where students feel able to share their views and ask questions without being judged, silenced or shamed (Ollis, 2014). This does not mean an uncritical acceptance of all views – but a guidance of conversations in ways that reflect a clear anti-violence stance. Such spaces will provide recognition and adequate support for students who may be survivors of sexual abuse. Important here are teacher knowledge and skills, especially in relation to minimizing harmful disclosures by informing students prior to these conversations that they are not required to disclose their own experiences. Teachers may need to deploy 'protective interrupting' strategies to remind students of this and protect them from disclosing private and distressing information. Awareness of appropriate referral and reporting services to support student wellbeing in this regard is central (Ollis, 2014). It is important that all teachers are aware of their mandatory reporting duties when engaging in conversations with students about sexual consent – in Victoria these duties are part of the Child Protection and Child Safe Standards - if teachers suspect that a child or young person in their care is in need of protection as a result of physical and/or sexual abuse they must report it to the Department of Health and Human Services, Child Protection (see VIT, 2018).

Consent and the law

The *Stepping Out* resource (Ollis, 2014) provides excellent guidance and information about consent and the law, including great activities for students about the age of consent and what constitutes consent. For teachers, it is important to know the following (taken from the resource, p. 123 and Youth Law Australia, 2021):

Age of consent

Under Victorian law, the general age of consent is 16. Once a person turns 16, they can legally have sex with another person who is 16 years or older (if both parties actively agree to it) except with a person who is in a position of authority (e.g., a teacher, youth worker, doctor, sports coach) or a family member. If a child is under 12, no one can have sex with them or touch them sexually. If a child is between 12 and 15, they can legally have sex. However, the other party must be less than 2 years older. If a person is 18 years and over, they can legally have sexual contact with anyone over the age of 16 who is not in a position of authority over them and not a family member. Certain professions (doctors, teachers etc.) have codes of conduct that do not allow any sexual contact with patients/students etc. even if they are over 18 (Ollis, 2014; Youth Law Australia, 2021). These laws apply to both heterosexual and same-sex relationships.

What constitutes consent

Consent means a person gives their free agreement to sex. It is a crime for someone to assume consent or to force sex/sexual relations. A person can also withdraw their consent at any time during sex (Youth Law Australia, 2021)

As stated in the *Stepping Out* resource (Ollis, 2014, p. 123), there are many reasons why people may feel forced or pressured to engage in sexual activity and the law addresses many of them. The law defines situations where consent is not freely given, e.g., if someone:

- · says yes because of force, fear or fraud.
- says yes because of the fear of harm of any type for themselves or someone else.
- · says yes because of being unlawfully detained.
- is asleep, unconscious, or so affected by alcohol or another drug that they are incapable of freely consenting.
- · is incapable of understanding the sexual nature of the act.
- · is mistaken about the sexual nature of the act and the identity of the person.
- · is mistaken in the belief that the act is for medical and or hygienic purposes.

The gendered dimensions of sexual consent

The *Stepping Out* resource (Ollis, 2014) also provides excellent teacher guidance and activities for students to explore the barriers to consent in relationships – a key one being, the gendered dimensions of sexual consent highlighted earlier. One of the sessions focuses on the pressures and difficulties of ensuring mutual consent in sexual relationships including fear of judgement – which is a 'driving factor in sexual interactions' (Ollis, 2014, p. 94). This session involves students unpacking a story of a sexual encounter told from two different perspectives: a young woman who saw the encounter as her being forced to have sex after drinking too much at a party and lying down with her male partner after feeling sleepy, and a young man, who thought her provocative dress and her invitation to lie down with him meant she wanted to have sex, her resistance construed as her wanting to be persuaded. The accompanying questions to this story invite a critical examination of gendered assumptions about sexual consent such as (Ollis, 2014, p. 95):

- · Women's provocative clothing communicates willingness for sex.
- Women want men to take responsibility for sex.
- · Men should start sex and women should stop it.
- Women will speak up if they don't want sex.
- · Men have a right to sex.
- · Silence means consent.

There are specific questions associated with this story for young men to examine how consent works and to encourage them to check in with their partner before going ahead with any sexual act. The questions invite young men to consider why young women might not speak up to stop a sexual encounter, what non-verbal signs might mean resistance or discomfort, what they might say to check in with their partner to ascertain comfort and willingness for sex and what the risks, consequences and benefits are in relation to asking and not asking for sex (Ollis, 2014).

Schools cannot be the panacea for the harms of sexual harassment, abuse and violence in the broader social world. However, they can be safe and inclusive spaces where students feel able to share their views and ask questions about sexual consent without judgment and shame. The guidance and content in *Stepping out against gender-based violence* are excellent in supporting teachers to scaffold discussions with students about the age of consent, what constitutes consent and the gendered dimensions of consent. Young people clearly would like more opportunities to explore sexual relationships with teachers who:

- · centre discussions around issues that concern them.
- · always guide conversations from an anti-violence stance.
- support them to examine the complex social and emotional processes of sexual consent including feelings of uncertainty, fear, discomfort and shame.
- support exploration of the nuanced and complicated forms of communication and miscommunication through which sexual encounters are negotiated.
- open up opportunities for students to critically examine the gendered and heteronormative expectations of desire and resistance within sexual encounters.

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Early childhood: The invisible scars of domestic and family violence

Jodi Dorney

A bruise on a child's arm, a burn mark on the leg, or strap marks on the child's back, these disturbing discoveries may suggest a visible possibility that a child has experienced direct physical abuse. More difficult to identify, however, is the child who does not present with the external signs and symptoms, but rather suffers due to witnessing the parent, usually the mother, being abused in the 'safety' of the family home. In fact, some scholars argue that the family home is the most dangerous place for women and children (United Nations Office on Drugs and Crime, 2018).

But how does a child become a victim if they are not touched, pushed, or hit? The answer is clear: in addition to being directly targeted, a child can be victimised by witnessing a parent, most often the mother, being abused.

Violence in Australia and around the World

The rate of women experiencing abuse and violence in the family environment is estimated to be one in three globally (World Health Organisation [WHO], 2019), and homicides perpetrated by a current or former male intimate partner account for approximately 38 per cent of all global homicides against women (Lutwak, 2018), a figure that continues to rise (Guggisberg, 2018; United Nations Children's Fund [UNICEF], 2017). We see or read stories about this violence in the media way too often, with an average of one woman dying every week at the hands of an intimate partner in Australia (Australian Institute of Family Studies [AIFS], 2018).

Additionally, it is estimated that one in four children under five years of age live in a family environment where the mother is a victim of intimate partner violence (UNICEF, 2017) and whilst many of these children do not suffer direct physical abuse at the hands of the perpetrator, they witness often horrific, brutal and violent physical attacks on their mother. They may also be witness to their mother being emotionally abused and/or psychologically abused, which is referred to as 'Coercive Control' (Katz, 2016). Emotional abuse is aimed at affecting the person's feelings, while psychological abuse often involves frightening, isolating and/or controlling someone, consequently impacting their mental health (Katz, 2016).

The impact of witnessing abuse

Research says that indirect experiences of domestic and family violence can result in negative psychological, physical, and behavioural impacts on a child (Briggs -Gowen et al., 2012), and negative effects on cognitive development (UNICEF, 2017) and on social and emotional development and functioning (Briggs-Gowen et al., 2012).

Also, much evidence suggests a child who experiences recurrent exposure to domestic and family violence often develops negative cognitive and behavioural schemas over time, such as devaluing self-worth, lack of confidence in adults as protectors, and beliefs that abuse and violence within in the family context is normal (UNICEF, 2017). Such schemas help explain some evidence of negative intergenerational transmission effects over time.

Social and Emotional development

Children learn to regulate emotions primarily from parents and others within the family, however, children living in an abusive and violent family context may be deprived of positive emotional engagement with their parents (Gelfand & Teti, 1990). Research suggests that mothers who are victims of domestic and family violence can suffer from symptoms of anxiety and depression, which may result in the mother becoming inattentive and unresponsive toward their child, impacting the child's opportunity to express, identify and appropriately manage personal emotions (Cummings et al., 1993; Fusco, 2017). Research identifies 'emotional competency' as critical for children's overall well-being and success in personal and academic development. Emotional development in early childhood influences social competence and reflects the psychological growth of the child (Thompson & Lagattuta, 2006).

The sometimes erratic, aggressive, and explosive externalising behaviour of a child who has been exposed to abuse and violence in the family environment can hinder opportunities for the child to engage in positive social interactions with friends and adults (The National Child Traumatic Stress Network [NCTSN], 2019). Furthermore, unstable, unpredictable, and fractured connections between the child and parents within a violent environment can promote a lack of trust, safety, and security within the child and a failure to acquire and learn fundamental social skills (Zauche et al., 2016).

Language development

Early childhood is a crucial time for a child's language development too (Zauche et al., 2016), as language skills enable a child to communicate and connect with others, and these interactions promote the development of cognitive skills (McLean, 2016). Children

need adequate opportunities to model communication patterns, practise developing verbal skills, and to be stimulated to verbally interact to assist their developing language skills (Shaffer & Ryan, 1995). The development of language skills can impact a child's functioning in all environments and their social interactions and social development (Shaffer & Ryan, 1995). A child exposed to intrafamilial violence may lack age appropriate vocabulary skills if parent-child interactions have been limited.

Language development is linked with the effective development of many cognitive skills (Kuhn et al., 2014). Research suggests a child's age when reaching particular language and linguistic milestones impacts emerging cognitive skills, and Carlson et al. (2005) explain that enhanced expressive and receptive language are related to improved cognitive abilities.

Cognitive development

Family environments lacking in positive social stimulation also have the potential to inhibit the brain to develop to its full potential (Zauche et al., 2016). Suffering stress within an abusive and violent family environment has been identified as a potential precursor to diminished cognitive development. Children living with domestic and family violence often experience fear and subsequently suffer chronic stress (Zauche et al., 2016). Children who experience this level of stress and constant anxiety may have cognitive difficulties such as thinking clearly enough to problem solve and reason, and may have difficulty sustaining attention, resulting in the inability to acquire new skills or new information (Zauche et al., 2016).

Benefits of quality early childhood education

Early childhood educators' knowledge and skills around working with children exposed to intrafamilial violence can affect their ability to support the children in their care. Research suggests that appropriate pedagogical support from educators provides positive learning experiences for children (Brinamen & Page, 2012). Quality early childhood education and educator support can positively promote the social, emotional, and cognitive development of a child exposed to intrafamilial violence (Roberts, 2017). Positive and secure relationships between child and educator encourage children to develop trusting relationships, and, as suggested in Bowlby's attachment theory (1969), support a child's cognitive and social development, particularly self-esteem (Holmes, 2014) and a sense of autonomy (Moen et al., 2019). Additionally, enrolment in an early childhood education program can provide children experiencing intrafamilial violence respite and relief from the abusive and violent family environment (Brinamen & Page, 2012).

Achieving positive developmental and wellbeing outcomes for children who have witnessed intrafamilial violence requires early childhood educators to understand the effects of trauma on children's learning, development, and behaviour (Fordham & Kennedy, 2017). All early childhood educators need the opportunity to access quality teaching resources to promote their understandings and knowledge about the effects of witnessing intrafamilial abuse and violence, and have the skills to support children who might be suffering in silence.

What can early childhood educators do?

As highlighted, the impact of exposure to intrafamilial violence can affect a child across all developmental domains, and the positive impact early childhood educators can have on the developing child is profound. It is important for early childhood educators to not only understand the impact of intrafamilial violence, but to have a range of strategies and teaching approaches to implement within their curriculum.

Research has identified that, in Australia, many early childhood educators do not feel they are effectively prepared during their initial teacher education to identify, respond to, and support children impacted by intrafamilial violence (Roberts, 2017). Early childhood educators are encouraged to be proactive in their own learning about the effects of exposure to intrafamilial violence on the developing child (Guggisberg, 2017). In addition to actively seeking out in-service opportunities to inform and develop knowledge on intrafamilial violence, Guggisberg (2017) suggests practising educators improve their understanding and knowledge of intrafamilial violence through engaging with colleagues within the industry, utilising modern technology and online platforms, such as blogs and podcasts.

As the effects of exposure to intrafamilial violence for a child are diverse and individual, so too should be educators' approach to each of the children in their program. Importantly, educators must embrace the child and his or her family without negative judgment, respond with empathy, and provide the child with a safe and caring environment.

Supportive early childhood education environment

Exposure to violence and abuse can evoke fear and anxiety in young children, impacting relationships with educators and peers, therefore, the importance of educators establishing strong and trusting relationship with the child cannot be understated (NCTSN, 2008). This involves educators being predictable, caring, reliable and consistent in their relations with children (NCTSN, 2008). Helping children to

develop the skills to foster positive and respectful relationships with other educators and children is crucial (Campo, 2015), and this should be done in an education environment that is safe and comfortable for all children.

Predictability, routine, and structure in the daily program can benefit a child exposed to intrafamilial violence. Such stability addresses the sense of chaos that many children experiencing violence and abuse in the family environment often feel (NCTSN, 2008). Keeping regular routines and transitions throughout the day and providing the child with prior warning when a transition is soon to occur, for example packing up time, will allow the child time to process the impending change.

The provision of an environment that fosters a child to feel safe and comfortable encourages the child to explore with more confidence, and provokes engagement and learning (Cummings & Swindell, 2019).

Be flexible

Exposure to intrafamilial violence can impact a child across all developmental domains, result in poor concentration skills, and can present through internalised and externalised behaviours. Educators must be flexible with curriculum content and expectations of the children, and modify experiences if necessary (NCTSN, 2008). For example, providing the child with a special 'therapeutic' chair to sit in at mat time, or giving them a 'fidget toy' to hold during the group music or story session, and maybe adjusting the length of the group time to ensure the child has a positive experience. Educators might schedule multiple short group times throughout the session instead of one long group time and may allocate an educator to sit specifically with the child to support their participation.

Providing one-on-one learning support within the program will assist the child to build knowledge and skills in various developmental areas. While providing this personalised support can be difficult when extra support staff are not employed, educators are encouraged to optimise opportunities that do arise to provide individual guidance to a child who has experienced violence and abuse in the family context.

Giving children choice of experiences throughout their time in the early childhood education setting, such as where they play, times they eat, and, ways in which they use materials or resources, can provide a sense of control and autonomy, something often missing in their intrafamilial environment (Cummings & Swindell, 2019; NCTSN, 2008).

Self regulation

If educators believe a child who has been exposed to intrafamilial violence is attending their program, a flexible and considerate approach to the room aesthetics is necessary. Creating a calm and soothing environment that respects the senses is an effective strategy that can influence a child's emotional self-regulation and behaviour (Cummings & Swindell, 2019).

Considerations include the lighting, clutter, room 'decorations' and displays, and potential noise (Cummings & Swindell, 2019). The positioning and design of furniture within the learning environment must be comfortable, uncluttered and aesthetically pleasing to promote concentration and engagement in the learning experiences and minimise externalised behaviour due to sensory overload and visual and physical chaos.

Research supports the inclusion of rhythmic and mindfulness activities as a regular addition to an early childhood education program. Activities such as yoga, playing on drums or other rhythmic instruments, marching, or singing encourages the child to focus on the present activity and feelings, provoking the regulation of their emotions, stress, and attention (Brunzell et al., 2015; Cummings & Swindell, 2019).

Providing constant accessibility to stress relieving materials such as bubbles, playdough, fidget toys, and visual aids allows the child to intentionally engage in sensory experiences to de-stress or calm down when needed, or to participate incidentally and spontaneously (Cummings & Swindell, 2019). Creating a quiet space in the learning environment that enables a child to have some 'time out' when feeling overwhelmed or distressed is important. This may include a small area of space with soft furnishings and some sensory resources, or may be an area with headphones that play calming music or sounds, that accommodates only the one child, ensuring autonomy over the experience.

Behaviour management

It is critical for educators to understand that there is always a reason behind a child's behaviour, that disruptive behaviour is often transient (NCTSN, 2008), that the negative behaviour of the child is not a choice (Souers, & Hall, 2016), and that the consequences of being exposed to a violent and abusive family environment can be the driving force behind the expression of a child's troublesome actions (NCTSN, 2008). Learning requires regulation, organisation, and moments of concentration and focus. Children who suffer the effects of intrafamilial violence are often still developing

these skills when their peers of the same age are demonstrating and have established the same capacities (Brunzell et al., 2015). With this in mind, pedagogical approaches need to address the "underdeveloped neural pathways" (Brunzell et al., 2015. p.4) influenced by exposure to intrafamilial violence, such as cognitive or language delays, decreased memory or concentration skills, or a lack of social and emotional skills before expecting cognitive integration skills to be developed (Brunzell et al., 2015).

In addition to establishing a safe, supportive, calm and predictable learning environment, educators must develop clear and definitive boundaries regarding disruptive and anti-social behaviour with logical and consistent consequences when a child behaves inappropriately (NCTSN, 2008). It is vital to remember however, that educators are role models to all children, and must demonstrate the ability to remain calm and in control of their emotions and stress when engaging with a child who is exhibiting disruptive behaviour (Souers & Hall, 2016).

The first task of the educator when intervening in disruptive behaviour is, with composure, to reassure the child that they are safe, are being heard and that their feelings are valid (Souers & Hall, 2016). The educator must calmly engage with the child until the child can revert back to a regulated state, which may take time, involve sitting silently together, walking around the room, or talking to the child about something they enjoy (Souers & Hall, 2016). It is only then that the educator can explore a child's feelings and discuss alternative, appropriate ways of exhibiting their feelings (Souers & Hall, 2016). Whilst educators may believe the behaviour displayed was inappropriate, they must remember their role is not to control the actions of the child but rather influence the child to engage in alternative and appropriate behaviours (Souers & Hall, 2016). Educators must also understand that the young child is potentially struggling with events in their lives that most educators would be unable to comprehend or be fully aware of (Souers & Hall, 2016). Empathy in these moments is essential. Also, early childhood educators need to be prepared to try multiple different approaches with individual children as each child will respond differently to various interventions (Souers & Hall, 2016).

Souers and Hall (2016) suggest fear is often a driving force behind decisions educators make when intervening, or not intervening, in the aggression or disruptive behaviour of a child. It is however, going to take time and repeated calm and confident interventions to establish trust with the child, and to establish a routine and strategy that calms the child and returns them to a regulated state. The more a child reacts to situations within the group, the more opportunities educators have to identify triggers,

to determine possible situations that distress the child, and what strategies can be implemented permanently within the program both as activities, and with regard to relationships between educators and child.

Commonly, children who are known to be disruptive, unpredictable and/or are unable to regulate their stress and emotions are labelled as difficult, challenging, and disruptive amongst educators. It is pivotal that educators change the lens with which they view or label children who are impacted by intrafamilial violence and focus on the positive influence that they can have on the child's early years. Educators must however be sure to take care of their own mental and emotional health in order to be the best educator for the children in their program.

Self-care

It is possible for educators to develop 'compassion fatigue' when working with children who have been exposed to traumatic experiences such as intrafamilial violence, and it is imperative that educators seek support and assistance if they feel emotionally or mentally impacted by their educator role (NCTSN, 2008). Signs that indicate an educator may have compassion fatigue include, impatience and irritability with children in their care, poor concentration, constant thoughts and/or dreams about a particular child's situation, and difficulty undertaking the duties of their educator role (NCTSN, 2008). Counselling should be sought by any educators impacted by compassion fatigue, either from a professional, or with colleagues (NCTSN, 2008).

Final thoughts

As discussed above, witnessing abuse and/or violence as a young child can have detrimental effects on a child's development and wellbeing. Emerging reports indicated that 2020 was a year where rates of domestic and family violence increased. Consequently, it is crucial that as educators we engage in the sometimes uncomfortable and confronting conversations about the visible and invisible effects of domestic and family violence with others, including peers and parents. Critically, we need to advocate for, and be aware of all children impacted by domestic and family violence, directly and/or indirectly and keep their safety and wellbeing at the forefront of our endeavours.

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Understanding racism: students must empathise with its impact and teachers must embrace discomfort

Niranjan Casinader

For people who experience racism, the pain sometimes comes as much from words as it does from actions. Indigenous people like Adam Goodes' and Latrell Mitchell² have spoken of the hurt they feel when they are subject to racist slurs. Words and actions used to demean people on the basis of race or colour can be found throughout everyday society and may even be seen as innocuous. Recent government bans on Australian citizens returning from India highlight one way non-white people can feel that they are being excluded from the society of which they are apart³.

People of Indian or African heritage who were born in Australia or, as in my case, the United Kingdom, often face questions like, "Where are you from?" The answer is regularly met with some disbelief. To be subject to the continual presumption that skin colour other than 'white' is country-specific and self-evidently non-Australian or European is humiliating, no matter how subtle or unintended it may be.

Changing how people act in terms of race and colour means changing their attitudes towards difference. And learning about the context in which racial words originated and why they are hurtful is crucial to achieving this.

Why the history of words matters

Education is an important strategy in the campaign against racist behaviour and language. Intercultural understanding is part of the Australian Curriculum⁴ and mandated as one of its "general capabilities", which must be taught throughout all learning areas where appropriate. Indeed, the current Australian Curriculum review recommends a reinforcement of this intercultural understanding. The draft changes offer greater emphasis on First Nations perspectives of Australian history and more specific acknowledgement of Australia's multicultural society⁵.

But it is not enough to just passively incorporate such education. Changing children's attitudes towards racial difference and, in particular, the idea (or irrelevance) of skin colour, can be best done if they learn through feeling a sense of the negativity that people of different races, cultural backgrounds and skin colours inevitably experience

simply because of how they look. This kind of education is known as "pedagogies of discomfort". It involves teachers deliberately placing students in learning situations where they feel uneasy and have to think through matters that may not have occurred to them previously. In this way, students can critically engage with difficult topics that are often unacknowledged or silenced in the classroom.

The use of challenging scenarios in education is not new. One example that was utilised in the 1970s was the blue-eyed/brown-eyed experiment. In this scenario, students are told brown-eyed people are superior to blue-eyed people. The blue-eyed children, for a time, experience exclusion. The roles are then switched so both groups can understand how the "minority" groups feel and how quickly prejudice can form. ⁷

More widely, current Holocaust education⁸ is based on presenting today's younger generations with the reality of the Holocaust⁸ in images, language and human actions, no matter how graphic¹⁰. Similarly, understanding the history of words like "nigger"¹¹ is important to empathise with the way their use can have a major impact on people of colour. Children need to learn that the word, which was used by slave owners in the USA, was derived from the African region of Niger¹², from where many Africans were transported to the United States and elsewhere as slaves. Rather than calling African people by their names, slave owners used a corruption of their place of origin in order to dehumanise them. The word "nigger" is a derogatory term; in effect, it is historically interchangeable with "slave". Its use by African-American rappers is a deliberate attempt to reclaim its ownership in order to negate the implications of its racist past.

The dilemma for teachers

The difficulty for teachers is that many find it difficult and troubling to use words like "nigger", "Abo", "negro" and "coon" in teaching about racism, even in the context of teaching students why they are offensive. Some teachers find it equally difficult¹³ to deal with words that might be less confrontational, but equally demeaning, such as "ape". Research shows teachers of literature find discussing books with themes of racial or colour prejudice particularly awkward, even when such themes are central to the meaning of the book or film.

Australian research ¹⁴ also indicates teachers are likely to only respond to student questions to such sensitive topics, rather than raising the issues themselves. This is partly because of the perceived difficulties about using troubling language. In my experiences with student teachers, I have noticed that many are reluctant to even have a discussion about how to employ examples of racist language in teaching

about cultural understanding. Unfortunately, if teachers don't accept the challenge of proactively educating children about racist language, young people may not understand its hurtful impact. And they may take this ignorance through into adulthood.

Teaching sensitively

Learning about confronting topics such as racism is best approached in a controlled environment where the teacher is able to manage and control each stage of the teaching and learning process. There are three main considerations to bear in mind:

1. Planning and Timing

The learning experience should be planned for a time in the school year when the teacher and students have built up a relationship of mutual trust. A debriefing discussion is essential and is the most important part of the learning; it must never be rushed.

Teaching about sensitive language is nuanced. It is more appropriate for the upper levels of primary school or in secondary school. The teacher knows their students and should be able to judge how these themes should be taught. This includes knowing if there are students in the class who may have been personally affected by the use of racist language or confronting educational scenarios.

2. Collegial discussions are necessary

Teachers should discuss their plans with the appropriate school leadership so their learning intentions can be supported publicly, if necessary. If possible, teachers should also have prior confidential discussions with students who might have been affected by racism and their parents. They can inform them about the nature of the forthcoming lessons and come to an agreement with them as to their participation.

3. Teachers need personal and professional expertise

Research suggests teachers who have learned from personal and professional experiences involving "cultural displacement" are more likely to have developed the kind of expertise required to manage "pedagogies of discomfort" in cultural education. The specific inclusion of cultural pedagogies of discomfort in teacher education units can significantly help prepare teachers to engage proactively with racist behaviours and attitudes as part of their professional work.

Teaching kids about racism is rarely comfortable, but neither is being exposed to racial abuse. Children need to face discomfort and learn through that experience if they are to truly empathise with how it feels. ¹⁶

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ADHD affects girls too, and it can present differently to the way it does in boys. Here's what to look out for

Rachael Murrihy

Two female Australian comedians recently revealed they've been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD).

In an interview before her shows at the Melbourne International Comedy Festival, Fiona O'Loughlin alluded to lifelong challenges including disorganisation and inability to sustain attention.

O'Loughlin, 57, described her diagnosis as a "seismic shift" in her life, and said medication has helped her immensely. But her struggle with focus will be a story familiar to many girls with ADHD.

And in an article published on May 3 of this year, Em Rusciano also revealed she's been diagnosed with ADHD. For Rusciano, too, treatment has been transformative. The 42-year-old wrote on Facebook:

I don't feel the world coming at me at 100 all the time anymore. The constant sensory overload has stopped. I don't feel overwhelmed by life quite as much.

While some of us might perceive ADHD as a condition that affects males (particularly boys), it affects girls and women too. And it's important to understand that the way it presents in girls can be quite different to the way it manifests itself in boys.

What is ADHD?

Best understood as a persistent, and sometimes lifelong, neurodevelopmental disorder, ADHD includes problems with sustaining attention, resisting distraction, and moderating activity levels to suit the environment (for example, sitting in a classroom; Barkley, 2018).

Young people with ADHD vary considerably in their behaviours (Rohde et al., 2019). A child might exhibit symptoms of hyperactivity-impulsivity (for example, fidgeting and squirming, or frequently leaving their seat in class), or inattention (careless mistakes, trouble focusing in class, difficulty keeping their belongings in order), or more commonly, both. Hyperfocus (an intense fixation on one activity) can also be a symptom.

Of course, these behaviours are common in childhood to varying degrees. Diagnosis is based on whether symptoms are excessive for the child's age, developmental level, and cultural background (parents across different cultures may differ in whether they see a child's behaviour as hyperactive or normal: Bathiche, 2007).

A diagnosis is only made if there's clear evidence that the symptoms impair functioning across several life domains such as at school, at home and with friends (APA, 2013).

Does ADHD look different in girls?

Researchers have only recently started to unravel the expression of ADHD in girls.

The way ADHD presents in girls and boys is in many ways similar, but there are a few noteworthy differences (Owens et al., 2015). Most importantly, while symptoms of hyperactivity-impulsivity are present across genders (with some studies showing more hyperactivity in boys), symptoms of inattention, which can be easier to overlook, are seen more frequently in girls (Quinn et al., 2013).

Further, the onset of ADHD symptoms can differ across gender. Symptoms of hyperactivity tend to present early in school life. Inattentiveness, by contrast, has a slightly later onset. So girls with ADHD can often go undetected until academic and organisational demands increase in late primary and high school (Nussbaum, 2011).

Girls with ADHD are also at higher risk of developing depression and anxiety than boys (Ruddidge, 2015). If depression and anxiety occur at the same time as ADHD, it can be more difficult to diagnose ADHD (Quinn et al., 2015).

A range of possible mechanisms have been implicated in the difference in ADHD expression between genders, from hormonal changes, to cognitive differences, to social factors (Nussbaum, 2011). But we need more research to truly understand the reasons behind the disparity.

Boys versus girls

ADHD is the most common psychological disorder among Australian youth. The second Australian Child and Adolescent Survey of Mental Health and Wellbeing, published in 2015, reported 7.4 per cent of 4-17-year-olds had ADHD over the previous 12 months (Lawrence et al., 2015).

Interestingly, more than twice as many boys have ADHD than girls. The disparity in prevalence may be a result of ADHD being historically viewed as a male disorder (Owens et al., 2015).

This gender difference in prevalence has prompted controversy about diagnostic criteria and brought the female expression of ADHD into sharper focus.

There's some suggestion the current diagnostic framework, developed on male-dominated samples, is inadequate for girls and sees more boys than girls get a diagnosis. Some researchers have suggested symptom thresholds for diagnosis in girls should be modified (Lahey et al., 1994).

Are there female expressions of hyperactivity-impulsivity (for example, internal feelings of restlessness) that could be added to the diagnostic criteria? Should there be gender-specific cut-offs for current criteria (for example, a lower threshold for hyperactivity for girls; Nussbaum, 2011)?

Until further research is conducted, the jury is out on any changes to the current system (Arnold, 1996).

Importantly, many parents and teachers have long-held stereotypes of an ADHD child as a disruptive and hyperactive boy with difficulties staying still and keeping on-task (Quinn et al., 2004). This perceptual bias influences who they recognise as potentially having ADHD and refer to treatment (Mowlem et al., 2019).

Research shows even when students display equivalent levels of impairment, teachers still refer more boys than girls for ADHD treatment (Sciutto et al., 2004).

Some signs of ADHD in girls

Does the child do the following *more than other children of her age?*

- · make careless mistakes
- · daydream or appear spaced out

- · fail to pay close attention to details
- have difficulty remaining focused in class, reading, homework, conversations
- · doesn't seem to listen (appears distracted)
- have difficulty organising tasks and materials
- is reluctant to engage in tasks that require mental effort (schoolwork, homework)
- often loses everyday things
- · is forgetful in daily activities.

Keep an eye out for an increase in symptoms in late primary or early high school, as workload increases.

A good rule of thumb for when it's time to seek help is when a child is starting to fail, fall behind or perform significantly below their ability either in schoolwork, friendships or family relationships.

There's no cure for ADHD, but treatment aims to manage symptoms. Across genders, the first line of treatment for children is stimulant medication (such as Ritalin, Adderall or Concerta) and behaviour management (parent training and classroom management; Evans et al., 2013). As more research on female ADHD emerges, we can consider treatment modifications specific to gender.

For many girls, ADHD is a serious and debilitating illness. Ensuring girls are identified early and accurately and that they receive evidence-based treatment is crucial.

Refernces

For reference links in this article go to https://www.aeuvic.asn.au/professional-voice-1417

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Neil Selwyn on technology: issues, dilemmas and futures

Interview by John Graham

JG Artificial intelligence (AI) is already in schools in various forms. The prediction by many commentators is that its role will substantially increase in the foreseeable future. What's your view about this and if it happens how do you think it will affect the work of teachers?

NS The steady creep of AI into classrooms is definitely something that everyone in education needs to be paying close attention to. I don't think that teachers need to worry about being *completely* replaced by AI – in reality these are technologies that are narrowly focused on very specific administrative and pedagogical tasks. But we should be concerned with how these technologies are beginning to sideline the teacher – particularly in terms of reducing teacher autonomy and professional expertise.

My main interest is in the AI technologies now being run in classrooms to make decisions. We've got automated grading software that can instantly provide marks for hundreds of written assignments. We've got personalised learning systems that recommend what learning content a student should next tackle. We've got chatbots that decide what advice a student needs ... we've even got 'live' in-class software that decides whether or not students are making appropriate use of their laptops. In theory all this software is meant to assist teachers make better decisions ... but it is a brave teacher that goes against this very expensive 'advice' too regularly. The danger is that these automated decisions begin to get taken at face-value by management and that teachers are steadily taken 'out of the loop'.

Teachers need to know how AI software is making the decisions in their classrooms that it does – i.e. there needs to be some level of algorithmic transparency and explainability. Teachers need to know who is accountable for the decisions that the software is making. Most importantly, teachers need to feel empowered to *completely* ignore the software and go with their own professional opinions. There is a fine line between being supported by a computer and being directed by a computer. I would argue that when a teacher is simply following 'what the computer says' then they are not *really* teaching.

JG Teachers and students had to operate in a remote technology-based mode of schooling for a large part of 2020 and revert back to it in 2021 for specific COVID outbreaks. What are your observations about the relationship between that experience and the nature and future of online learning?

NS I'm sure that AEU members all had very different experiences of lockdown teaching – especially the challenge of having to deal with the very different 'homeschool' contexts that each of their students was having to work in. In that respect, one of the key things that we quickly learnt about remote teaching was that one-size-doesnot-fit-all ... things needed to be kept loose and flexible, students needed to be offered as many different ways of working as possible, to have offline options, for tasks to be asynchronous, and for teachers to be free to improvise and *not* burn out by having to do everything in the same way as in the face-to-face classroom.

It is important to look back on these experiences as 'emergency remote schooling' — these bouts of lockdown schooling are not really comparable to the online learning that some IT firms are trying to spruik as a post-pandemic 'new normal'. I do expect pandemic remote learning to accelerate the post-pandemic take-up of online learning in universities and TAFE ... but I'm less convinced that face-to-face schools will be changing much in the foreseeable future. Most parents and students suddenly became a lot more appreciative of the work that schools and teachers actually do. I don't think people are in a hurry to give that away.

That said, I hope that we can develop robust and reliable systems for emergency remote schooling in the future. This is not going to be the last time that schools need to go online for crisis reasons. COVID isn't finished yet, there might well be future pandemics, and there will *definitely* be future bushfires, flooding and many other emergency reasons that force schools to suddenly go remote for a while. So I'd hope that school leaders and the Department are already looking back on the past 18 months and developing robust plans, systems and support to make sure that there are no surprises next time a school has to go remote. Online emergency remote teaching is simply something that all schools, teachers, students and parents add to their skillsset. We'll all be doing this again in the future, so we might as well get prepared for the next time.

JG One of the big issues about technology use which came into sharp focus with compulsory mass remote learning was the digital divide between students, families, teachers and schools. What's your understanding of the extent and impact of the existing digital divide and how the present situation can be ameliorated?

NS The COVID remote schooling really hammered home the message that digital divides and inequalities inherent in going online are serious issues. We are not living a digital age where everyone has multiple devices, fast broadband, and all young people are tech-savvy digital natives. This was a real wake-up call to schools and policymakers that we need to take the issue of digital disadvantage seriously.

Sadly, the people and places that suffered most from the switch to online schooling were all-too-predictable. It was also sadly predictable who was going to end up doing OK. Independent schools, and schools in well-resourced middle-class communities were able to cope much better that less advantaged schools. Teachers living in shared accommodation or with additional caring responsibilities really suffered. We saw a boom in middle-class families rushing out to buy extra devices, desks and learning resources, hire private tutors and generally make sure that *their* children remained engaged and learning. In contrast, we had other families with three children sharing one smartphone, or falling off the radar altogether. All told, remote schooling saw those who were already vulnerable and disadvantaged become more disadvantaged.

I hope that the planning for future bouts of remote schooling that I mentioned in my previous answer takes this all into account. We need to be giving free or heavily-subsidised tech to families that cannot afford decent devices and high bandwidth. Teachers' home tech needs to be subsidised and better supported. Online schooling needs to be designed to fit the low-bandwidth, small-screen realities of less-advantaged students' home technology. Offline paper-based resources and other low-tech approaches can be used. All told, much of the hype around ed-tech 'solutions' over the past few years was found to be remarkably lacking during remote schooling. Tech did not save us all! If nothing else, I hope that everyone in education is now much more sceptical and willing to push-back against future promises and hype around ed-tech. When it comes to learning online from home, what works for some certainly doesn't work for all.

JG I know you are interested in the different forms of 'teacher' that are emerging through the use of digital technologies (para-professionals, shadow teachers and teaching work being outsourced to others). Can you describe these developments and their implications for teachers and schools?

NS This is something that came to light during the COVID lockdowns, where we saw all sorts of people (not only parents and carers) stepping into the role of working as substitute classroom teachers. Some middle-class parents who had their own 'WFH' commitments were quick to hire online virtual tutors who could sit-in via Zoom

and oversee their children's remote schooling, and perhaps also provide additional 'after school' tuition. A few affluent parents even went as far as hiring live-in 'private educators' to oversee their children's home-schooling, while others clubbed together to fund small 'learning pods' with one tutor stewarding a small group of students. At the same time, millions of students were also being 'taught' online by the likes of Joe Wickes and other celebrity YouTubers, as well as watching the video output of regular teachers from around the world whose online tutorials somehow went viral.

Now families have had a taste of these extra-curricular services, I'm interested in what might continue to be popular, and what this means for what we perceive as a professional 'teacher'. We are certainly seeing a boom in private online tutoring services — with Aussie companies such as 'Cluey Learning' competing alongside giant East Asian providers which boast hundreds of millions of users. In the US, we are seeing the likes of Prenda pushing the idea of in-home 'micro schools' where non-qualified 'learning guides' can set up school in their homes and guide small groups of students for 20 hours a week.

From a free-market perspective, all these new resources and services could be welcomed as 'disrupting' the monopoly of mass schooling ... but there are a number of reasons for concern. Firstly, paying for the privilege of educational assistance raises obvious equity issues. For example, middle class parents splitting off into small learning pods might well result in racially and socially segregated cliques.

Secondly, the rise of tutoring services leaves regular school teachers facing the challenge of teaching content that some of their classes might have already learnt before in a variety of different ways and with varying degrees of accuracy. Regular classroom teachers might now have to develop skills of 're-teaching' and 'de-teaching' content – working as best they can with the diversity of (mis)understandings that already exist in their class.

Finally, as with many other types of 'gig worker', these alternate online tutors, coaches, mentors and guides all suffer from lack of job protection, labour rights, and all the other disadvantages of being in 'precarious' labour. Teaching children shouldn't be a low-paid 'side-hustle'. This is a growing group of educational workers that need support from teaching unions, teacher educators and other aspects of the traditional educational establishment.

JG One of the things that is not front and centre for most technology users as they switch on their devices every day is the environmental and ethical impacts of digital technology consumption. Recently I read about the huge environmental cost of expanding AI into most areas of human work and leisure. Our lives now centre around digital technology consumption, so can you describe and explain what the environmental and ethical impacts are of this and what can be done to address them?

NS This really is the elephant in the room when it comes to thinking about how digital technology might be impacting on education over the next 30 to 40 years. At the moment we are all stuck in a mindset of 'abundant' tech use —we upload everything to the cloud, presume one-to-one device access in the classroom, we want to live-stream videos, replace our phones and laptops every few years, take-up offers for 'unlimited data', and generally assume that our tech use is 'always-on'.

But there are clear signs that this way of using tech simply isn't sustainable for a bunch of interlinked reasons. Our digital devices are built on the extraction of non-renewable minerals and rare metals that are fast running-out. Manufacturing this hardware involves massive energy expenditure, as do the data storage centres required to support software and online services. Emerging innovations such as training Al models and trading in crypto-currency incur huge carbon footprints ... even running a couple of Google searches consumes the equivalent energy of boiling a kettle. The disposal of e-waste is another major environmental burden. At some point this century we will reach the point when all of this grinds to a halt.

On top of all of this, this cycle of extraction, manufacturing and disposal is reliant on exploited labour in some of the world's poorest countries. If you don't want to be swayed by the unfolding environmental disaster, then it is also worth reflecting on how all this tech is an unmitigated ethical disaster.

So, I'm beginning to come to the conclusion that ed-tech cannot carry on as it is. We need to start to rethink how we might make use of technology in future decades in radically different ways. This doesn't mean getting rid of digital technology altogether. And neither is this a problem that is unique to education. But schools and colleges are obvious places to start leading the way to kickstart a change in how our society looks at its tech use. This is certainly part of the climate emergency that teachers, students and schools can make a direct impact on.

Unfortunately, there are no easy solutions! This isn't a problem that can be solved, but it is a predicament that we need to work out ways of being able to live with. We all need to think about how to make best use of our digital technologies as if they are a finite, limited resource – what I've been calling 'Ed-Tech Within Limits'.

Some obvious initial steps might include teachers and students working to locally implement ideas of right to repair, with schools looking to reuse and repair existing tech where-ever possible, procuring ethically produced 'modular' devices, and getting 'e-waste' activism going in their schools.

The longer-term challenge is the huge culture change that is required in education. We need to develop a different set of values about tech use in schools – ideas of using less tech, in slower, more thoughtful and frugal ways. This might involve developing a culture of staying offline as much as possible, using the minimal bandwidth and memory as possible, having communally-owned and shared devices, looking for lowenergy or no-tech alternatives.

This raises some tricky questions. For example, if tech use has to be rationed then which educational tech uses (and users) are genuinely essential and should be prioritised? What are we doing with tech that genuinely 'adds value' and allows teachers and students to do things that are not possible any other way? Do we prioritise tech use for certain subjects, or certain students? Do we prioritize digital education for the emergency remote education of populations displaced by climate migration?

Not allowing ourselves to continue to be dependent on digital technology already makes good sense – we are already living in times of increased power blackouts, data failures, and global shortages of microchips. This might seem like an uncomfortable way of thinking about schools and tech, but these are going to be unavoidable issues in a couple of decades' time ... so it is makes good sense to start rethinking how to change our unhealthy relationship with tech well in advance. From now on, our conversations around ed-tech need to about eco-justice just as much as efficiency and effectiveness.

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Assessment, technology and the impact of social concerns

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