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THE improvement factor

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Every report on school education in Australia now begins with a category of woes. The education system as a whole is in the doldrums, the reports say, because of the performance of the country's students in selected national and international standardised tests. The performance is described as being in decline or at best flat-lining and there are several PISA and/or NAPLAN graphs to prove it. As a consequence, the many reports and reviews all have their own best practice improvement strategies, ranging from a package of more testing, 'back to basics' and 'better' teachers, to research-based interventions and a needs-based funding system. The key performance indicator in each case is Australia climbing back up the testing league tables.

The most recent, and most prestigious, document which uses this format is the Gonski report into achieving excellence in Australian schools (*Through Growth to Achievement*). After running through the bad news from the testing results, the report sets out in dire terms the need for root-and-branch improvement in school learning. "The extent of the decline is widespread and equivalent to a generation of Australian school children falling short of their full learning potential." Its improvement recipe however, is generally more thoughtful and more complex than most of the predecessor documents. It eschews the majority of clichés and ideological props which substitute for education policies in the Turnbull Government and, the best test of all, its improvement strategies received some severe panning by the noisy warriors of the education right – "all that is wrong with the system" (Kevin Donnelly) and "it privileges psycho-babble over science" (Jennifer Buckingham).

The Gonski report contends that the present curriculum structures with their orientation to age and year level standards and the pervasive influence of standardised testing have a negative impact on student achievement. They leave some students behind and fail to

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extend others. It also finds that reporting against year level achievement standards "hides both progress and attainment for some students and does not amount to a diagnostic assessment of real learning needs". It wants the curriculum, and the way it is taught and assessed, to be restructured around levels of student progress.

The report's approach to assessment has become central to the debate and discussion about its recommendations. The review found that "tailored teaching based on ongoing formative assessment and feedback is the key to enabling students to progress to higher levels of achievement". To support teachers in this process the report recommends that an online formative assessment tool based on the curriculum learning progressions should be developed. The tool would help to identify the stage of learning a student has reached and provide advice about various interventions the teacher could choose to use to enable further progress. The report contrasts the benefits of the new formative assessment approach with the limitations of NAPLAN which it argues is about point-in-time achievement rather than growth, presents results to students long after they have any value as a learning tool, is only administered at Years 3, 5, 7 and 9 and has little positive impact at the classroom level.

These recommendations represent the major 'improvement factor' in the Gonski report. But they are hardly new. Most of them, in some form, have been longstanding issues in staff discussion and practice in public schools and have been high on the priority list of the AEU and influential education academics like John Hattie. The novelty of the recommendations is that they have been proposed by the flagship review of a conservative federal government which has a record of valuing ideology above evidence. Where the report falls short is in the collective unwillingness of the reviewers to take on the enabling resource issues. The Turnbull Government's funding plan short-changes public schools, and in this way places a significant barrier between the report's ideas and their implementation in resource-poor schools. More broadly, the report's recommendations are in their pre-detailed form, and past experience has shown how easily the improvement factor can be squeezed out of ideas once politicians and bureaucrats tie them into coal-face accountability requirements.

The general theme of this edition of *Professional Voice* is learning improvement and the contest of ideas around how to achieve this. Mary Jean Gallagher, who was Assistant Deputy Minister and Chief Student Achievement Officer of the Ontario Ministry of Education for seven years up until 2015, writes about her role as a 'critical friend' to the Victorian Department of Education. She recounts how Ontario was in the flat-lining doldrums in the 1990s with the public losing confidence in its public schools. Ontario introduced a ten year strategy to "raise the bar and narrow the gaps" in literacy and numeracy in primary schools and to improve the graduation rate in secondary schools.

> *Our curriculum expectations in these areas included higher order thinking, critical thinking and problem solving, and it was understood that having students succeed in these critical areas would result in improved learning and thinking in many other dimensions.*

The success of the strategy raised the state to the top of the Canadian performance tables in a country whose education system (according to OECD assessments) is regarded as one of the world's best in terms of both achievement and equity. Gallagher is optimistic about the efficacy of Victoria's Education State initiatives which follow the Ontario model of seeing improvement as a necessary mindset for all teachers and schools rather than just for the strugglers.

Carol Dweck, the developer of the growth mindset/fixed mindset concept describing the underlying beliefs students have about learning and intelligence, is the subject of the *Professional Voice* interview in this edition. Students in a fixed mindset view their intellectual abilities as fixed traits that simply cannot be changed, while students in more of a growth mindset see their intellectual abilities as competencies that can be developed – for example, through hard work, good strategies, and mentoring and support from others. Dweck states that everyone has a mixture of fixed and growth mindsets and students can change from a growth mindset to a fixed one in certain confronting situations. So "the task becomes not just 'having' a growth mindset, but learning how to stay in it (or find your way back to it) after such an experience". The role of the teacher is to embody a growth mindset in classroom practices and not see it "as a property of a child or something children should simply adopt regardless of what their environment conveys".

An important role of academics with expertise in a particular area of knowledge is not only to identify improvement strategies that research has shown will work but also to detect those which evidence indicates should not be implemented. Jessica Mantei and Lisa Kervin explain why the Turnbull Government's proposed standardised phonics assessment (the phonics screener) for Year one students should not be introduced. There is no evidence that the new test will improve student literacy skills and they express concern that it may derail the good practice which is already occurring in classrooms around the country. "Standardised tests such as the proposed phonics screener sit outside what we know to be good pedagogical practice, consume valuable teaching time and generate anxiety." The authors describe their study of effective professional practice of teachers in teaching letter-sound relationships and why government policy should respect that practice and recognise the research evidence, knowledge and experience which it is based on.

For Denis Fitzgerald the improvement factor needed in Australian education is to recognise that the current fixation with standardised testing and its associated data is acting as a drag on the quality of teaching and learning in schools. He cites evidence from Australia and abroad about the way in which the testing obsession has had a negative effect in particular on low SES school communities. The notion that improvement will emerge from a pared-down "basic skills" curriculum accompanied by "number harvesting, spreadsheets, datawalls and scattergrams" has no basis in fact. In contrast to this, Fitzgerald outlines the central features of an assessment system that has the capacity to improve achievement. It should create positive incentives for teachers to teach well and for students to study well and "it should fade into the background and be unnoticeable and unremarkable".

In the 1960s Marshall McLuhan developed the idea of the medium is the message, meaning that the form of a medium needs to be understood as it embeds itself in any content it conveys. In many ways this is the essence of *Screen Schooled*, a new book by two US high school teachers, Joe Clement and Matt Miles, reviewed in this edition of *Professional Voice* by Mark Scillio. *Screen Schooled* questions the supposed 'neutrality' of smart phones/iPads/laptops/consoles and details the negative impacts of their 'overuse' on young people. These include a decline in the ability to think critically and problem-solve, shallower and more disconnected knowledge ("Google thinking"), poorer social interaction with peers through the norms of social media and a range of mental health consequences. Instead of the "digital superkids" portrayed in the media, they see students in their classrooms who are addicted to being on screen for most of the day, finding it virtually impossible to put their phones down.

A major pedagogical challenge for teachers is how to deliver engaging learning activities within a classroom environment which facilitates those activities. This dilemma is often acute for new graduates who have to temper their enthusiasm and many fresh ideas with the nature of effective student behaviour management in the particular school context they find themselves. Katrina Barker's article is designed to throw a research light on the many issues of debate in this area and offer practical advice about why some approaches work better than others. She describes the general trend as a movement from "reactive" measures relying on punishment and coercion to more proactive and positively oriented approaches. "The goal is to change behaviour, not temporarily suppress it, and to do this we need to use positive strategies to discipline."

John McCollow's article moves the improvement factor from the classroom to the organisations which exist to protect and advance the collective interests of teachers and other education workers – education unions. He sets out the very challenging situation confronting these unions around the world.

> *In the Twenty-First Century education workers face reduced public spending, job insecurity, work intensification, privatisation, marketisation, high-stakes testing, and curriculum standardisation. At the same time, attacks on unions' capacity to organise, social and demographic changes within the profession and broader social, economic and technological changes pose new challenges for them.*

Coming to terms with this state of affairs means education unions asking themselves some hard questions about their goals, strategies and modes of operation. McCollow refers to the work of Bascia and Stevenson as a way forward. They set out seven key strategies for unions to consider. For example, they note that the sharp end of the attack on teachers is increasingly focused on professional issues so that unions must speak to their members "as the educators they are". They need to establish themselves and their activities as an important feature of their members' professional identities so that "engagement with the union is considered indispensable in order for any teacher to be the teacher they want to be".

Improving learning in the Education State

Mary Jean Gallagher

I have had the great privilege of visiting a number of schools across Victoria as I work with the Victorian Department of Education and Training as a critical friend to the system in its implementation of the Education State reforms. I have been in this role for a few visits over the past year and a half, meeting with departmental leaders and the teams responsible for the programs and support processes, visiting schools and regional staff and speaking at a number of conferences and learning days. And I am so impressed with what I see here, everywhere I go I meet dedicated educators and public servants who want Victoria's students to be the best they can be.

Education systems world-wide however, face a common problem – we need to prepare our students for success in a world that is changing incredibly quickly, but school systems are often slow and difficult to change. In fact, very few education reforms around the world actually result in the changes they aspire to produce. Teachers try to improve their classroom practice, principals lead their schools in efforts to improve, and districts and governments set goals and produce supports, but identifiable improvements in student learning across whole systems are elusive. For this reason, departments of education world-wide look to learn from other jurisdictions which have been successful in improving student learning.

Ontario, Canada

I was Assistant Deputy Minister and Chief Student Achievement Officer of the Ontario Ministry of Education for seven years up until 2015 and believe Ontario provides a good case study for Victoria. Ontario and Victoria have so much in common: Australia and Canada have similar cultures, we are members of the Commonwealth and share some of our history and values.

Dr Mary Jean Gallagher is the former Assistant Deputy Minister and Chief Student Achievement Officer of the Ontario Ministry of Education. During her tenure, literacy and numeracy skills and graduation rates of Ontario elementary and secondary school students improved dramatically. She is internationally renowned and is currently in demand as an advisor, consultant and speaker. She is presently acting as a critical friend to the Victorian Department of Education and Training.

In Canada, each province is responsible for its own elementary and secondary school systems. Ontario is not geographically the biggest province, but it is the largest by population (40 per cent of Canada's population), and it is also the most diverse (up to 60 per cent of Canada's new immigrants come to Ontario each year and 27 per cent of our students start school speaking neither English nor French). Traditionally Ontario has enjoyed having one of Canada's strongest school systems. Like Victoria, we have well qualified and caring staff who work to do their best for our students.

In the nineties however, Ontario's schools were struggling. Government funding for education had decreased, early school leaving rates were rising and educators were increasingly frustrated, many retiring as soon as they could. Province-wide tests of the degree to which our grade 3 and 6 students had learned the skills required in our curriculum in reading, writing and maths were at best flat-lined, and these skills are the foundation of later success, in academics, in critical thinking and problem solving and in developing a sense of confidence. And our public were losing confidence in our schools.

In 2003 a new government was elected, with a new Premier who declared himself to be "the Education Premier". They invested in our school system and set goals for improvement. And they repeatedly said that they believed our teachers, principals and district leaders could and would improve student learning in measurable ways. They paid attention to international research and asked the Ministry and schools to work in partnership to learn how to better help our students to succeed. They established a division within the Ministry of Education called the Student Achievement Division (with a Literacy and Numeracy Secretariat responsible for improvement in grades Kindergarten to 6, and a Student Success unit responsible for grades 7 to 12) to lead the changes. And they were ready to support the school system with the processes and professional learning required to produce real improvement in teaching and learning.

The goals set for reform in the first ten years were to "raise the bar and narrow the gaps" in literacy and numeracy in elementary schools and to improve the graduation rate in secondary schools. Our curriculum expectations in these areas included higher order thinking, critical thinking and problem solving, and it was understood that having students succeed in these critical areas would result in improved learning and thinking in many other dimensions. The charts below show our results.

Mobilizing Data and Effective Practices

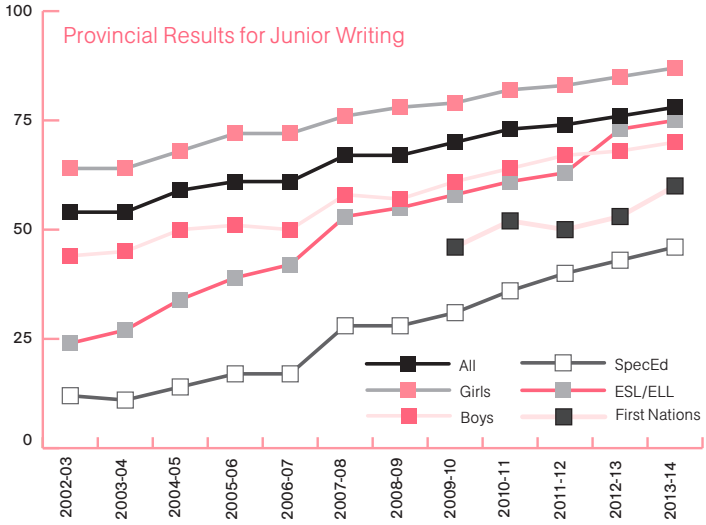

Chart A – improvement in results in grade 6 writing over the past several years

Provincial Graduation Rate

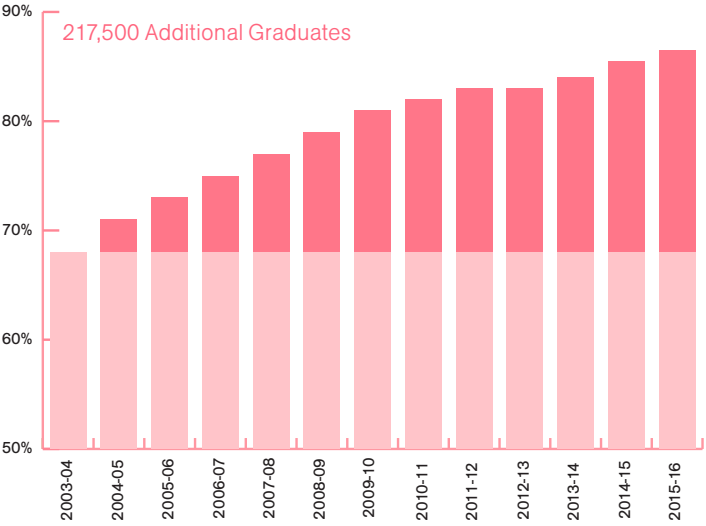

Chart B – improvement in % of students graduating from high school on time over past several years.

As our teachers and principals increased their efficacy, we became the leading jurisdiction in Canada in literacy, second to Quebec in mathematics and second to Alberta in science – good results considering that Canada is cited by the OECD as an education system that is both excellent and equitable (characterized by high achievement and reduced impact of poverty on student learning). More importantly however, we gave our students a better future. We now have over 217,500 young people with a high school graduation diploma who would not have graduated had our schools not learned how to be better, and the proportion of our students moving on to apprenticeships, college and university has increased as well. Ontario is still working to improve its schools, and the goals now include excellence, equity, well-being (for students and staff) and public confidence. Our definition of excellence includes the areas Michael Fullan refers to as Deep Learning: creativity, critical thinking, communication, character, citizenship and collaboration.

Achieving sustainable improvement in student learning

There are a number of lessons about long term sustainable improvement in a school system that emerge from Ontario's experience.

The first observation is that too often we underestimate the amount of new learning that is required at every level of the system. Departments of Education need to learn how to partner more effectively with schools, providing a careful balance of both pressure and support to mobilize the changes across hundreds of schools. Regional staff must learn to be more effective change leaders. Principals need to improve their ability to be instructional leaders, leading and co-learning with their teaching teams. And teachers need to hone their formative assessment skills, understanding of content and curriculum, and range of pedagogy in order to meet the needs of all of their students.

The entire system must place student learning and growth at the centre of their work. As the system improves, teachers increasingly observe the needs of individuals and small groupings of students. They monitor the impact of their teaching on individual students in addition to whole classes. Professional conversations occur around the specifics of how to implement additional high impact teaching strategies, how to narrow the gap for students in vulnerable circumstances and how to enhance learning for the students already achieving well.

Principals focus the work of the school on improving learning and in building the collaborative structures and culture to engage everyone in taking responsibility for improvement. Department staff, both at the regional and central office levels, define their roles in terms of providing support for positive change to occur in classrooms and in

reducing distractions from this core work. The system develops a deeper understanding of what works and what doesn't and there is increasing precision (but not prescription) in the goals and targets established and in the work groups do together. In fact, learning by adults and children, at every level, *is* the work of the system.

Good system reform is a careful combination of top down and bottom up change. Government has the right and responsibility to articulate the goals of learning (curriculum and standards of achievement), the goals for change across the system and the ways in which these changes can be monitored. Departments of Education translate this into processes which mobilize and support implementation, as well as gather data and evidence to inform the next steps. But ultimately, it is teachers who make the changes that matter in the work they and students do together.

System improvement is a continuous cycle of learning and improving together. The department needs to know and respond to the current outcomes and learning needs of every level of the system, and teachers and principals work together to not only learn new strategies for improving student success, but also to take action in classrooms to give effect to these strategies and to honestly assess what is needed to make improvement a reality. Student results and assessments provide the feedback needed for further cycles of improvement.

As this top down/bottom up change unfolds, perhaps the most important leadership role is what Fullan has identified as leadership from the middle – the regional leaders and principals who work with central office staff and teachers, and each other. This critical role is the glue that holds the change together. It takes system-wide initiatives and translates them into reality on the ground, choosing those programs that match the culture and needs of the school and then monitoring their implementation. The process involves a balance of pressure and support. This is needed in order to activate the sort of change which impacts student learning in observable and measurable ways.

As the system learns to improve, greater consistency in practice across classrooms and schools will emerge – consistency but not conformity, and definitely not a compliance mindset or a limit to professional creativity and innovation. Principals and teachers will be actively pursuing solutions and a sense of what works for their students, and when they find promising practices they are shared so that others can learn and adapt them to their classrooms. This is why collaboration and the use of professional learning communities are so necessary for success.

Professional learning community discussions are most effective when they are about strategies which have a direct causal relationship to improved learning for students and are characterized by an "open to learning" mindset, one in which all participants are curious together about what works for improvement and what does not. Discussions of this type work when people speak up about both good and bad approaches, insisting on evidence to support ideas and approaches.

Schools that are working successfully to improve learning develop a culture which "de-privatizes" teaching, classroom doors are open and staff move in and out of each other's classrooms, observing student work and acting as "critical friends" to each other. New teachers are mentored and supported, common problems of practice are explored and discussed and acted upon. And staff hold each other accountable for trying the new approaches they agreed to use, and for questioning together what works better.

In systems successfully improving student learning, there is a sense of urgency to implement new learning and to see improved outcomes in student learning. As a system, improved outcomes over hundreds of schools takes time, but in individual schools, as change takes root and teachers observe changes in student learning, there should be evidence that approaches are working. Do teacher assessments indicate that students have improved in the specific areas teachers were targeting with a new strategy? Are students better able to discuss what they are learning and why? Are teachers better able to describe what they are teaching and why they chose a particular teaching strategy? People are held accountable for improvement, not in a punitive way, but in a way that allows and expects regional staff to provide additional support to schools that are struggling to see results. Schools that are improving assist those which are not, and teachers who are seeing results will move to assist their colleagues who are struggling.

All of this speaks to the requirement that a department of education must provide the infrastructure and support which make change not only possible, but probable and eventually inevitable. Ultimately this is how the change becomes a system reform and our visions for our students and their brighter futures become reality. The culture and behaviours identified above do not instantly take place, they are built up over several years of improvement and several years of constantly improving professionalism at every level of the system. The outcome is a system that prepares all students to become more effective lifetime learners – giving them a path to excellence in both foundational areas and in higher levels of learning in their fields of interest and specialization.

Victoria's improvement journey

Victoria is moving well down this pathway of change. The Education State's four areas for improvement draw attention to and provide a focus on the ways in which schools can make a difference for their students. The Department has learned from global research and the work of a number of systems around the world and has developed a solid "change infrastructure". The components of change in Victoria represent some of the best documents and processes in the world: FISO, annual improvement planning, the High Impact Teaching Strategies, the Literacy Strategy, Leadership Guides and a number of other documents. They are integral parts of an overall plan for improvement. When this is implemented at the school level it becomes a way of improving teaching and learning through collaboration.

The leadership training provided by the Bastow Institute is an amazing resource for Victoria's schools, helping leaders and leadership teams step more effectively into instructional leadership. Specific projects like Professional Learning Community engagements and Communities of Practice are providing opportunities for collaborative learning within and across schools.

The additional investments in enhancing the capacity of regional offices to support instructional improvement both through programs and supports to principals and schools, and the growing efficacy of networks of principals and leadership teams, are important steps on the road to success. The system is gaining in its ability to support schools in a differentiated approach, delivering more help through executive principals and lead teachers to schools facing challenges to their progress and asking successful schools to partner with others to learn their way forward together.

The most recent budget announcements add the critical areas of enhanced early learning and strengthened career pathways to the system. One principal leader told me that the budget announcements brought all the pieces of improvement to the table and helped her see the whole picture.

There are risks and tensions within these changes. We need greater precision in our work, but not lock step prescription. We need to pay attention to assessments of student progress (including standards-based common assessments), to drive improvements forward, but this should be done without narrowing goals or pathways to excellence for students. We need to stay the course in accelerating learning for our most vulnerable students as there is evidence even in the first few years that the gap is narrowing for these young people. And we need to pay attention to stretching our students at the top to achieve more, to pursue personal excellence and explore where they could go and who they could become as a result.

I believe that Victoria is off to a strong start and the various pieces of the improvement puzzle are coming together. No matter how good a teacher or a school may be, improvement is both possible and necessary. For teachers, improvement best occurs through a learning and evaluation cycle – engaging in professional learning with colleagues, taking action in the classroom to implement the new learning and then evaluating its success by measuring results. Our students depend on us to be the best that we can be, so they can become the best that they can be.

Teaching phonics: good teacher practice v the phonics screener

Jessica Mantei and Lisa Kervin

Teaching relationships between sounds and the ways they are represented as letters and letter clusters – phonics – is foundational pedagogical work in the first years of school. It sits alongside teaching comprehension, phonemic and morphemic awareness, vocabulary development, fluency, and critical thinking to name a few. While there is agreement that the purpose of teaching reading and writing is to develop the ability to make meaning, it seems there is always debate about how this is achieved. A current focus is the so-called "phonics debate", a response to the Australian Governments proposed "phonics screener". This standardised assessment draws on the UK model where children are scored while reading "real" and "pseudo" words in a list. Children who fail are the target of an intervention using synthetic phonics, an approach that addresses letter sound relationships in isolation from the act of reading and writing continuous text.

This article shares accounts of explicit and systematic teaching of phonics in early years classrooms. It explores implications of these practices within current debates in an effort to reiterate the expertise of teachers and acknowledge their ability to identify and respond to their students' learning progress without taking on another standardised test.

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Introduction

Learning to read and write is critical to becoming literate. While the consensus in education is that the purpose of reading and writing is the making of meaning, there is no "recipe" for a best approach. In learning to read and write, a person develops skills and understandings about text. Some skills are fixed, that is, items to be learned are finite (Dougherty Stahl, 2011), they remain unchanged and can be applied consistently. Paris (2005) calls these *constrained* skills. They include name writing, alphabet knowledge, concepts about print and phonics. Unfixed or *unconstrained* skills (Paris, 2005) are developed over a lifetime of literacy activity. They include knowledge about language, vocabulary knowledge and comprehension. Unconstrained literacy skills allow us to read, understand and create increasingly sophisticated texts that are conceptually and structurally complex, and academically demanding. Educators must support students to master the relatively straightforward constrained skills while taking a continued focus on the sophisticated unconstrained skills that will support engagement with more complex texts.

A child's literacy experiences at home, in the community, in prior-to-school settings and early primary years underpin long term academic achievement. Through play and thoughtful interactions with others, children learn to collaborate, solve problems and build relationships, as they try on literate identities. Within the context of rich literacy experiences, they accumulate key concepts about texts, and the power of language to achieve their goals, as well as knowledge about letter sound relationships, oral language, vocabulary, fluency, and comprehension (Schleppegrell, 2008).

However, there is recent significant pressure on Australian educators to focus particularly on teaching the constrained skill of phonics. Phonics is the study of sounds and symbols that represent them. It is well noted that English offers particular challenges because of the limited number of symbols (26) required to represent its many sounds. As such, the symbols are used individually and in clusters to achieve different representations of sound, requiring from the reader a flexible processing system. For example, the limitations of teaching 'a' only in connection with ants and apples are clear when we consider the ways 'a' represents sound in the words: *at, ate, car, warm, about*. A further challenge comes when a single sound is represented in different ways. For example, 'er' (as in her) can be also represented as ir (as in fir), ur (as in fur), and or (as in word).

Certainly, developing knowledge about letter sound relationships is one component of literacy pedagogy. The US National Reading Panel (NRP) (2000) and the Australian Expert Advisory Panel for the National Year 1 Literacy and Numeracy Check (2017) agree that approaches that are explicit and systematic achieve greater learning gains than when there

is no teaching, or implicit teaching, or unsystematic teaching of phonics. Furthermore, in their extensive review of classroom practices, the NRP (2000) found teachers used a range of approaches to teaching phonics, including analogy phonics, analytic phonics, embedded and onset-rime phonics, synthetic phonics and phonics through spelling. It is important to note that the NRP (2000) found none of these approaches showed *statistical significance* in being better than any other. Indeed, it is the explicit and systematic nature of the teaching rather than any single approach that has been identified as important (Centre for Education Statistics and Evaluation, 2017; Expert Advisory Panel, 2017; NRP, 2000).

Despite demonstrated success using various approaches to phonics instruction, recent Ministerial advice (Buckingham, 2016; Expert Advisory Panel, 2017) advocates a single approach – synthetic phonics. This includes adopting the UK "phonics screener", a standardised test requiring children to read a list of real and pseudo words by blending together the sounds represented by the letters. Real word examples include: chum, feast, scribe, reptiles. Pseudo words include: ept, murbs, sploam, zued, braits. Responses are recorded as correct or incorrect, and teachers perform an 'evidence-based intervention' to address a failing 'student's area of weakness' (Expert Advisory Panel, 2017, p 66) and then the child is retested.

The recent debates about phonics instruction and the prospect of yet another standardised test for young children led us to ask:

> How are teachers responding to the political push for phonics instruction?
> What implications are there for the teaching of reading and writing?

This article shares data collected in a larger Australian longitudinal multiple-method study examining language and literacy experiences of 150-200 children across school settings. Participants were located in three clusters representing diverse social and cultural backgrounds of a region in New South Wales. Each cluster comprises a prior-to-school setting, a primary school and a high school. One cluster is located in a coastal township south of the city, one in the industry hub close to the port, and the third is in the central business district. Each educator and teacher identified moments of practice in their literacy teaching and invited the research team to conduct observations. Shared in this paper are data from prior-to-school and early primary school classrooms across all clusters.

In our data:

Teachers in this study were observed teaching letter sound relationships explicitly and systematically. Some lessons had high levels of teacher control, while others afforded

experimentation and practice. Some experiences focused on individual letters in isolation, while others worked at word or continuous text level. All teachers were observed making anecdotal assessment notes during and after the learning experiences. Following are examples taken during invited visits.

Letters as items:

All teachers were observed working on single letters and commonly associated sounds.

Figure 1 shows a collection of common items jumbled together. The children sort and match beginning sounds with the symbols that represent them.

Figure 1: Sorting and grouping by initial sound

As an oral task, the children must collaborate, solve problems and negotiate as they match individual sounds represented symbolically, and listen for the initial sound as they identify items for sorting. Known items provide clues to the focus letter, while items that do not match required differentiation.

> *The children make connections between sound, symbol and a concrete example. The teacher gathers evidence of the children's mastery of the alphabetic principle.*

The activity in Figure 2 required a more abstract understanding of letter sound relationships as the children worked with letters on paper tiles: a, c, g, m, o, p, s, t.

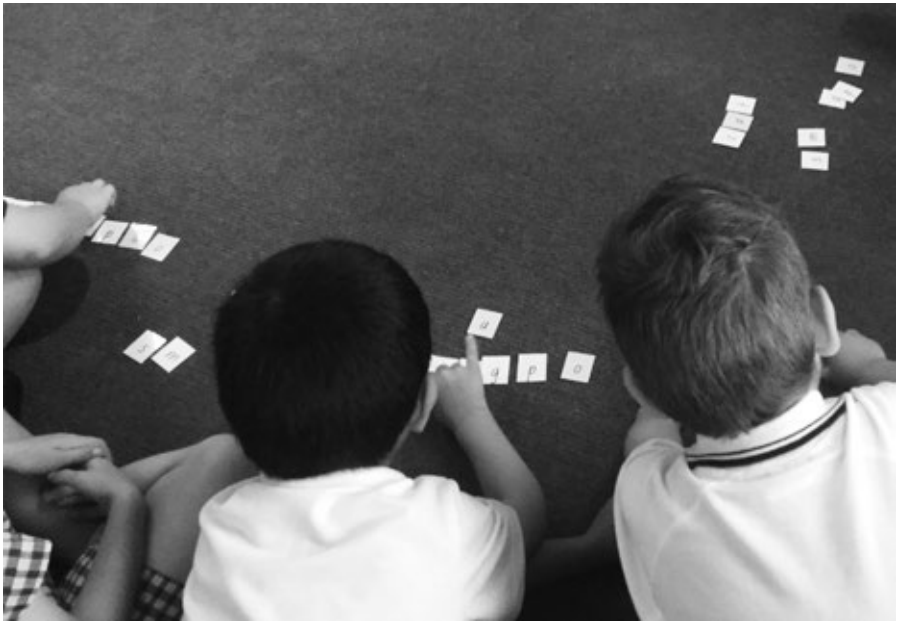

Figure 2: Responding to letter names with symbols and sounds

The teacher directed they "wake up" a certain letter, requiring them to isolate the paper tile and articulate a single sound. Accepted answers were: /a/ as in at, /c/ as in cat, /g/ as in go and so on.

A feature of this task was the expectation of rapid responses to the instructions.

> *The children match the teacher identified letter name with its symbol, and then generate a sound it represents. The teacher monitors students automatic recall matching letter name, symbol and the 'right' sound.*

Working with whole words

All teachers were observed working on letter sound relationships within whole words.

Figure 3 shows posters of word families generated by manipulating the onset of a word while keeping the rime consistent.

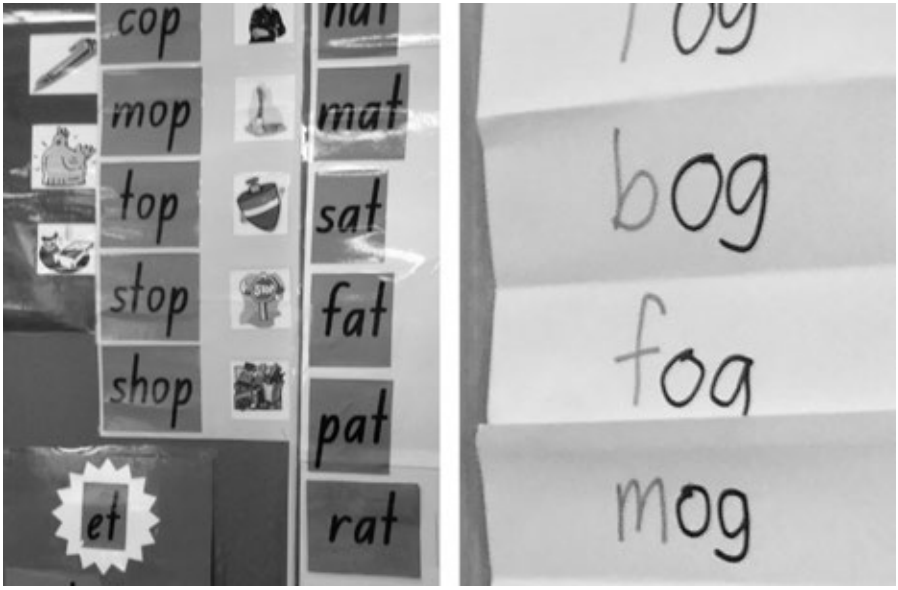

Figure 3: Onset rime lists

Interesting in these examples is the resources. The left reflects considerable teacher planning and time in its creation. Images and words are carefully cut out and laminated for longevity. The texts on the right were generated between teacher and children as they manipulated onsets to create new words while maintaining the rime. There is capacity for newly discovered words to be added to this second list if required.

> *The children have a repository of word lists that teach about the ways letters and sounds in words work. The teacher assesses their uptake of this knowledge in writing samples and reading assessment (running records).*

In Figure 4 a child has unpacked a pile of words, which he must reproduce, check it against the model, read and then erase it.

Figure 4: Writing words

The child is working to familiarise himself with the recording of alphabet symbols, and to practise mastery of the handwriting.

> *Children learn about forming letters to make common words, even if they are yet to read them. The teacher observes letter formation and fine motor control.*

Reading continuous text

All teachers were observed working on letter sound relationships within the context of reading whole texts.

Figure 5 captures a shared reading session. The teacher points to the print as the children

Figure 5: Shared reading

This story is familiar, offering opportunities to develop reading fluency and understandings about text. It also frees the children's attention so that new knowledge can be developed. For example, here, the teacher's lips are pursed to make the initial sound in the word *path*.

> *The children learn about letter sound relationships within the context of solving unknown words in a story. The teacher observes the children as they interact with the text and notes the development of their problem-solving skills.*

In Figure 6, the child reads a text assessed by her teacher as offering opportunities for personalised instruction.

Figure 6: Teacher led reading instruction

As a basal reader, this text is contrived to offer specific challenges the reader must solve to make meaning. These relate to understanding letter sound relationships, to syntactic structures at sentence and whole text levels, and the ability to draw on the story's topic.

> *Children take up opportunities to develop a reading process that orchestrates letter sound relationships with other contextual information. The teacher carefully plans the teaching focus and makes acute insights into the ways knowledge is being utilised for reading.*

Creating continuous text

All teachers were observed working on letter sound relationships within the context of writing whole texts.

Figure 7 shows a joint construction in response to a shared picture-book. The content is chosen carefully to support the teaching focus of hearing and recording sounds in words.

Figure 7: Explicit teaching of hearing and recording sounds in words

As a whole class activity, the teacher leads the children in creating a story. Together they monitor the composition of the plot and tackle the challenges of recording the symbols to represent the sounds in the words.

> *The children are engaged as authors: composing, recording, monitoring, and editing. The teacher differentiates the learning through questioning and invitations for different children to share understandings. Without deep knowledge about what her students know and what they are yet to learn, this level of individual differentiation is not possible.*

Figure 8 shows children writing with different levels of support, reflecting the teacher's knowledge of their skills and ability. In this example, they are writing the story *I am at school*.

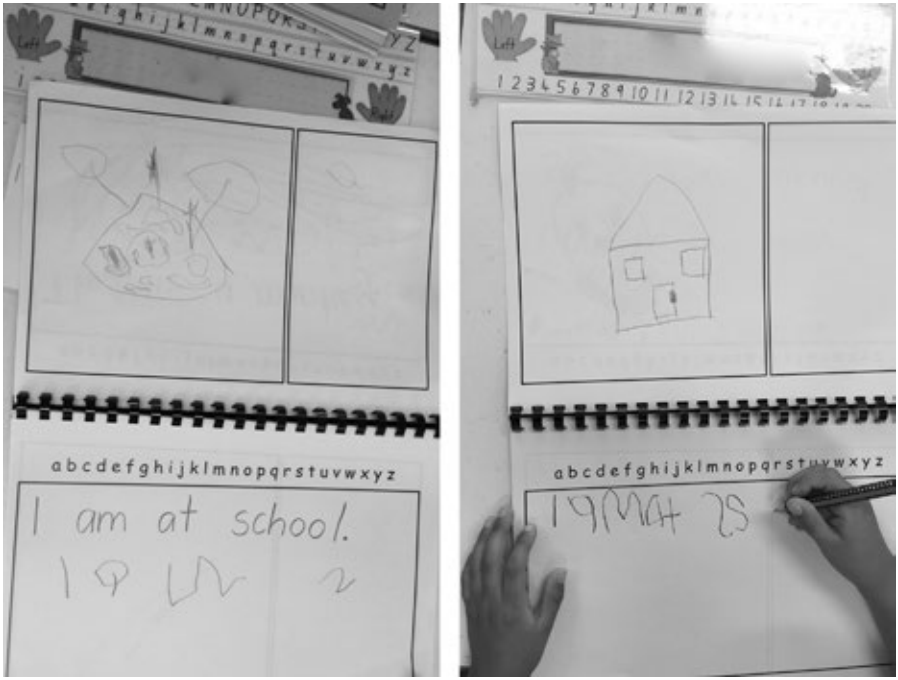

Figure 8: Writing with and without a model

The lower-case symbols of the English alphabet printed above the writing page support both children as they write. Extra support has been added in the photograph on the left where the teacher has written the story as a model for the child to replicate underneath. The children draw on the available resources to match the sounds they make as they articulate the story with symbols that might represent those sounds.

> *The children practise and demonstrate their knowledge about letter sound relationships in story writing. The teacher gathers evidence of the connections made and uses their approximations as next steps for learning.*

Discussion

It is clear, even from the small number of examples shared here, that these teachers indeed teach and assess letter sound relationships in explicit and systematic ways. They move from a focus on letter sounds as individual items to embedding them within continuous text. These

teachers have expert knowledge about reading and writing processes. They assess and know their students. They have deeply informed philosophies about how their students can best learn letter sound relationships. And it is this knowledge that underpins the planning and teaching of lessons that operate at the cutting edge of a child's learning. No published program has that knowledge. No program can respond to individual needs or adapt to new learning environments. That is the work of teachers.

So why are we being steered towards another standardised test and a publisher's program? It doesn't matter what it's called – a screener, a check or a light touch (Buckingham 2016). The reality is that it's another standardised test with all the expense in its purchase, production, and no doubt the professional learning required for an approach to teaching phonics that is proven as no better or worse than any other. Dougherty Stahl (2011) and Paris (2005) tell us that the constrained skills of phonics are relatively easy to assess, unlike the complex and changeable nature of unconstrained skills. Could it be that we are measuring what's easy to measure because we can't standardise assessments of unconstrained skills such as critical thinking or knowledge about language? Who benefits from this approach? Who doesn't? Standardised tests such as the proposed phonics screener sit outside what we know to be good pedagogical practice, consume valuable teaching time and generate anxiety.

Our research has shown the push down for reading and writing instruction is impacting children earlier and earlier. We have particularly observed the push down in the area of phonics instruction through the first year of formal school and into prior-to-school settings. There is undoubtedly increasing parental pressure on early childhood educators to teach constrained skills and code-based practices including phonics. This push, particularly in the prior-to-school context, stems from heightened media and political campaigns that create hysteria and discredit the important professional role teachers play.

We know from Dougherty Stahl's (2011) work that over-emphasis of highly constrained skills compromises the development of unconstrained skills. Demands from parents, politicians and the media threaten to overshadow the development of broader literacy repertoires so important for emergent readers and writers. There is a real need to help those who are not educators to understand how the specific skills of reading and writing are integrated into rich, engaging and meaningful literacy programs.

Pressuring teachers to adopt a solely interventionist approach to teaching letter sound relationships is not constructive. Teachers must be trusted with the responsibility for reflecting on and adjusting professional practice in the light of their knowledge of the children in connection with their own research evidence, knowledge and experience.

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Beyond NAPLAN and the datawall

Denis Fitzgerald

The good news is that Australia has an especially strong research base in outlining what does indeed lift student achievement in all school communities, especially those in greatest need. An exemplary case of this is the work of Professors Wayne Sawyer and Geoff Munns and their colleagues in The Fair Go Project that has closely analysed the teaching practice of highly successful schools in NSW. This project has identified the consistent themes and characteristics of successful teachers and teaching. It found that what truly works is a whole school approach that has a consistently high level of intellectual challenge and where actual teaching and learning are central to all classroom activities thereby forming the basis for academic success.

This is more elaborate than that simple exposition suggests however. The successful classrooms are those, as Geoff Munns describes them, where:

> *The schedule is demanding, with expectations that all learners will be involved with work that is cognitively challenging. The combinations of intellectual quality, active and authentic learning and consciously designed enjoyable experiences build engagement.*

Flowing from this, the classroom becomes a place of:

- higher order thinking, problem solving and analysis;
- research and experimentation where students are encouraged to question their conclusions;
- student-centred discussion;
- teacher modelling;
- the foregrounding of goals, concepts and criteria;
- linking existing student knowledge and new fields of enquiry;

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- the integrated use of resources, including ICT, with rich tasks to encounter;
- relentless questioning;
- the embrace of intellectual risk;
- valuing the process of learning as well as content knowledge;
- building understanding and answering problems;
- interpretation rather than reproduction of rote knowledge.

The Fair Go Project concentrated its work in low SES communities and was able to demonstrate the particular efficacy of these approaches in schools where teaching and learning occurs in a complex and often demanding environment. Encouragingly, schools that have followed these positive pathways of thought are demonstrating clear success. Woonona High School, as one example, has a whole school approach of rich task design, high standards in all classrooms, a practice of drawing students into their own assessment and a culture of setting and achieving challenging learning goals. And it works.

It is of particular significance that what has not benefited low SES school communities has been the testing agenda of the past 25 years. Indeed, these communities are some of the biggest losers, globally, from the test obsession. As Linda Darling-Hammond reports from the USA:

> *Poor districts offer stripped-down drill and practice approaches to reading and math learning, rather than teaching for higher order applications … Critical thinking and problem-solving, collaboration, effective oral and written communication, accessing and analyzing information, curiosity and imagination … have typically been rationed to the most advantaged students in the United States.*

What Darling-Hammond identifies here as higher order needs are the very skills that youngsters from linguistically struggling home environments need to have explicitly taught, valued and practised in their classrooms.

Alan Luke describes a similar phenomenon in Queensland:

> *Far from students in poorer communities lacking 'basic skills', they in fact receive more work on decoding at the expense of other critical aspects of reading and literacy.*

Teese and Lamb draw this conclusion from their national research:

> *Since public perception of schools based on league tables particularly disadvantages low SES schools, the consequence is a focus on "performance", rather than "achievement".*

Meanwhile, both performance and achievement are in decline. John Hattie observes that PISA results have steadily declined since the year 2000 and this has been principally because of the worsening relative outcomes of the top 40 per cent of students. And here we draw closer to the quintessential failures of the testing regime. It does not focus on deep performance. It does not enhance performance. It has corresponded to an inexorable decline in results across the board for Australian students in international measures. It correlates with a cross-curriculum decline in top end outcomes, without any commensurate lift in bottom-end achievement. It has narrowed the taught curriculum. It has sapped the joy from too many classrooms and programs. In fact, it has conspicuously and remorselessly failed by every criterion and goal that it has set out for itself.

The Fair Go Project has closely analysed the teaching practice of highly successful schools in NSW. This project has identified the consistent themes and characteristics of successful teachers and teaching. Perversely, our sustained national decline across stages, years, subjects and learning areas has led some key policy makers and politicians to prescribe the need for more testing as the cure for the very malady that a generation of testing has clearly contributed to. One might suggest therefore, that the wave of testing has nothing to do with direct student benefit or enhancing student achievement. It now borders on ideology.

Naturally, it is important for schools and systems to review the outcomes of the students in their care. Indeed, systems have an ethical obligation to use such data to apportion resources as they would in any other area of public policy in direct ratio to areas of identified need. This function however, is very different to using data for the purposes of blood-sport media reporting or mindless yuppie chatter. To use the private academic performance of children in obligatory tests as the basis for public speculation, social division, community shaming and talkback prattle is shameful. Systems can collect all of the data required to inform education and resource policy, without reducing the process to the public spectacle it has become today.

NAPLAN online

It comes as no revelation to note that there is a huge impetus from education authorities to move this testing juggernaut online. Concomitant with this desire is a massive edu-business

motivation to gain as much command of this lucrative process, which is central to their multi-billion dollar business plans. While the early stages of moving the testing online fell at the first hurdle in 2017 – the capacity of school systems to technically comply – it borders on certainty that the push will be resumed. And while there is some potential in some elements of online assessment, including possible variegated and differentiated testing, shifting it away from a mass and simultaneous test, disconnecting the test from the current reporting fever, there is much to be done before it is possible even in limited domains.

Until such testing does not advantage those students already starting with advanced keyboard and IT skills that often correspond with existing social privilege, and until all schools are equipped with the capacities and facilities to allow their students a fair and equal go in these assessments, the time is not right to move the testing behemoth online. In its apologia for robot marking, ACARA seeks to sidestep the question of students' varying capacities and experience with computers and keyboard skills by claiming that: "There are variations in how fast and well a student can type, just as there are variations in how fast and well a student can write by hand." The speciousness of this justification is exposed when one realises that handwriting speed does not correlate with social class.

The related concern arrives with the desire of the edu-businesses to command not only the setting of these tests but also the marking of them in totality and exclusively by their corporation's computers. ACARA, which has a close and worryingly fond relationship with some of these edu-businesses, has been energetically pushing plans to move all marking online, including those sections devoted to persuasive, creative and narrative writing. These vast global corporations, glorying in names such as Measurement Incorporated, Pearson, Pacific Metrics and MetaMetrics, claim they have the technical capacity to mark anything that is tested.

Teachers are aware that simple multiple choice answers can be scanned and diced by computers but naturally this is because of the low level type of response elicited from students in such assessment items. It comes as no revelation to note that there is a huge impetus from education authorities to move this testing juggernaut online. Yet a dollar can make a person (or a corporation) say or think or believe the most extraordinary notions. What we will soon be confronted with is the proposition that these giant companies can develop algorithms that can evaluate creative forms of expression in extended prose form. The fact is: they cannot. Computers can identify from a pre-programmed list one or more correct answers from a scale. They can engage in reductive counting. At the more advanced level, they can identify patterns and locate some technical errors in spelling or punctuation. They can be programmed, and here we begin to enter dangerous territory, to reward as "correct"

a certain answer or answers. Their machine capacities are somewhat proficient in low order parts of the curriculum.

In all of the above, these robot markers contain finite, humanly-programmed language to "mark" and identify finite forms and modes of expression. Quite naturally, as overseas experience reveals, they can therefore be gamed as teachers prepare students to develop responses to please the robot. If you know the underlying algorithms, you can thrive. Again, the underlying feature of computer-based marking is its encouragement of skills at the lower end of the spectrum. But a profit bottom line can be a dangerous thing and we should prepare ourselves for the march of the robots cheered on by very well paid acolytes who will swear that these machines can mark tests as well as (if not better) than professional teachers, or to use ACARA's Orwellian term "human markers".

But as Hamish Douglass, one of Australia's leading IT venture capitalists admits, we are not even close to having computer capacity to appreciate or evaluate human language and expression. As even this gung-ho tech disciple admits:

> *We are within five to ten years away from software programs written to truly automate human knowledge and what is missing is computer understanding of natural language.*

Meanwhile, NAPLAN Online is being trialled in schools right now. In the USA robot marking has spread across school systems and into some of their colleges. Thankfully, there has been a backlash led by academics such as Les Perelman from MIT and colleagues at Harvard and other colleges. Perelman has demonstrated how these machines can be gamed and exposed. As he explains, computer markers "do not understand meaning, and they are not sentient. They do not react to language; they merely count it".

Perelman and colleagues point out that computers are unable to recognise or judge the elements most associated with good writing such as logic, flair, clarity, accuracy, relevance of ideas, irony, innovation, playful form, appeals to audience, humour, sequencing, truthfulness, variation of tone, modes of persuasion, complex organisation, appropriate use of evidence, devices such as repetition, the deliberate use of grammatical nonconformity and sheer joyful flights of language.

The US National Council of Teachers of English concurs with the Perelman analysis. They found that computers can detect low-grade, technical errors. They can mark to a deficit

system of tracking down and punishing some exam room blemishes. But little more. They are cheaper than humans, however, and they are coming.

Beyond the datawall

To begin constructing a replacement for the current failed assessment and testing mess, we have a starting point for our understanding of the diverse and complex nature of the broad curriculum that students experience and the different contexts in which teachers operate.

> *When the assessment is distributed across the whole course, the negative effects of 'teaching to the test' are minimized, because the only way to maximize the students' achievement is to teach all the students everything. When the assessment is cumulative, there is no incentive for students (and teachers) to adopt a shallow approach, because if material is forgotten, it has to be learned again, because it is going to be assessed again …*
>
> *The important thing is that the assessment system, as far as possible, creates positive incentives for teachers to teach well, and for students to study well. Once this kind of assessment is in place, it should fade into the background and be unnoticeable and unremarkable.* (William)

In the Australian context, this would mean that the uniform mass testing of decontextualised skills and knowledge would need to be replaced with testing that has a range of intellectual demands for different student capacities at different times and would be completely embedded in syllabuses and curriculum developed by the appropriate statutory bodies. Quality, equity, personalised learning and curriculum-assessment alignment would all be enhanced through this process. Such an approach would allow schools to progress beyond the current modish managerialist obsession with number harvesting, spreadsheets, datawalls and scattergrams.

As Wiliam's research establishes: "There is absolutely no evidence that this kind of monitoring has any impact on students' learning." What it does do, however, is give the illusion that something constructive is being done, that a pseudo-scientific method is being applied to student need, that political accountability is being served and that the human mind and its progress can be simply mapped. It is scarcely the much-heralded twenty-first century approach to learning. In fact, it bears the hallmarks of a nineteenth century approach to schooling, rather akin to phrenology.

Pasi Sahlberg and Jonathan Hasak remind us that this latest datawall fad is yet another import from US schools where they adorn corridors and staffrooms. They conclude:

These data sets, however, often don't spark insight about teaching and learning in classrooms; they are based on analytics and statistics, not on emotions and relationships that drive learning in schools. They also report outputs and outcomes, not the impacts of learning on the lives and minds of learners.

This article has been extracted from: Denis Fitzgerald, *Crossroads: A green paper on assessment policy*, NSW Teachers Federation.

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The overuse of technology in education

Mark Scillio

One of the most vexing issues facing parents today is their children's use of technology. In the space of a decade, we have seen a massive explosion in the number of screen-based gadgets kids interact with – smartphones, iPads, laptops, consoles – and, more alarmingly, in the amount of time they spend on these various devices.

This is also true in the classroom. Laptops and iPads are now seen as indispensable to learning. Schools in Australia are almost universally aiming for a single computer (or device) per student, with the dominant view being that this is a necessary and good thing to prepare young people for the future.

But what are the consequences of all this screen-time for students? Is it beneficial or harmful?

As a teacher and parent of teenagers, I know that screen-based technologies can be used constructively. I also know how much my kids use them for entertainment, gaming, watching silly video posts, or pretty inane messaging.

We tend to assume the benefits outweigh the harms, but we do not yet know the extent to which they are changing the way our children think, feel and interact with others. Meanwhile, these developments seem like a juggernaut; they are happening so fast, and feel largely out of our control.

Joe Clement and Matt Miles, two high school teachers based in the United States, have come to the conclusion that these developments are unequivocally negative. In their provocative new book, *Screen Schooled*, they make a case for why our 'overuse' of technology is having

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dire consequences for – students for their ability to think critically and interact socially with their peers.

Clement and Miles, it should be said, are no luddites. In fact, both have backgrounds in IT and believe computers can be valuable tools. What they are witnessing in US schools, however, is frightening.

Some of the issues they address include the increasing amount of time young people spend in front of screens (US teens make use of entertainment media an average nine hours a day), the effects on their cognitive abilities, and the ways in which this is changing kids' social lives at school and at home. They also present recent research on the mental health consequences of so much technology use, which can be likened to those of other addictions.

Among those addictions, Clement and Miles investigate the effects of social media. In 2016, the Australian eSafety Commissioner reported that nearly 20 per cent of teenagers had experienced cyberbullying. These more acute cases, though, are just visible instances of the more chronic forms of anxiety brought on by participating in the digital world. The research suggests that, increasingly, young people are feeling intense pressure to portray themselves as successful, beautiful and smart, lest they be publicly judged and shamed in cruel ways. Social media can make people feel inadequate and, paradoxically, isolated.

One of the central points made in *Screen Schooled* is what the authors call the "myth of the digital superkid". We have been sold the message that the current generation of young people – 'digital natives', as education technology guru Marc Prensky dubbed them 20 years ago – think differently to previous generations. They are supposedly at home with new technology. Their immersion in it has given them superior information processing skills: they can think faster and they can multi-task. And so the message given to educationalists is that these kids need to be engaged differently. Traditional modes of teaching won't work. Teachers need to meet students where they are. In essence, teachers need to get out of their way and become 'facilitators'.

The authors argue that none of these superior attributes are evident. In fact, kids are showing signs of the opposite: decreasing problem-solving and critical thinking, and shallower, more disconnected knowledge. Some of their own students increasingly show signs of disjointed "Google thinking". They can answer questions which ask for facts, or discrete definitions, but struggle to join ideas together and build a deeper understanding. This is a result of relying on apps like Google to acquire knowledge in a sporadic and piecemeal way. In contrast,

> *the older methods of obtaining information, such as lectures and paper books, follow a linear, sequential pattern. This is a more ideal way to learn. Learning sequentially not only can give students the knowledge of the individual concepts, but it also allows them to connect that knowledge to a broader picture. (*Clement & Miles 2018 p.67-68)

Another sign is students' inability to focus. An underlying cause, argue Clement and Miles, is the pervasiveness of gadgets within constant reach. These fuel the habit for constant stimulation. Kids are becoming unable to tolerate boredom, needing to fill any downtime with music, videos or social media – think of how many students have earphones in all the time, even before bed or just after waking up. The thing is that silence, and boredom, are vital for critical and creative thinking. The authors refer to research that shows how people do their deepest and most creative thinking when the mind is allowed to be inactive and can wander. Ironically, all this digital 'play', is actually leading to a *lack* of imagination.

The idea of multi-tasking is also deeply entrenched. The other day in my daughter's class meeting, one parent proudly reported on their child's ability to do several things at once: "while doing homework, he listens to music, has some video going on his laptop, and he's checking his phone for messages. He's learning to multi-task!"

The example was apposite, because it's identical to one Clement and Miles use in their book. Except their assessment – and current neuroscientific evidence appears to back them up – is that what is happening is not a neoteric capacity to do several things at once and do them all well, but to be doing several things simultaneously poorly.

Research suggests that we cannot actually attend to several things at once – especially several things requiring a similar cognitive focus. It is one thing to be putting the clothes on the line while listening to a podcast, or cooking dinner with the radio on (we're all for that!), quite another to be watching a YouTube video while writing an essay. The attention needed for these tasks is finite and not divisible. In reality, this child's so-called multi-tasking is actually shifting his attention from one thing to another, and adjusting his focus constantly, which turns out to be a very inefficient way to carry out tasks.

The superkid myth is strong. One consequence is a move towards 'edutainment'. Miles and Clement are concerned that the idea that today's kids are different and need technology to be engaged puts pressure on teachers to make their lessons more entertaining – read: more wiz-bang PowerPoints, videos or computer games.

Edutainment also gradually and profoundly morphs what we think of as learning. Interviewing other teachers about trying to incorporate Facebook, Twitter or Minecraft in their lessons, teachers said that students were certainly engaged, but the educational purpose of the exercises were being lost. The result is that:

> *teachers aren't stepping up into digital natives' alleged advanced digital world. They're having to dumb down everything in order to step down into kids' simplified digital existence. Rather than deal with the issues created by technology addiction, schools are trying to trick digital natives into learning by sneaking small, palatable doses of education into their games and social media. (Clement & Miles 2018 p.35-36)*

The idea that digital natives are different and need this specific kind of digital engagement also serves the interests of edu-business. In essence, the authors warn, this is a powerful marketing device. Education technology companies can offer their wares as 'essential'. And who would not want to make learning 'easier' and 'fun'? On a wider scale, these companies are exploiting the pressure now felt by US schools across the system to be more competitive and accountable, and to ensure that they and their students are not left behind. The edu-tech industry is offering solutions to make schools 'successful', and the profits are astronomical.

One of the striking issues discussed in the book is about the relationship between technology use and the achievement gap. At one level, the notion that kids from poorer backgrounds should have the same access to computers and other technology is laudable and sound – especially when we think of technology in terms of its educative uses. And as the cost of IT and mobile phones has gone down, this access is equalising. But in the US, the achievement gap is getting wider, and although income disparity is the root cause, technology use may be a *contributor*. Clement and Miles cite research showing that teens from lower socioeconomic backgrounds are spending more time on screens, especially phones. Parental involvement seems to be a critical factor. More affluent families tend to have more parental supervision of their children's technology use. In poorer families, where parents are often working long hours and multiple jobs, technology can function as a nanny, with kids spending many more unsupervised hours on online games and social media.

> *Large chunks of unsupervised time lead to students who have grown accustomed to being on a screen for most, if not all, of the day. By the time they get to school, the habit is often so ingrained that it becomes virtually impossible for them to put their phones down. (Clement & Miles 2018 p.176-177)*

Screen Schooled seeks to empower teachers and parents to respond to these changes. At the end of each chapter, there are suggestions for parents on how to better manage their kids' use of technology and to bring back more of the things that technology has been displacing, such as dinner-table conversation and physical activity.

In the final chapter, Clement and Miles offer a detailed account of what teachers can do to resist these forces, outlining how to keep lessons simple, effective and socially grounded. They highlight what they see as essential for learning, including good relationships and face-to-face discussions.

This is a polemical book that covers a lot of ground. You might not agree with all of the authors' arguments. You might say that Australia is not like the US; that we are less vulnerable to the forces of edu-business, and have more control over our students' use of technology. But the US situation is just around the corner. We will need to get more involved in the critical dialogue on these issues if we want to remain in control and, in this, *Screen Schooled* will be an important reference.

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Classroom management
Effective strategies and interventions

Katrina Barker

Grappling with challenging student behaviour is common even for the most experienced teachers. For beginning teachers research consistently shows that behaviour management is rated as one of the most difficult elements of the job. The challenges of delivering engaging learning activities while simultaneously orchestrating appropriate student behaviour requires the coordination of complex skills, and at times this can be overwhelming. When teachers feel under pressure they have a tendency to be reactive and rely on punishment to address the misbehaviour. In some cases these reactive responses can serve to exacerbate the situation rather then defuse or illuminate it.

This article draws upon theory and research in practical ways to outline what behaviour management strategies are effective in the modern classroom. Modern classrooms have become increasingly characterised as student-centred with greater use of technology to facilitate learning and teaching. There have been increases in the number of special needs students in mainstream classrooms with policy commitments for more inclusion. An increase in this population of students heightens the demand for teachers to know and use a range of effective behaviour management strategies. This means keeping up to date with the research evidence and, when necessary, modifying existing practices.

The prevalence of disruptive behaviour in primary and secondary classrooms tends to be minor in nature but frequent. A recent review of international research on teachers' perceptions of high school students' behaviour ranked talking out of turn the most frequent misbehaviour followed by inattention and then slowness to start work. The most serious misbehaviours consistently reported by secondary teachers were stealing, destructiveness, physical violence, verbal abuse, along with absenteeism and truancy (Crawshaw, 2015).

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While the present rapid changes to teaching and learning have definitely had an impact, these minor and more serious behavioural issues were common in the past too. The nature of behavioural concerns have remained the same across time but how these behaviours are addressed in classrooms is shifting from reactive approaches, which rely heavily upon coercive and punitive measures, to more proactive and positively oriented approaches. Shifting to a more positive approach to manage students' behaviour has been linked to gains in students wellbeing and academic outcomes (Yeung, Barker, Tracey, & Mooney, 2013; Whitton, Barker, Nosworthy, Humphries, & Sinclair, 2016).

Research convincingly shows that using positive approaches to address difficult behaviour is more effective than using punishment or coercion. Critics of this view may say "but students stop their misbehaviour when I punish them". In line with principles of behaviourism, it is true that punishment stops misbehaviour but punishment only temporarily illuminates the undesirable behaviour and therefore it is likely to be used again in the future. As an example of the temporary effect of punishment, think about when you drive past a speed camera, what do most people do? They temporarily slow down but once they've passed the camera they usually speed up again. Punishment also has a number of unintended adverse consequences such as undermining relationships. It can lead to rebellion and reduces a person's autonomy and problem-solving skills. Teachers who rely on punishment tend to value compliance rather than autonomous engagement with learning and behaviour. Students do as they are told out of fear and this can negatively affect their wellbeing (Baumrind, 2012).The goal is to **change behaviour**, not temporarily supress it, and to do this we need to use positive strategies to discipline.

Effective strategies for promoting positive student behaviour

Utilising positive behavioural strategies not only decreases unwanted behaviour, it promotes prosocial behaviour and strengthens relationships. Considerable research exists into classroom management. Congruence emerges across these studies on the importance the teacher plays in preventing misbehaviour in the first instance. The following preventative measures have been identified as some of the most effective:

Preventative measures

Establishing routines: Building structure through routines makes the classroom predictable and creates a safe learning environment. Routines and procedures need to be taught and rehearsed until they are automated, and then periodically revisited throughout the year. Routines enhance students' capacity to respond efficiently to various situations (eg. forming groups, arriving in the classroom, preparing for lessons) and this ensures lesson momentum is maintained.

Rules and expectations: Teachers collaborate with the class to set 5-8 rules which are positively expressed (eg. keep your hands and feet to yourself; treat others how you would like to be treated) and expressed clearly to ensure students understand the goal behaviours. Negotiating expectations will increase students' commitment to follow them. These rules should be explicitly taught using strategies like role play, discussions, modelling, and vignettes. During the introductory stages they should be practised and reinforced with rewards and reminders about why the rules help create a safe and positive learning environment. Throughout the year they should be periodically revisited. In addition to having negative consequences for not following the class rules, there should be positive consequences for keeping to the rules.

Engage learners: Learning experiences should be engaging and promote students' interests. There should be frequent opportunities for student participation and lessons should promote student accountability (eg. students are assigned roles and responsibilities for a task). Involvement in lessons increases time-on-task and results in students having less of a desire to act out.

Communication and instruction: Instrumental to the success of engaging lessons is the quality of instruction. Thorough preparation will ensure the instructions are clear, concise and well-paced. Check for students understanding before commencing the activity.

Measures to increase desirable student behaviour

Preventative measures need to be accompanied by a range of evidence-based practices which strengthen and reinforce desirable behaviour. These proactive strategies are grounded in relational pedagogy because they focus on promoting positive teacher-student interactions. When operationalised in the classroom, students are exposed to orderly and workable learning environments that are supported by the teacher's warmth and care. This promotes risk-taking, on-task behaviour, as well as autonomous learning. These strategies create more fertile motivational ecologies that build a sense of belonging.

Positive measures

Praise and rewards: Although both praise and rewards are useful and have their place, teachers need to use them appropriately in order to maximise their effectiveness. For instance, to have the most impact, praise and rewards should be given immediately after the desirable behaviour is displayed, rather than waiting until later. They should be specific (eg. "Your image can be seen from a distance because you have used the full page") and compare the student to their previous performance (eg. "This story was more interesting to read than last time because you have evolved the characters"). The reward chosen needs to be valued by the student so that its appeal drives motivation to be well-behaved.

Moving beyond praise to use encouragement: Encouragement is different from praise. It emphasises the process of learning new skills and behaviours whereas praise focuses on the outcome of the skills or behaviours. Encouragement recognises the effort expended: "You thought long and hard about your answer and tried different ways of solving the problem… this is a great approach". Encouragement promotes self-regulation in students and provides a powerful motivator.

Positive relationships: This is one of the most critical components of a preventative measure to minimise the likelihood of misbehaviour. Students are more likely to behave and enjoy school when teachers show they care, use praise and respect students (Vickers, Barker, Dockett, & Perry, 2014). Positive relationships are forged when teachers are approachable, consistent, use active listening, provide choices, are enthusiastic, use humour, and are both firm and fair. Although not sharing the same level of research consensus, it is also valuable to involve parents and the community.

Discrete reminders: Remind students of the rules. Use vicarious reinforcement to do this. This can be achieved by noting to the class what some students are doing that is highly desirable eg. "It appears that there are a number of class members who are ready to get on with the activity. I can tell because they already have their pens and books out…". Prompts such as eye contact or facial expressions to refocus the students or even body proximity, are effective tools to encourage desirable behaviour.

When to intervene and how

If discipline issues arise and persist after using a range of preventative and positive measures, it's time to intervene. A continuum of consequences starts with the least obtrusive strategies and then incrementally increases the severity of the measures. Consequences should be predetermined, and known to the students, to assist them in making decisions about their behaviour. Students care about how teachers apply consequences. Therefore it is meaningful to have students co-construct the consequences because it encourages ownership. Teachers are not seen to be imposing consequences but rather students can be guided to make a choice about their behaviour and its consequences. This approach reduces resistance from students once the consequences are applied.

Redirecting behaviour: It is most desirable to provide students with an opportunity to correct their behaviour. This can be achieved by redirecting their behaviour by giving them choices. For older children, ask them what would be a better behaviour choice. For younger children, give them constrained choices. For instance a teacher might say you can either work quietly next to your friend or talk and be moved away from your friend.

Warnings: Thresholds need to be set for disruptive behaviour. There is little research evidence to confirm the most appropriate number of warnings but there is strong evidence to support the importance of being consistent on the number selected and following through. This means you need to be measured in the timing of warnings and match the action to the consequence. Consistency is the key.

Consequences: The consequence should be logically linked to the rule broken. For instance, if a student damaged another peer's property and broke the class rule centering on respect for others' property, a logical consequence would be for this student to repair or replace the damaged property. Another effective consequence is to calmly discuss breaches of rules with students with a strong focus on why the behaviour is problematic.

Time-out: When used well, time-out can be effective. Its perceived ineffectiveness is often linked to misunderstandings of the purpose or suboptimal implementation of procedures. Time-out is the removal of all situational reinforcement of misbehaviour. It functions best when an appropriate location is used for the time-out period. It needs to be a quiet and private location with minimal stimulation. There is a need to act quickly after the behaviour occurs, giving a concise reason for sending someone to time-out. The student should be prompted to think about what they could have been doing differently. Secondary behaviours should be ignored while in the time-out period (like shouting or pleading) and you should avoid talking to them until the end of the time-out period. Two to three minutes is usually the amount of time. Before exiting, ask the child to remind you why they were put into time out and what they could have done differently. Catch them being well-behaved as soon as you can and remind them how much you care for them.

In spite of teachers' best efforts to prevent and increase desirable behaviour, there will be times when the provocation is more serious and requires swift and effective responses that protect the rights of those in the setting, including the rights of teachers themselves. Few would argue that punishment should not be resorted to in an attempt to reduce maladaptive behaviour that places others' safety or learning at risk. However, it is the form of punishment which is selected that is of critical importance, since not all forms of punishment are equally justifiable or effective. When confronted with discipline issues, teachers need to be prepared and knowledgeable in order to draw upon effective approaches in a calm and non-aggressive manner. Preparation is the key since educators are more likely to resort to ineffective strategies when they are under pressure.

Behaviour management is always more effective when teachers' actions are guided by an evidence-base, and they work together as part of a school-wide approach. A strong consensus exists on the benefits of a school-wide approach. When it is employed, it results

in the staff developing consistent systems that promote a positive school culture and discourages unproductive behaviour. Staff members collaborate in teams to make decisions and work together to reinforce positive school norms. These competencies can then be generalised into each teacher's own classroom practices.

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The Nature and Future of Education Unions

John McCollow

Introduction

Debates about the nature of education unions are as old as these institutions themselves. While it is agreed that the purpose of these organisations is to protect and advance the collective interests of teachers and other education workers, what those collective interests entail and how they should be pursued have been and remain active matters for debate.

Over thirty years of neoliberal social, economic, and educational polity have increased the stakes of debates about the nature and role of education unions. The future of these unions is by no means assured. Social and economic changes – in particular, industrial and educational changes wrought as a part of the ascendancy of neoliberalism – pose significant challenges. To survive and thrive in the face of these external challenges will demand adept responses and organisational change.

The Legitimacy of Education Unions

The very legitimacy of education unions remains a point of contention. Certain writers (e.g. Lieberman, 1997; Brimelow, 2003; Moe, 2011) characterise the pursuit of educators' "special interests", in particular through collective bargaining, as having a malign influence on educational policy and practice. In this view education unions consistently act to slow down, subvert or block necessary schooling reforms, while seeking to maximise workers' remuneration, conditions and job security. Such a view, which often finds support from conservative and neo-liberal politicians and governments, argues for severe restrictions on, if not the elimination of, education unions.

This negative view of education unions has been vigorously contested. Bascia (2003, p.23), for example, notes: 'it is both ironic and troubling that teacher unions' traditional concerns

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about compensation and working conditions are perceived … as "self-interested" … when these factors are so clearly fundamental to attracting and retaining individuals to teaching careers'. Further, education unions remain amongst the most important defenders of public education. Writers such as Peterson, 1999; Weiner, 2012; and Gindin and Finger, 2013 have argued that these unions have the potential to be encompassing social movements for progressive change.

Factors contributing to – or detracting from – education unions' perceived legitimacy (and thus to the power and scope of their influence) include: the legal and legislative framework within which they operate, which can range from recognition and even encouragement of their role to severe restrictions on their role and even their outlawing; public, media and government attitudes to them (and to unions generally) and to public education and teachers; union community engagement; the extent and depth of coalitions that the unions have developed with other activist groups; and membership density and activism.

Models of Education Unionism

Several ideal-type models of education unionism have been identified.

An "industrial model" may be said to take as its starting point the proposition that 'teachers are workers, teaching is work, and the school is a workplace' (Connell, 1985, p. 69). This model prioritizes the improvement of members' pay and conditions using collective bargaining, industrial campaigning, and strikes, in a manner consistent with other trade unions. A focus on these issues is generally strongly supported by union members. In certain legislative regimes, however, industrial activity is severely constrained, and this has become increasingly the case with the ascendency of neo-liberalism. Further, this model has been criticized for failing to recognize the professional and "caring" dimensions of educators' work and their desire to exercise professional judgment.

"Professional unionism" has been proposed as an alternative to the industrial model. In this model teacher unions engage critically with the education reform movement and champion reforms that improve teaching and schooling. The goal of improving members' pay and conditions is not abandoned, but the approach shifts from "winner-take-all" to "win-win". This model has attracted criticism. Some see it as a ruse to camouflage the industrial goals that remain at the heart of unions' agendas (e.g. Moe, 2011). Others see it as an expression of weakness, and an accommodation of the neoliberal educational reform agenda (e.g. Rethinking Schools, 1997). However, a number of unions in Europe and South America, for example, have participated (in some cases over an extended period) in the development and implementation of educational policy.

The concept of "social movement unionism" sees unions as part of a broad movement for social progress rather than as merely focused on the self-interest of their members. The key features of social movement unionism are the following: it is locally focused and based; encourages collective actions that go beyond strikes or workplace activities; builds alliances in the community and beyond; embraces broad emancipatory politics; and develops transformative visions. The degree of grass roots membership support for a broadening of the aims of educational unionism remains uncertain and social movement unionism as a model remains a concept and project in need of considerable further development.

The identification of ideal type models can be misleading. It obscures, for example, differences that exist among unions that might be categorised as of the same type. Further, most education unions pursue industrial, professional and social objectives.

Challenges and Strategies

In the Twenty-First Century education workers face reduced public spending, job insecurity, work intensification, privatisation, marketisation, high-stakes testing, and curriculum standardisation. At the same time, attacks on unions' capacity to organise, social and demographic changes within the profession and broader social, economic and technological changes pose new challenges for them. Member demand for union support has been increasing at the same time as union capacities and resources to meet this demand have become more and more vulnerable.

Carter, Stevenson, and Passy (2010) suggest that union strategies can be classified under three broad headings: rapprochement, resistance, or renewal.

In employing a strategy of rapprochement, a union does not necessarily endorse an educational reform but, rather, is making a pragmatic decision that it is better to have a seat at the table where it can exercise some influence on the extent and nature of the reform as it affects members. Resistance occurs where unions actively oppose and reject educational policy and reform, either because of their potentially negative impacts on members' pay or conditions, or on educational grounds. Unlike in a rapprochement approach, where negotiation is the primary focus of activity, the "repertories of action" utilized by unions that adopt a resistance approach can include various forms of industrial action or legal/judicial challenges to the reforms.

Renewal strategies involve unions examining and modifying their own aims, structures, and practices in the light of emerging challenges. For example, a union may seek to take advantage of a decentralization of decision making to empower workplace representatives

and to invigorate heretofore bureaucratic modes of operation. Renewal might also entail the proactive development of policy agendas, rather than simply responding to government/employer agendas. Bascia and Stevenson (2017, p. 8) argue that the magnitude of the challenges faced by education unions in the Twenty-First Century demand that these organisations must themselves change in response to changing conditions.

The strategic orientation of a union is determined by various factors internal and external to the organisation that can be ideological, political, and practical. A hostile political climate may render rapprochement strategies unavailable, or, conversely, a climate in which the role of unions is acknowledged and facilitated, and which has delivered benefits to union members, may encourage continued rapprochement between the union and the employer/state (and discourage exploration of other options). Factors such as membership density and dispersion, the union's financial situation, its history of success and failure, and whether the union competes for members with other unions may be key factors.

Bascia and Stevenson (2017) identify seven key strategic themes/challenges for education unions:

Organise around ideas: Attacks on working conditions derive from an ideology which seeks to establish itself as the dominant discourse by which problems and their solutions are defined. It is vital that unions develop, communicate and mobilise around an alternative narrative based on the value of public education.

Connect the industrial and professional: A union that insists on a solely industrial role cuts off an important channel of communicating with and representing members and plays into the hands of union antagonists. Bascia and Stevenson note that the sharp end of the attack on teachers is increasingly focused on what might be referred to as "professional issues"; unions need to speak to their members 'as the educators they are' (p. 57).

Working in, and against: Where unions and governments/employers can work in collaborative partnership it can result in better policy and practice. However, the danger of co-option is real. Developing a working relationship with employers/governments and then balancing the need to work simultaneously *with* and *against* the system is a major and ongoing test for unions.

Building at the base: It is vital for unions to develop a strong voice at the state/system level and to engage (where possible) in institutional structures such as collective bargaining. However, it is also vital to support and sustain membership activism at the grass-roots level.

Build democratic engagement, formal and informal: Unions need to recognise that the diversity of members' backgrounds and interests may mean that not all will find traditional union structures or modes of communication inviting. Bascia and Stevenson identify various non-traditional ways that unions have sought to engage members, for example, by facilitating groups organised around identities (LGBTQI, Indigenous, women, disability), issues (refugees, peace, poverty), or professional interests (maths, early childhood). Another example of non-traditional engagement is the use of social media.

Connect the profession, horizontally and vertically: Education unionism is marked by "splits" and potential splits that governments and employers seek to exploit. In some cases, unions compete with each other for members; in others, unions are differentiated by sector or job category (e.g. primary/secondary; public/private; teachers/support staff/principals). Bascia and Stevenson argue that 'education unions should … resist division and work in ways that speak for the whole profession' (p. 61).

Create broader alliances: Alliance-building with other unions, civil society organisations, community groups, parents, students, and the community generally needs to be an important and ongoing feature of union work.

The term "unionateness" has been used in the academic literature to refer to the degree to which a union exhibits the features traditionally associated with trade unions (e.g. participation in collective bargaining, use of strikes and other industrial tactics), but Bascia and Stevenson use it in relation to education unions to refer to the degree to which a union has established itself and its activities as an important feature of its members' professional identities: 'put another way, engagement with the union is considered indispensable in order for any teacher to be the teacher they want to be' (p. 9). This is a goal to which all education unions should aspire.

Implications for Australia

Bascia and Stevenson use case studies from seven different countries (not including Australia) to illustrate the common (or global) nature of the challenges facing education unions, but also to show how local history and context shape these challenges in important ways, thus 'there can be no easy importing and exporting of ideas' (p. 11). The union work described is incomplete and ongoing – 'long, slow and often difficult' (p.3) – and its success is far from assured. None of the unions studied by these authors had embraced change and renewal across all of the areas identified above, but there was evidence that they were prepared to explore a variety of strategies, to examine their internal organisation, to build alliances, and to develop alternative conceptions of the future of education.

An assessment of the strengths and weaknesses of, and the opportunities and threats facing Australian education unions is beyond the scope of this paper though undertaking such an exercise for each of the themes/challenges identified above would be worthwhile for each AEU branch. High membership density, long experience working with and against governments, involvement in broader social justice coalitions, an ongoing schools' funding campaign that creates a counter-narrative to neo-liberalism and engages the community in general – these and other things mean that Australian education unions are relatively well-placed by international standards to deal with the challenges confronting them. But there is no room for complacency. Attacks on the working conditions of members and on unions' capacity to organise will continue, and unions will need to ask themselves hard questions about their goals, their strategies and their modes of operating.

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Interview: Carol Dweck
On developing a growth mindset

John Graham

JG *There is a growing interest in Australian schools about your ideas of students bringing different mindsets into the classroom and these differences having a significant impact on learning progress. Can you explain the difference between a growth mindset and a fixed mindset including their implications for student learning progress?*

CD Yes, the idea is this. When students are in a fixed mindset, they view their intellectual abilities as fixed traits that simply cannot be changed. Being in this fixed mindset can make them worry about how smart they are and about doing anything that might make them look or feel incompetent. To prevent this, they may avoid challenges, sticking to things they know they can do, and may turn off to tasks and subjects as soon as they don't do well. Even needing to work hard at something may signal to them that they're not good at it. You can see how avoiding challenging tasks and withdrawing your energy from a task when you need it most could limit learning progress.

However, when students are in more of a growth mindset, they see their intellectual abilities as competencies that can be developed – for example, through hard work, good strategies, and above all great mentoring and support from others. Now, if you believe your intellectual skills can grow, then you can stop worrying so much about how smart you are right now, and can focus more on learning. With a focus on learning, it makes sense to take on challenges and it makes sense to persevere, try new strategies, or seek guidance when tasks turn out to be hard. This should lead to greater learning progress over time.

It's important to realize that we are all a mixture of fixed and growth mindsets. No one is pure. Even if a student (or teacher) is usually in a growth mindset, there are many things that can flip them into a fixed mindset: feeling that someone is judging them, confronting

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a very challenging task, struggling on a challenging task and not making much progress, or experiencing a big setback. In view of this, the task becomes not just "having" a growth mindset, but learning how to stay in it (or find your way back to it) after such an experience.

JG *Your research has found that students have different theories of intelligence which influence their attitudes to learning. How do you diagnose the theory of intelligence a student has? How does a teacher identify students with a growth mindset or a fixed mindset?*

CD I don't recommend testing kids and diagnosing their mindsets. There are several reasons for this, but the main one is that it makes it seem like a "property" of the child and we may be tempted to put children into mindset categories. Even worse, in some cases, it may be seen as the child's fault for having a fixed mindset or the child's responsibility to adjust their mindset. Sadly, I've heard of educators who've said to parents, "I can't really teach your son. He has a fixed mindset." I've also heard of educators who chastise students for having a fixed mindset, when in fact the whole structure of the classroom may be pushing kids toward a fixed mindset.

Basically, whatever mindsets a child tends to be in, it is our responsibility as educators to create a growth-mindset classroom climate – a climate in which learning is valued over immediate high performance; struggling with challenges is valued over taking on easy tasks; mistakes and setbacks are seen by educators as interesting and valuable, and as calling for new strategies or appropriate help-seeking. In other words, a growth mindset should be *embodied in classroom practices* and not be seen as a property of a child or something children should simply adopt regardless of what their environment conveys.

JG *Has your research shown a relationship between the ability/talent/intelligence of a student and their mindset? For example, are 'smarter' students more likely to have a growth mindset?*

CD Both mindsets are found at all levels. There are plenty of so-called smart students who tend toward a fixed mindset. They may play it safe and make sure they don't tarnish their reputations with mistakes or setbacks. Many of these students may stop trying when school gets more difficult, because they have not had to work hard before (while being told how smart they are), and working hard makes them feel like they're not smart anymore.

JG *How do teachers encourage the development of a growth mindset in students? How do you create a classroom which develops a growth mindset?*

CD This is something my colleagues and I are working very hard on now. At first, we thought that embedding growth-mindset practices into their classrooms would be intuitive to teachers, but this was typically not the case. So, over time, we realized that we needed to study this directly and create curricula that would guide teachers through the process.

Professor Stephanie Fryberg of the University of Washington and Professor Mary Murphy of Indiana University, based on extensive research, are creating and testing such a curriculum. Susan Mackie, in Australia, has had deep insights into this process and has developed some wonderful materials and exercises for teachers and students. David Yeager of the University of Texas has led a nationwide study of high school students and their math teachers in the U.S. He and a large team of top researchers are analysing the results right now to understand the teacher practices that foster growth mindsets in their students.

To date, these practices all seem to be built around *a focus on the learning process*.

a. Expressing the *value* of learning process: Talking about the importance of challenging tasks and improvement over time and showing students how that value is expressed in your classroom practices, such as allowing students to revise work or including challenging-seeking and improvement in grades.
b. *Giving feedback* for the learning process: Praising students' full commitment to a task, reflected not just in effort, but also in their trying new strategies, gathering or consulting resources, seeking appropriate guidance from the teacher; also, noticing and praising progress on a task but also over longer periods of time, and tying the progress to the students' good strategies.
   What about when students are stuck or have done poorly on a test or assignment? Work together with the student on analysing what the student has tried, what the student is thinking, and what new strategies the student can try to move forward more effectively.
c. Presenting yourself as a *collaborator* in the learning process. Some teachers set themselves as judges who rule on who is smart and who isn't so smart, who is a favoured student and who isn't. In growth-mindset classrooms, educators are resources for their students, and collaborators with their students. They are 100 per cent devoted to every child's learning and they sit with a child who is stuck or struggling and, as noted above, together figure out how best to move forward.

JG *Is there a link between a student's mindset and their reaction to poor/good assessment results of their performance at school? For example, do students develop a 'learned helplessness' after several years of poor assessment results? What can teachers do to address this?*

CD In the U.S., the powers that be are obsessed with standardized assessment, so our kids are tested way too much. Teachers are also evaluated on the basis of their students' standardized test results, putting tremendous pressure on teachers to teach to the test. Not only does this make school both anxiety-producing and boring, but it is far from ideal preparation for our kids to thrive in the world of the future.

The worst part is that many students believe that these tests tell them how smart they are and how smart they'll be when they grow up. This could well lead to "learned helplessness" after several years of poor assessments.

Standardized tests are not going away any time soon, but they don't need to be so toxic. Students should know that these tests are a snapshot of particular skills or knowledge at one moment in time – they can learn from the results about things they may need to improve. They need to know that the test doesn't tell them anything about the wonderful abilities they might develop in the future with a combination of commitment and great mentoring. In addition, educators should be encouraged to teach in ways that instil a love of learning in their students and in ways that encourage a deeper understanding of the material. When students love learning and learn well, the test results should follow.

JG *What is the relationship between pedagogical approaches to encourage student self-esteem and those designed to foster a growth mindset? Is there a tension between these learning goals?*

CD Some educators have tried to instil self-esteem by simply telling kids how smart they are. Some have praised children's effort enthusiastically, even if no progress has been made. These practices often back-fire. Genuine self-esteem is fed by showing kids, *though our actions*, that we accept, support, and value them and by giving them tools for learning and growing over time. The growth-mindset practices I described above are aimed at just this.

JG *Does your research indicate that a fixed mindset can be turned around in high school after a student may have developed an ingrained fixed mindset over nine or ten years of school? Is this a difficult process?*

CD Our research most certainly shows that a fixed mindset can be turned around in high school. Many of our brief growth-mindset online workshops have been aimed at high school students and have especially helped lower-achieving students. (They have also helped higher-achieving students seek more challenging work.) David Yeager has also developed brief online workshops aimed at mindsets about personality, that have helped decrease the prevalence of depression and anxiety in high school students. These effects have also

been shown by Jessica Schleider and John Weisz of Harvard University in adolescent clinical populations.

JG *You have written about the misunderstanding of growth mindset by some teachers and the development of what you have referred to as a 'false growth mindset'. Can you explain what you mean by this?*

CD The term "false growth mindset" was coined by Susan Mackie. She recognized, before we did, that many educators were misunderstanding the growth mindset or implementing it in ineffective ways. Some examples include equating growth mindset with effort alone, rather than understanding that growth mindset is the belief that abilities can be developed — and effort is just one of the ways that this can be done. Learning good strategies and receiving great mentoring are other necessary ingredients. Just focusing on effort may lead people to blame the student when things don't work out by believing that the student just didn't try hard enough.

Another misunderstanding is to think that a growth mindset means that talent doesn't exist and that all children are the same. A growth mindset, again, simply refers to the belief that people can develop their abilities and doesn't mean that all children have the same abilities at any given time — but it does leave open the possibility that all children are capable of great accomplishments under the right circumstances. We never know what anyone is capable of when they develop a strong interest in something and are given the right learning support, resources and opportunities

Some teachers have told their students "You can do anything!" Although this is a lovely and well-meant message, it can be unfair to students if they don't have the resources and the knowledge to move toward such goals. It can also put the onus on them, and if they fail in the future, they may feel it's their fault. Certainly, students should be encouraged to work toward important goals, but they need to know what it will take to reach those goals and they need to be helped by educators to develop the skills, strategies, social networks, funding sources, or learning opportunities that will be necessary.

JG *There have been recent suggestions in Australia that schools should have a greater emphasis on developing resilience, positivity and a growth mindset and that these attributes or attitudes should be an assessable part of the curriculum. What is your view of this? Can you (and is it desirable to) formally assess a students mindset along the spectrum of fixed to growth?*

CD I am not in favour of formal assessments of students' mindsets. One reason is that it is far too easy to "fudge" the answers. Teachers can easily coach their students in what the desirable answer is. Nor am I in favour of mandatory teaching of growth mindset before we have well-validated curricula for teaching growth mindset to teachers and teaching them how to best impart it to their students through their practices. To proceed before such curricula are available is to invite false growth mindset on an unprecedented scale. The good news is that the development of a curriculum is in progress and when completed will be made available at no cost to educators.

Professional Voice

Back issues

The following back issues are still available, free to AEU members. Contact Marlene McLean marlene.mclean@aeuvic.asn.au indicating the volume, number, and title of the edition and your postal address.

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12.1: Professional learning

This edition has the general theme of teacher professional learning. Michael Fullan, Mary Kennedy and Stephen Dinham relate research about professional learning to student achievement gains, school improvement and effective leadership.

PV11.3: What works (and what doesn't)

This edition examines the evidence on the theory and practice that is working - or not working - in school and early childhood education. In an age of ideologically driven policy and 'alternative facts', our articles are sourced from authors due to their research expertise and the depth and quality of their work in these areas.

PV 11.2: Teaching in context

This edition is about the conditions and context of teaching. The authors challenge some of the current "truths" about education such as the need for greater school autonomy and choice, the unimportance of class size, the unalloyed benefits for teachers of the new digital environment, the negligible need for mainstream gender diversity education and the quality of private schooling.

PV 11.1: School choice

The theme of the Autumn 2016 edition of Professional Voice is school choice. There are four articles directly related to the theme. Two of them describe and analyse research studies of school choice in Melbourne. The other two have an international flavour and investigate charter schools in America and academies in the UK.

PV 10.3: Teaching "teaching"

This edition's focus is initial teacher education. Three authors comment on the national (TEMAG) report into teacher education and give their views about how to improve the quality of pre-service education. There is also new evidence about the decline in equity in Australian schools and an article about diagnosing and accommodating in schools the increasingly common Autism Spectrum Disorder.

PV 10.2 Public, Private and Edu-business

This edition looks at the relationship between the public and private education sectors and busts the myth that education offered in private schools is superior to that offered in public schools. We also examine the alarming rise of edu-business in Australia.

PV 10.1: Testing Times

From NAPLAN to PISA, tests have become a defining feature of global education systems. But how much do testing regimes really tell us about education systems and how much do they distort the very thing they report on?

PV 9.3: Global Education Reform Movement

With an editorial overview of the GERM agenda, stories include a look at NAPLAN and assessment, collaborative teaching, class sizes and the models of reform being pursued in America and the UK.

The improvement factor