

Submission to the Inquiry into the State Education System in Victoria

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There are many issues facing education in Victoria. Three of these are the quality reading instruction, the quality of mathematics instruction and classroom behaviour and the impact this behaviour has on wellbeing. We need to adopt evidence-based methods for teaching reading, embracing structured literacy and a knowledge-rich curriculum. We need to adopt an explicit approach to teaching mathematics and support this by producing detailed curriculum materials. We need to conduct a classroom behaviour survey to begin identifying good practice and moving to a more pragmatic approach.

I am a teacher in an independent Victorian school and so I am not directly involved with the state education system. However, I coordinated the Australian branch of researchED, a grass-roots organisation originating in the UK, for a number of years. I also write a popular newsletter about education. Through these avenues, I have engaged in many conversations with Victorian government schoolteachers, both in mainstream and specialist schools.

There are therefore many comments I could make about the Victorian education system. However, in this submission, I will restrict myself to three areas – reading, mathematics, and wellbeing and classroom disruption.

Reading and the phonics check

Phonics involves teaching children the relationships between the letters in a word and the sounds those letters represent. Since the 2000 publication of the US's National Reading Panel report (NIHCD, 2000), it has been clear that structured literacy, an approach that includes but is not limited to the systematic teaching of phonics, is the most effective form of early reading instruction. The National Reading Panel findings do not mean that students

cannot learn from alternatives that avoid systematic phonics teaching, but that structured literacy is the most efficient method and the one through which the greatest proportion of children will learn to read. It is a best bet.

Unfortunately, this finding has been resisted by many in the education sector. For ideological reasons, they view the explicit teaching of letter-sound relationships much as they view explicit teaching more generally – as oppressive (see e.g. Freire, 2000). Scepticism of structured literacy may also be related to the tendency to see schooling as artificial and the wish to make it more natural. However, this is a mistake. As David C. Geary has argued, we have evolved to learn certain things naturally, such as our local language. Nobody sits us in a room and instructs us where to place our tongue to make the letter 'S'. We just pick these things up through immersion. However, reading and writing are too recent a cultural invention for us to have evolved an effortless way to learn these skills (Geary, 1995).

In England¹, considerable progress has been made against such resistance. In 2006, Jim Rose published a review

¹ Note that due to the United Kingdom's constitutional arrangements, the UK government sets policy for schools in

England only. Scotland, Wales and Northern Ireland have separate education systems governed by devolved assemblies.

commissioned by the UK government into effective reading instruction that echoed the findings of the National Reading Panel in the US and cast doubt on the ‘cuing systems’ approach developed by alternatives to systematic literacy instruction such as supposedly ‘balanced’ literacy (Rose, 2006).

Initially, the Rose Report had limited impact, perhaps because teachers preferred their established methods and perhaps due to anti-phonics advocacy from notable critics such as the children’s author, Michael Rosen (see e.g. Rosen, 2012).

In response, in 2012, the UK government, a coalition of the Conservatives and the Liberal Democrats, introduced a phonics screening check. This consists of 40 words for children in the first year of formal schooling to read to their teacher – 20 normal words and 20 nonwords. The nonwords are presented to the children as the names of alien creatures such as ‘smung’ and ‘besh.’ The purpose of these nonwords is to check whether children have learnt the relationships between the letters and the sounds they represent. This cannot be done with normal words because it is possible the students have met these before and memorised them whole.

Although a relatively crude instrument, this measure, and the professional development it precipitated, seems to have had an impact on teaching and learning. In 2021, PIRLS, an international study of reading ability, assessed English students as performing significantly above the international median score, holding steady in performance in a context where most education systems experienced significant drops, likely related to the pandemic. Both the gender gap and the gap between lowest-scoring and highest-scoring students have decreased in England over time and more than half reach the High International Benchmark, compared to an international median of 36% (Lindorff et al., 2023).

However, the resistance to what has become known as the ‘science of reading’ is still strong in Victoria. The newly

introduced Victorian version of the phonics check contains only ten words, of which only five are nonwords (Grace, 2023a). It also persists in using outdated practices such as assessing, ‘Running Records,’ (EducationHQ News Team, 2023).

In traditional societies, children learn many important skills and abilities without ever going to school. It seems fair to link the development of the technology of schooling to the need to teach children large amounts of the kinds of knowledge that they have not evolved to acquire through immersion or play. While play is clearly a desirable part of a primary school day, it is not the reason primary schools exist. Instead, teaching reading could be viewed as their most fundamental purpose. Reading unlocks all other aspects of the academic curriculum. It is that central to the enterprise.

If a child cannot adequately read, a mainstream school setting must be a frustrating place to be and we can empathise with those who rebel against being placed in this context day after day. If classroom behaviour is important – and we will see that it is – reading is what we need to fix first. A good start would be to conform to international standards around the phonics check.

We also need to ensure that the curriculum is knowledge-rich and not based around abstract supposedly transferrable skills. Not only is knowledge of intrinsic value, a knowledge-rich curriculum is also likely to boost reading comprehension (Hirsch, 2003; Willingham, 2006; Cabell & Hwang, 2020).

Mathematics instruction

Despite explicit teaching and worked examples being two of Victoria’s High Impact Teaching Strategies (Victoria State Government, 2017) – alongside some more questionable approaches – Victorian teachers in general, and mathematics teachers specifically, are continuing to be trained in teaching methods that are not explicit.

For example, in August this year, *Earth Ed*, in partnership with the Victorian government, invited Professor Jo Boaler from Stanford University to train Victorian teachers (EarthEd, 2023). Boaler has conducted research that purports to show the benefits of engaging students with open-ended problem-solving over more traditional methods of maths teaching (Boaler, 1998). However, there is debate over the findings of this and other research presented by Boaler (Lee, 2023).

In addition, on the Victorian government's *Fuse* website, online at the time of writing, there is a video in which Professor Peter Sullivan states that, "We want children to... think and be like a mathematician... fundamentally, experience should precede instruction and so we want to give students tasks they can engage with after which there can be some instruction or sharing of ideas... students should sometimes work on tasks they don't know how to do." (Victoria State Government, 2023). Sullivan is an advocate of 'inquiry based, student centred pedagogies,' which is the opposite of explicit teaching (Ashman, 2022a).

Although perhaps intuitive to some, the view that we should treat mathematics students as miniature mathematicians confuses the practices of an expert with the best methods for teaching a novice. Experts and novices are not the same because experts have a wealth of prior knowledge to draw upon (Kirschner, 2009). Similarly, evidence suggests that asking novices to solve problems with little instructional guidance is ineffective. This is because with little prior knowledge, such tasks overwhelm the limited capacity of working memory – roughly the thoughts we are conscious of having – leading to little learning (Kirschner, Sweller, & Clark, 2006). Yes, these negative effects can be somewhat reduced by adding back some instruction, as suggested by Sullivan, but why adopt a form of instruction that needs to be mitigated in this way? Why not provide explicit instruction from the outset?

Such a view is bolstered by the results of the international surveys such as the

Programme for International Student Assessment (PISA) which assesses 15-year-old students from around the world in reading, maths and science and asks a range of questions about their school experience. It found that students who reported that their teachers used more 'student-oriented instruction' tended to obtain lower PISA maths scores than peers with teachers who used less. This finding was observed in all 62 of the states that took part in the survey, including Australia (Caro, Lenkeit, & Kyriakides, 2016). The level of student-oriented instruction was determined by asking students a series of questions about practices such as how often the teacher asked them to work on projects or come up with joint solutions in small groups. These are not features of explicit teaching.

And yet the evidence for explicit teaching is overwhelming. Even if it were limited to the evidence previously discussed on phonics and structured literacy, from that alone, it would be reasonable to suppose that an explicit and structured approach is the best bet in other subject areas too.

However, we do not need to draw solely on the evidence from structured literacy. From the 1960s onwards, we have known about a body of 'process-product' research that suggests the superiority of explicit teaching methods. In these studies, researchers visit classrooms, record various teacher behaviours and then look for correlations between particular behaviours and student learning gains. What has emerged is a model described variously as 'active teaching' (Brophy & Good, 1984), or 'direct instruction' (Rosenshine, 2009) that I am labelling 'explicit teaching.'

The defining feature of explicit teaching is that concepts are fully explained and procedures are fully modelled before novices are asked to apply those concepts or procedures themselves. However, process-product research suggests that there are additional elements that make this style of teaching successful. For instance, in contrast to what many may imagine to be a traditional style of teaching, effective explicit teaching is *highly*

interactive. If you were to watch me teach a mathematics class, you would see that my students rarely go for more than a minute or two without all students responding to a question on their mini whiteboards.

Worked examples are clearly a way of modelling the procedure for solving a specific type of problem and so, rather than being a separate teaching strategy to explicit teaching, worked examples sits underneath the broader explicit teaching strategy.

It is therefore useful to note that in addition to the correlational process-product research, there is a large body of evidence from high quality randomised controlled trials that demonstrates the effectiveness of providing worked examples to novice learners rather than asking them to figure things out for themselves (Sweller, Ayres, & Kalyuga, 2011).

Unfortunately, we are training Victorian mathematics teachers to do the opposite of what the available research implies. We need to refocus our training around explicit approaches and this could be aided by the development of curriculum materials for the explicit teaching of maths. The development of common materials would have additional benefits, not least a reduction in teacher planning time (Hunter, Haywood, & Parkinson, 2022).

Wellbeing and classroom disruption

The final issue that I want to address is that of classroom behaviour and the impact this has on teacher and student wellbeing. In the 2018 round of PISA, students were surveyed on classroom behaviour. PISA then used this data to construct an 'index of disciplinary climate'. When ranked on this index, Australia place 69 out of the 76 jurisdictions that took part (OECD, 2019). This was not a chance finding. In the previous round of PISA in 2015, Australia ranked 63 out of 68 on the same index.

There is more recent data available on teachers' perspectives of school disruption. A survey conducted by researchers at Monash University in 2019 and 2022. It

asked teachers about a range of issues they faced. In 2019, roughly a fifth of teachers reported feeling unsafe at work and this had risen to around a quarter by 2022, with the majority attributing the source of concern to students (Heffernan & Longmuir, 2019; Longmuir et al., 2022).

Clearly, Australia has a problem. It seems reasonable to assume that if teachers feel unsafe, many students also feel unsafe. Moreover, teachers who feel unsafe may be motivated to leave the profession, which will not help the difficulties Australia faces with recruitment and retention (Kidson, 2022).

These figures are for Australia and not Victoria. We therefore do not know whether the problem is better or worse in Victoria than the country as a whole. We therefore need to collect such data. We should replicate a similar survey as the PISA survey at the school level. This data could be efficiently collected when students complete NAPLAN assessments. We would then be able to identify areas of best practice and target resources at areas of concern.

There are two interrelated problems faced by anyone who wishes to address the issue of classroom behaviour. Firstly, the ideology that education can be oppressive has militated against the adoption of structured literacy and causes education academics and bureaucrats to look at classroom behaviour through this lens. They worry that asking students to behave in cooperative, pro-social ways, having rules about such conduct and positively and negatively reinforcing these rules is oppressive. They mistakenly identify such policies with a branch of psychology known as 'behaviourism,' (see e.g. English, 2015) whereas its true origin lies in the structuring of all human societies since before the beginning of recorded history.

The kernel of truth is that the behaviourist branch of psychology does have some insights that can aid classroom management. For instance, behaviour can be shaped by the classroom environment and seating students such that they can all

see the teacher tends to lead to less classroom disruption than grouping them around tables (Wheldall and Bradd, 2013). Unfortunately, a generation of schools have been built on the assumption that students thrive best in chaotic working environments (Grace, 2023b).

In this topsy-turvy context, a taboo has developed around mentioning the problem of classroom behaviour (see e.g. Lehmann, 2023). This taboo is enacted by academics, teacher trainers and administrators who, almost universally, do not work in the classroom themselves, leaving teachers stranded and attempting to manage the issues they face with little expert guidance. It is easy to see how these attitudes lead to the worrying data reported above.

Finally, the issues of behaviour and disability have become conflated (see e.g. Graham et al., 2021). Some disabilities, such as ADHD and Autistic Spectrum Disorder can have a marked effect on behaviour and so it is not surprising to find that students with these disabilities are overrepresented in statistics on, say, school exclusions.

The Disability Standards for Education require teachers to make reasonable adjustment for students with a disability. However, they do not require them to make unreasonable adjustments and any adjustments made must balance the interests of all parties affected (Australian Government, 2005).

In practice, this issue is mainly dealt with through excessive levels of documentation (Ashman, 2022b). Whereas there is no specific requirement for reasonable adjustments to be evidence-based and effective, there are various bureaucratic requirements that involve recording and reporting. For teachers with significant numbers of children with disabilities in their classes, this burden can become overwhelming.

More emphasis needs to be placed on developing practical, pragmatic strategies for managing challenging behaviour and on measuring the impact of these

strategies. A behaviour survey should form a key part of this strategy.

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