Professional Voice

TEACHING
"teaching"

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Teaching "teaching"

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Editorial: Teaching "teaching"

John Graham

There is something obsessive about the way initial teacher education has been showered with criticism and reviews over the past several decades. While governments and politicians come and go the desire to overhaul teacher education seems to remain a constant. Organisations such as the Australian Education Union have provided submission after submission to national and state reviews with, it has to be admitted, very little effect as the reviews just keep rolling on. It's like a form of collective amnesia as the many weighty tomes of review recommendations from parliamentary committees, governments and other authorities can still be accessed via Google just waiting for implementation.

The latest Commonwealth review was carried out by the Teacher Education Ministerial Advisory Group (TEMAG) set up by Federal Education Minister Christopher Pyne in 2014. Pyne had been a long term critic of pre-service teacher education and made his position clear when launching the TEMAG review:

There is evidence that our teacher education system is not up to scratch. We are not attracting the top students into teacher courses as we once did, courses are too theoretical, ideological and faddish, not based on the evidence of what works in teaching important subjects such as literacy. Standards are too low at some education institutions – everyone passes.

According to the Minister teacher education was broken and his review was designed (in line with his self-selected sobriquet – "the fixer") to "fix" it. While he used the term "evidence" many times as a justification for the review there was never any mention of specific research to argue his case. This is despite the fact that a large-scale longitudinal study of how well

John Graham is a research officer at the Australian Education Union (Vic). He has carried out research in a wide range of areas related to education and training. He has had particular responsibility for the range of the issues impacting on teachers and teaching as a profession, teacher education, developments in public education in general and in schooling in particular, the organisation and funding of education and curriculum change. He has written extensively about all of these matters. This includes many articles, submissions to state and federal inquiries and reviews, development and analysis of surveys and various papers to seminars and conferences.

Australian teacher education graduates are prepared for their role as classroom teachers had just been published.

The "Studying the effectiveness of teacher education" (SETE) project investigated graduate teachers' perception of the effectiveness of teacher education in preparing them to become teachers. It followed 2010 and 2011 graduate teachers in Victoria and Queensland during their first three to four years of teaching "to provide an evidentiary basis for policy decisions regarding teacher education and beginning teaching".

The SETE study came up with many interesting findings regarding the impact of teacher education courses on their graduates. A high proportion said they felt effective and prepared having completed their course and 75 per cent would recommend their teacher education program to others. It also seems that teaching is still acting as a means to enable non-traditional groups to move into professional employment as 43 per cent of the respondents said that they were the first representative in their family to gain a tertiary qualification. Another finding was that teacher education program characteristics account for little of the variance in overall perceptions of preparedness and while 90 per cent of graduates agreed that their practicum prepared them for their current teaching context this was irrespective of the ways in which it was structured – days per week or blocks of time in schools.

TEMAG published its review report, and the Federal Government its response to the report's recommendations, simultaneously in February 2015. And Minister Pyne was pleased. He stated that he was sure that "the problem" would now be solved: "Kids with learning difficulties will never again be shunted to the back of the classroom" and advocates of phonics-based and explicit teaching such as himself will no longer feel like ""Christians in the catacombs...hunted down and persecuted out of existence." The "crime" of young teachers graduating with poor literacy and numeracy skills would also be a thing of the past after a new standardised test for teachers prior to their graduation is introduced. These measures, along with the backward-looking curriculum review and the uncapped user-pays proposals for higher education, were all part of his "revolution" in education.

Central to this edition of *Professional Voice* is the opinion of those who actually know about the real issues in teacher education through their longstanding interest and participation in it. Lawrence Ingvarson contends that efforts to improve teacher education need to focus on integrating the three stages of recruitment, accreditation, and induction and registration. The TEMAG brief limited the reach of its report by concentrating only on accreditation. Ingvarson believes there are too many teacher education providers and programs without the staffing or resources to provide quality school experience or supervision for students. He sees the call for a national initial teacher education regulator to

ensure quality standards across the country as the most important recommendation in the TEMAG report, despite it being rejected by the Federal Government.

Ingvarson argues that the report didn't come to terms with the vital issue of the academic quality of the students teacher education courses are able to attract. University administrators who downplay their low entry standards in the name of social justice are missing the point as "there is no social justice in sending poorly qualified teachers to teach students in disadvantaged schools." Australia needs to make teaching an attractive career option for high academic achievers by having competitive salaries and career development, matching supply to demand, and setting high standards for admission. He wants the profession to have a stronger voice in all of these matters.

Neil Hooley has a different take on the issues in the TEMAG report. He describes the report as being the latest salvo in the attack on teacher education from conservative critics who have shifted their fault-finding from teachers to the courses which give them their professional qualification. These attacks are taking place in a political context which denigrates public education, reduces funding for universities and increases costs for students, condemns certain approaches to literacy in schools and entrenches the dominance of highly conservative national and international testing regimes. Hooley believes that it is important for the profession as a whole to safeguard the historic independence of university operation through their academic boards and acknowledge that university teacher education programs are constantly under review and have been moving in a direction already identified by national and international debate and literature.

John Loughran sees the TEMAG report as fitting into the same mould as its predecessors, producing the impression that teacher education and the teaching profession itself is in need of "fixing". For Loughran, the present fixing debate is all about increased compliance measures and doing more with less. It avoids what he sees as the far more important issues of appropriate levels of resourcing, career development and "creating conditions for better valuing the work of teachers and the sophisticated practice of teaching". By not really taking on these issues TEMAG may have already set the clock ticking for a new search and a new report and the next round of fixing.

Operating as a crucial backdrop to any review of teacher education is the supply of and demand for teachers. This was another area where the TEMAG report was very light on. Paul Weldon's article in *Professional Voice* helps to fill in the gaps through his analysis of the latest data on this matter. According to Weldon, the number of students in primary schools in Victoria increased by 7,600 (1.7%) between 2001 and 2010. Contrast this with the forecast data which indicates that between 2010 and 2020 the rise will be a remarkable 107,760

additional students - a 23 per cent increase. By 2018 this growth will be flowing through to secondary schools. Weldon's analysis has major implications for teacher supply, teacher education course intakes, the capacity of schools in growth areas, school facilities, class sizes and teachers teaching outside of their areas of qualification.

Using My School data, Bernie Shepherd's article sets out a damning case about the consequences of not implementing the Gonski recommendations and not introducing needs-based funding for Australian schools. Over the period since the Gonski Review equity in schooling has taken a great leap backwards. The students in low SES schools are scoring more poorly on average in 2014 in NAPLAN than they did in 2010, while those in high SES schools are scoring better. In other words socio-economic factors have increased their influence on student results. In examining this further, Shepherd found that the proportion of advantaged families in disadvantaged schools is declining, while it is increasing in the more advantaged schools, having an effect on NAPLAN scores in both types of schools. He links this development to the marketisation policies of federal and state governments:

> So to that extent, the "market forces" policy of encouraging competition and facilitating choice has worked: some students have shifted to schools where academic success is more aggregated; the corollary is that the low-ICSEA schools now have a greater concentration of disadvantage which is itself a further impediment to success.

When movements in the distribution of school funding are factored in, the decline in equity becomes even clearer. Shepherd points out that over the same period the difference in educational need between the two groups of schools was slowly increasing the difference in their funding was slowly decreasing. Because of the profile of their student population government schools bore the brunt of this development. Between 2010 and 2013 the total of state and federal government funding for Victorian Government schools increased at about 2.7% per annum while government funding of non-government schools increased by around 7.5% per annum. "Whatever the basis for the funding decisions might have been, student need appears to have formed little or no part of it."

It is estimated that one child in 152 has Autism Spectrum Disorder (ASD) and there has been an unexplained 25-fold increase in the past 30 years. The article by Suzanne Carrington and Keely Harper-Hill is about what this means for schools. They explain how a diagnosis of ASD is made and what can be done to accommodate the needs of these students in the classroom. It is important not to see students with ASD only through the lens of their impairment and a diagnosis of *ASD* does not prescribe the same educational response or outcomes for each learner on the spectrum. The authors believe that current teaching practices create particular difficulties for students with ASD because they are required to

work in groups, talk about what they have learnt, and complete a range of academic activities that require focus and skills. "The challenge for teachers is that many children with ASD can learn and participate at school but require adjustments or use of particular resources and supports to facilitate successful learning."

In part two of our interview with Jill Blackmore, the distinguished education academic speaks about a number of the issues and ideas contained in the articles in this journal. For example, she sees the failure to introduce needs-based funding for schools as a sign of the resistance among politicians to any form of redistribution or social justice. She believes that schools in high poverty areas need to be more innovative because of the nature of their student population yet they are under the greatest surveillance and not allowed to take risks. Teacher education courses need to enable teachers to be professionals rather than technicians and have a professionalism which is committed to the education of every child, not just those in their class. "Being in a state school means you work in a system not a set of independent schools. I think a principal or a teacher in a public school has to have a strong sense of what that means."

Reflections on teacher education

Lawrence Ingvarson

In February 2014, the Federal Minister for Education, Christopher Pyne, appointed a Teacher Education Ministerial Advisory Group (TEMAG) to make recommendations on how initial teacher education in Australia could be improved. Their report, *Action Now: Classroom Ready Teachers*, was released in February 2015, together with a response from the Australian Government.

Policies to improve teacher education outcomes need to assure quality at three stages:
1. *Recruitment*: The quality of students attracted to teaching and the match between supply and demand
2. *Accreditation*: The quality of teacher education programs and their graduates
3. *Induction and registration*: The quality of training and support during the induction period and the rigour of the registration assessment.

TEMAG's brief focused only on the second stage, consistent with the fact that, while the Commonwealth is responsible for higher education, state and territory governments and other employing authorities are responsible for matters such as salaries, conditions of work, induction and registration. However, these three stages are highly inter-dependent and reform efforts need to focus on integrating all three. High achieving countries with high quality teacher education graduates have strong quality assurance policies at all three stages.

TEMAG received over 175 public submissions. The concerns raised most frequently were the extent to which governments were meeting their responsibilities in assuring high quality applicants for teacher education programs, the level of investment in teacher education, the burden the practicum places on schools, and the importance of effective induction programs. Most of these concerns are not reflected in TEMAG's recommendations. Most

Dr Lawrence Ingvarson is a Principal Research Fellow at ACER. His major research interests centre around the professionalization of teaching. He recently co-directed a study for the IEA on the preparation of mathematics teachers in seventeen countries (TEDS-M). Recent books include *Assessing Teachers for Professional Certification: The First Decade of the National Board for Professional Teaching Standards*. He is a Fellow of the Australian College of Educators and a recipient of a Distinguished Service Award from the Australian Science Teachers Association. In 2014 he was awarded the James Darling Medal by the Australian College of Educators.

instead focus on strengthening the extent to which providers are held accountable for the quality of their graduates through more rigorous accreditation processes.

Accreditation

Given its limited brief, the TEMAG report has made a relevant and important contribution. It has addressed important issues, especially in relation to giving some backbone to systems for assessing and accrediting teacher education programs. While the current program standards are satisfactory, they are not applied rigorously.

TEMAG asked ACER to prepare a background report on benchmarking teacher education, which pointed out that the methods currently used to accredit teacher education programs are incapable of distinguishing programs that are successful from those that are not.[1] There are no measures of graduate outcomes currently that make this possible, certainly not literacy and numeracy tests alone.

We do not know the answers to quite simple questions about our teacher education programs, such as the extent to which beginning primary teachers are familiar with recent research on learning to read, or knowledgeable about the maths they will be expected to teach and how students learn it. The TEMAG recommendations should help to rectify this situation.

Because our teacher education system lacks the measures to monitor its performance, there is no basis on which to judge whether current accreditation arrangements are improving the quality of teacher education or not.

The demand-driven model of university funding has not been conducive to higher quality teacher education. No one appears to be taking responsibility for ensuring that supply is matched to demand across all teaching areas. Some universities enrol students with little regard to their prospects of coping with the demands of university courses, or the effects their low entry standards will have on the teaching profession. Tertiary institutions do not have a god-given right to provide preparation programs for the teaching profession.

There are too many teacher education providers and programs, especially on-line courses, without the staffing or resources to provide quality school experience or supervision for students. If the current standards for program accreditation were applied rigorously, some programs would lose accreditation, or fail to gain it.

A national, or a nationally consistent, accreditation system?

The ACER report pointed out that Australia was more likely to have an effective accreditation system if the eight states and territories did what most professions did long ago - delegate the accreditation function to a single national body with strong professional representation. The current state and territory borders no longer match the reality.

Some universities have campuses in more than one state. On-line programs have proliferated, recruiting students from several states. Many teachers graduate in one state and teach in another. Jurisdictions like Tasmania, the ACT, the NT, SA and WA have five or less providers making it difficult to make hard decisions about local providers in the local political context. It made little sense to stick with the present inefficient and ineffective system.

Consistent with this view, TEMAG recommended that:

> *"The Australian Government establish a national initial teacher education regulator through a reconstituted Australian Institute for Teaching and School Leadership (AITSL) to overhaul and manage the accreditation of initial teacher education programs, and work with the states and territories to ensure rigorous accreditation processes operate with teacher registration"* (Rec. 4).

This is arguably the most important recommendation in the TEMAG report. Unfortunately, the Australian Government did not support the idea, leaving us with the present situation, which we know is not as rigorous as it needs to be. There is uncertainty about who is responsible for what. Accreditation is a responsibility of State and Territory Ministers. Yet the Federal Minister is responsible for the quality of higher education.

Needed: A national teacher education curriculum project

In the event, the Federal Minister for Education has asked AITSL, a body responsible to the Federal Minister, to develop more rigorous methods for assessing graduates for state and territory regulatory bodies to apply. This will be a complex and expensive operation if the assessment methods and processes are to meet the necessary standards of validity, reliability and fairness.

While new teachers should be literate and numerate at a high level, we should keep in mind that literacy and numeracy tests are not a valid basis for measuring the quality of teacher education programs. If there is any validity to the argument for literacy and numeracy testing, it is at the entry, not the exit stage of programs.

In measuring outcomes, priority should instead be given to developing valid methods for assessing the professional knowledge and teaching skills that graduates should had mastered in their specialist area of teaching by the end of their teacher education programs. These assessments should largely be common for all programs within each specialist field (e.g. primary teaching; secondary mathematics), as befits preparation for a profession. There is little difference, for example, between what primary teachers in Tasmania or Western Australia should know and be able to do to teach reading or mathematics.

While the TEMAG rightly points to the need for better outcome measures, we need to be careful not to allow the assessment tail to drive the curriculum dog. We need first to develop a *National Curriculum for Teacher Education*, clarifying what beginning teachers should know and be able to do in the first place.

National clarity and consistency about what future teachers should have the opportunity to learn will be essential if a valid and reliable accreditation system based on graduate outcomes is to be achieved. This work should begin with the current Australian Professional Standards for Teachers (APST) and flesh out what those standards mean for each of the specialist fields that make up the teaching profession as a basis for developing valid outcome measures.

This would be a major and worthwhile project bringing our best teacher educators together with the profession in developing a national curriculum and assessment framework for graduate teachers. (Just think of primary teacher educators and teachers coming to a common understanding of what a graduate should know about recent research on learning to read, or what teaching skills they should be able to demonstrate in managing and monitoring student learning.)

The current graduate level standards provide the headings for such a curriculum, but not the detail. Developing a national curriculum and assessment framework for graduate teachers should be seen as a major research and development project that will take at least three to four years to complete. We should not rely on assessments developed by other countries. Australia has the capacity to develop its own rigorous framework for assessing beginning teachers' professional knowledge and skills.

A new model of accreditation is needed

The traditional 'big bang' approach to accreditation is not working and needs to be supplemented or replaced by a simpler model based on continuous and longitudinal data about program outcomes. In the current model, the accreditation 'event' takes place once every five years or more. It requires universities to devote major resources in collecting evidence about courses, staffing and resources – mostly 'input' data that provides assessors with little reliable information about how effective a program actually is. It is a poor basis for improving program quality and effectiveness.

A new model is needed based on data collected annually across a range of indicators and measures. These measures should be based on an assessment framework showing how they cover all seven standards in the APST and the APS. Essential indicators include:
- Data about the academic quality of entrants and their course progression
- Measures of impact and outcome including:
  * assessments of *knowledge* about students and how they learn, content knowledge and pedagogical content knowledge
  * assessments of *performance* using observations and structured portfolio tasks during intern or induction periods
- Surveys of first year teachers about perceptions of their *preparedness* for the first year of teaching.
- Surveys of cooperating schools about the *quality of clinical practice* and their partnerships with universities.
- Indicators of employer satisfaction.

The new model would aim to build a longitudinal data system useful to universities as they monitor trends in the outcomes of their programs and adapt courses accordingly; and more useful to regulatory bodies as they seek to promote continuous improvement in the teacher education system and monitor its quality.

Selection

The TEMAG recommendations that more rigorous selection methods for entry to teacher education programs be implemented should also to be welcomed. It is noteworthy that 'selectivity' is one of the key criteria for accrediting teacher education programs in the USA and the UK; programs are assessed in terms of the academic quality of the students they are able to attract.

Courses with higher entry standards attract higher quality students academically. (Some states like NSW are already on the right track in this respect.) Research also indicates that the quality of a teacher education program and the academic background of entrants are inter-related. The prior knowledge and level of achievement of entrants affects the quality of teaching and learning activities in a university program as well as the intellectual demands lecturers can place on them.

Some Australian university administrators rationalise or downplay concerns about their low entry standards, sometimes revealing a misplaced conception of social justice, as if the role of teacher education programs is to remediate limitations in secondary education. Teacher education programs cannot be both remedial programs and high quality professional preparation programs. There is no social justice in sending poorly qualified teachers to teach students in disadvantaged schools.

There is no need to become embroiled in debates about the validity of ATAR scores as predictors of university success to recognise we have a problem. Over the past ten years, we have reached a point where almost everyone who applies now finds a place in a teacher education program. Fewer and fewer of our most successful Year 12 students are applying. In 2013 less than 7% of Year 12 students entering undergraduate programs in Victoria from Year 12 had ATAR scores of 80 or more, out of nearly 5000 entrants, compared with at least 50% for other university programs.

Some universities are ignoring the spirit of the current Program Standards for accreditation, which require entrants to undergraduate programs to be selected from the top 30% of Year 12. In 2015, the proportion of offers to students with ATAR scores less than 60 was over 30% (2236 students). Over 58% had scores less than 70. The proportion of Year 12 entrants in undergraduate programs with ATAR scores less that 50 doubled over the past three years.

While it is true that nearly 50% of applicants do not come directly from Year 12, the evidence indicates that their ATAR scores are even weaker than for those entering direct from Year 12.

The TEMAG recommendation for greater transparency in selection methods should be embraced by all regulatory bodies. However, it is a symptom of, not a solution to, the real problem.

Australia has a recruitment problem more than a selection problem. While there is no doubt that selection standards should be high, tougher selection alone will not ensure that

many more of our brightest graduates will see teaching as an attractive career option and increase demand for places. Surveys of secondary school students indicate that long-term salary prospects and status are the main reasons why abler students are not choosing teaching, even though they regard it as an important profession.

These are responsibilities that rest with our governments and, ultimately the public. The policy goal should be to ensure that Australia attracts sufficient students from the top 30% of the cohort, making selection a non issue. Australia is unlikely to match the quality of teacher education graduates in high-achieving countries unless concerted policies are in place that enable teaching to compete with other professions in salary and career development terms and thereby to attract a much higher proportion of entrants with a successful academic track record.

What is the theory of action underlying the TEMAG report?

In a recent article (*The Australian*, March 28, p. 10), Ben Jensen, a member of TEMAG, articulates, perhaps more clearly than the TEMAG report itself, how its recommendations are designed to improve teacher education. In contrast to the evidence from several international studies that high achieving countries apply strong filters at the point of entry to teacher education programs, TEMAG argues for strong filters at the end of these programs. Jensen states that:

> "Reforms are more effective when they focus on the later stages of teacher education, closer to when teacher seek their first job in schools rather than selection into education degrees."

This statement is not consistent with findings from international research on teacher education. The evidence is that high achieving countries apply strong quality assurance mechanisms at *all* three stages above. It is not a question of either one or the other.

In a recent study of teacher education programs in seventeen countries[2], ACER found that countries that do well on international tests of student achievement have strong quality assurance policies and mechanisms at all three stages of a teacher education system. They make teaching an attractive career option for high academic achievers, they match supply to demand and they set high standards for admission to teacher education programs. They have regulated teacher education systems and rigorous procedures for the accreditation of teacher education programs. And they require and support a period of mentored induction or residency coupled with rigorous assessments of readiness for full entry to the profession.

The theory, as expressed by Jensen, seems to be that if we introduce valid and reliable methods for assessing the professional knowledge and performance of graduates, and the results of these tests are made public and used to determine accreditation, then providers will see that it is not in their interest to enrol students who are likely to fail four years later.

This is, of course, the theory that is supposed to be in place already. It is the way accreditation and registration are supposed to work – they go hand in hand. A course should not be accredited if its students fail to gain registration. Teachers should not be registered if they have not graduated from an accredited program. There is nothing new about the theory. The problem has been the implementation. Current accreditation and registration practices lack rigour. (And no one I know is arguing that "simply regulating higher entry requirements" is the answer – this is a straw man line of argument.)

The ACER report argued that the theory is more likely to work if we have one national accreditation authority rather than eight state and territory accreditation authorities. And that a great deal will depend on the validity and reliability of other, yet to be developed, outcome measures. As mentioned already, literacy and numeracy tests are not a valid basis on which to evaluate the quality of a teacher education program. We need measures better tailored to what graduate teachers should know and be able to do as a result of their teacher education program.

Who should be held accountable for the quality of recent teacher education graduates and their literacy and numeracy levels? Before we blame teacher educators, we might keep in mind that these levels may be more a measure of the difficulty they face in attracting sufficient numbers of high quality students - because our governments, and we as a society, do not place sufficient value on teachers' work. If university administrators do not feel accountable for the low quality of applicants currently, will they accept fewer students with low ATAR scores because those students might fail a literacy and numeracy test four years later at the registration stage?

Final reflections

The brief for TEMAG focused on important issues and its report is providing a catalyst for needed reform in outcomes-based accreditation, greater transparency in selection, in school-partnerships and quality practical experience. However, its scope was narrow in relation to the range of issues that Australia needs to address if all entrants to the teaching profession are highly qualified and competent - and in relation to the stakeholders who needed to be around the table if its recommendations were to be embraced and implemented.

The quality of new teachers should be seen as a shared responsibility between governments, the profession and providers of teacher education, for which each should be accountable. 'Teacher quality' is a key component of Government policy, but it is an empty slogan without action to make teaching as attractive to our ablest graduates from secondary schools and universities as other professions. Nearly 30,000 students enter teacher education programs each year, two thirds of whom enter undergraduate programs. Of these, less than 50% have ATAR scores in the top 30%. We cannot ignore the need to ensure that sufficient numbers are recruited from the top 30 % of the age cohort.

It is time that the profession had a stronger voice in matters vital to its future – in particular, decisions about who gets into teacher education, who is eligible to train them, what future teachers should learn in their courses, and finally, who gains registration and full entry to their profession. In the CAEP model of an independent national professional body, teachers' professional associations are deeply involved in the all three stages as partners with providers and employing authorities. Potentially, the TEMAG report presented an opportunity to engage the profession more deeply in these matters. It is to be hoped that these opportunities will be taken up as the TEMAG recommendations are implemented.

Endnotes

1. Ingvarson, L., Reid, K., Buckley, S., Kleinhenz, E., Masters, G. & Rowley, G. (2014). *Best Practice Teacher Education Programs and Australia's Own Programs*. Canberra: Australian Government. **http://docs.education.gov.au/ system/files/doc/other/best_practice_teacher_education_programs_0.pdf**

2. Ingvarson, L., Schwille, J., Tatto, M., Rowley, G., Peck, R. & Senk, S. (2013). *An analysis of teacher education context, structure, and quality-assurance arrangements in TEDS-M countries. Findings from the IEA teacher education and development study in mathematics*. Amsterdam: International Association for the Evaluation of Educational Achievement.

Teacher education, an easy conservative target

Neil Hooley

It has been obvious for some time now that criticism of the Australian public education system has shifted from teachers to teacher education. Conservative commentary on national and international test results for example, may express alarm at perceived trends, curriculum directions and indeed imagined approaches to teaching but without identifying the specific role of teachers. It is however, common for assumed educational anguish to be seen as the fault of teacher education conducted by (some) universities with inadequate discipline and rigour.

Could it be that conservative newspaper editors and columnists, corporate executives, consultants, think tank operatives and politicians have realised that the Australian community understands the difficult job of teaching and that the outcomes of primary and secondary schooling are reasonable? Could it be that neoliberalism is demanding more of public education in economic terms and is attempting to narrow the social purpose and educational basis of schooling by squeezing those who prepare teachers as much as possible? Then again, could it be that while a university sector has important economic functions, incessant criticism will help reduce public funding for them and release billions of dollars for use elsewhere? In other words, a balanced evaluation of public education and teacher education cannot be decontextualized, or be considered in isolation from all the political, economic and cultural factors that impinge on their organisation and responsibilities.

Literacy is a case in point. For decades now, conservative critics in many countries have embarked upon relentless denigration of approaches to teaching that emphasise the active use of language for meaning. That is, language use, understanding and meaning arise from the interaction of participants as they live and collaborate within networks of human practices and experiences (Hansen, 2006). Within these settings, all learners respond to the actions of others and by so doing, create their own meaning of the situation encountered. It is through this process of dialogue and communication that language is explored, its structures and

Dr Neil Hooley is a lecturer in the College of Education, Victoria University, Melbourne. He teaches in the Master of Education and Master of Teaching programs and has experience of working with pre-service teachers over many years. He strongly supports school, university, community and union partnerships for improving the democratic education of all concerned.

conventions investigated and its expression appreciated. Here, language, or more generally learning across all knowledge, is social and democratic, available for adoption by each person in their own way at a particular time. Each person develops their own perspectives on language and learning, which is a democratic right for each person and is valid for each person precisely because it is their own as they progress and grow. As each perspective is refined over time through the experience of different conditions, it is brought into alignment with accepted understandings, valued by others including teachers and schools.

Literacy is a convenient target by conservative critics because reading and writing are seen by most countries around the world as being central to their personal and economic culture and are experienced in some way by all citizens. It also enables trenchant if not ignorant criticisms of public education to be made as an attack on the ideology of "public" itself. Interestingly, or at least until now, while literacy and numeracy are often spoken of together, numeracy has not come under the same scrutiny. This is because of the highly conservative approach to school mathematics that occurs around the world and how this can usefully be employed to sort and filter the outcomes of schooling (Teese, 2014). Rather than accepting national and international test results as the basis of criticising public schooling, the discussion above indicates that informed criticism needs to be turned to the nature of such tests themselves.

It would seem strange to set a series of gymnastic exercises for children who have not been involved with gymnastics. In other words, there should be an affiliation between the experience and the task before any validation of outcomes can be made. Unfortunately the dominant feature of mass testing around the world has exactly this flaw, the wrong epistemological basis, where it is assumed that all children need to be inducted into a form of rationality or world view that is fixed and must be accepted (Apple, 2013). As mentioned above in relation to literacy, this is not how humans learn. Mass testing does not allow for dialogue and communication to be explored and exhibited as learning occurs, it does not accept different perspectives by children as they experience the complexities of life, concepts and social practices and it does not respect that learning must be a democratic process where viewpoints cannot be imposed at any one time.

This establishes a different purpose for formal schooling of course, not induction into and acceptance of a narrow, predetermined and technical rationality, but a continuing process of democratic dialogue and communication as all children seek meaning through their collaborative and social communities (Biesta, 2006). The dominant conservative view accepts that the main function of modern schooling is to pass on privileged knowledge rather than for children of all social and economic backgrounds to construct their own

knowledge and understandings. For some reason, both conservative and progressive comprehensions generally accept the ideology of statistics and numbers without critique. This is a mystery given that critique is usually seen as a process for pushing thinking and knowledge forward. The dominance of mass testing with its numbers, charts, diagrams and trends is a difficult ideology to combat.

It is within this political and economic context that any review of education and teacher education must be considered, that is, in part, continuing conservative attacks on public education, reduced funding for universities and increased costs for students, perceived incorrect approaches to literacy in schools, the dominance of highly conservative national and international testing and deficiencies in teacher education programs. This process is occurring in similar countries, with the latest salvo in Australia being the federal report of the Teacher Education Ministerial Advisory Group (TEMAG, 2015). As was to be expected, the report focused on five themes involving enhanced quality assurance for teacher education courses, improved selection procedures for entry to teacher education courses, more structured practical classroom experience for pre-service teachers, more robust assessment regarding classroom readiness for teacher graduates and better national research and workforce planning capabilities. These are legitimate areas to raise and they need to be debated fully by all stake holders. Some brief comment on this debate is outlined below:

- The authority for the design, implementation and evaluation of university courses rests with the independent academic board. There are usually program reviews every three years and amendments or major changes need to be documented and approval sought via course committees, faculty boards and ultimately the academic board. In the states and territories, teacher education programs are approved by appropriate registration authorities and requirements for employment are decided by employing authorities. It is correct therefore, for the federal government to not endorse the recommendation from TEMAG that a new national regulator of teacher education courses be established, in an attempt to direct university and state procedures already in place. In accord with what happens now, universities will continue to collaborate with a range of organisations in developing and improving courses, but the historic independence and authority of the academic board will not be undermined.

- Currently, about 50 percent of pre-service teachers have been selected on the basis of ATAR scores, with the other 50 percent applying through mature age processes, interviews, portfolios and work experience together with personal and educational references. Across Australia, the vast majority of pre-service teachers who have applied via an ATAR score fall within the 60-85 ATAR bracket. Serious questions arising

from this include whether education should seek a higher proportion of applicants with an ATAR above 90, whether the proportion within the majority band is grouped towards the lower end and whether applications below 60 ATAR should be accepted? There is limited evidence that can correlate highly dubious ATAR scores with quality teaching some years into the future (Ravitch, 2013). To do so would at least require substantial research regarding the nature of teaching and learning noted above. If higher ATAR is argued as being required to say 70 for the majority, then this means that the most important debate in Australian education involves increasing ATAR by a few points for more applicants. TEMAG did not recommend an increased ATAR as a measure of quality, indicating the difficulty of arguing this point from an informed perspective and arguing the proposition that having a majority of applicants in the 60-85 ATAR cohort engaging quality teacher education programs, is inadequate.

- Most universities around Australia and in a number of similar economies are progressively implementing two-year graduate Master of Teaching (MT) degrees (Hulse and Hulme, 2012). There are many difficult questions yet to be completely investigated regarding the MT including their balanced and integrated nature, the extent of school experience according to available resources, their research orientation and their distinctiveness as courses operating at the masters' level involving scholarly and socially-purposive studies. For these degrees to contribute to an improved quality of graduate outcomes, especially in the early years of teaching, they need to reject a more-of-the-same approach and ensure that collaborative partnerships are established between teachers, pre-service teachers and university staff so that the experience of school students is enhanced. This is a complex outcome to describe, but data needs to be obtained that perhaps focuses on small groups within schools and the learning that proceeds within the conditions that exist for that group of practitioners. Again, TEMAG did not recommend two-year graduate programs, but given national and international trends this will occur as teacher education continues to seek improvement in curriculum, teaching and learning quality.

- Most unfortunately, TEMAG did recommend a literacy and numeracy test for all pre-service teachers. In view of the discussion above regarding the conservative, incorrect and dominant ideology of mass testing, this must be rejected by the profession. Not only does it directly challenge the authority of academic boards and university programs, but it further reinforces the wrong view of knowledge and learning (Hursh, 2008). It is unclear whether the test is intended to be administered before graduation, that is, as part of a teacher education program, or before registration. It would seem apparent that the test will require a fee, will be administered and assessed online

with a minimum pass rate of say 85 percent, but whether or not multiple attempts will be allowed has yet to be decided. In addition to the discussion above, it seems likely that the tests will be of a simplistic, multiple-choice variety, although major test developers around the world are considering tests that purport to measure creativity, imagination, problem solving and text-based responses (Robinson, 2014). These will take some time to develop and may still require simplistic responses. In making this recommendation, there is strong evidence that TEMAG is gripped by the ideology of narrow, neoliberal measurement that they perceive as meeting the needs of the economy rather than the education of the citizenry.

- For many years, most universities have used a range of assessment processes for pre-service teachers regarding graduation and readiness for classroom teaching. These include sophisticated portfolio discussions over time, interviews on professional issues immediately prior to graduation, school and mentor reports usually based on registration requirements and tutorial projects and presentations that closely link school and university understandings. This is a complicated area as the purpose of pre-service teacher education is to ensure that criteria for graduating teachers are obtained and that graduates are ready to take their place as active, agential members of the profession. If this has not occurred, then many teachers have not mentored pre-service teachers well and many principals and school selection panels have made terrible mistakes in employing graduates. More data are required however on graduate outcomes, to ensure that the education profession is strengthened each year and that schools are ensuring that high quality induction programs are provided for all new entrants. Stronger partnerships between schools and universities are also an essential aspect of this process, bearing in mind that, like schools, the pressure on budgets can seriously diminish the resources required.

So, what can be said of the TEMAG report overall, commissioned as it was by a neoliberal federal government and a right wing activist minister? Will it make a difference? In the recent federal budget, an additional $16.9M was provided for the Australian Institute of Teaching and School Leadership (AITSL) to implement various recommendations of the report. This indicates a serious commitment but, as noted above, some areas of criticism of teacher education will be targeted, others not. Whether the report will have an impact, in which areas and to what extent, is a matter for members of the profession, particularly those located in universities themselves. There are many government reports that should not have any impact after all.

As a first step however, the profession as a whole needs to safeguard the historic independence of university operation through their academic boards, while at the same time,

come together on areas of teacher education that need improvement. The profession needs to act as it always should, in recognising weakness and in supporting a strengthening of its work, while rejecting that which is ill-informed and inappropriate. There will be continuing conservative and progressive debate on university selection, the conduct of university programs and graduate outcomes, but this must occur by taking into account the neoliberal agenda for constricted, undemocratic process and ill-conceived, inaccurate and anti-public accountability measures. The profession as a whole also needs to acknowledge that university teacher education programs are constantly under review and have been moving in a direction already identified by national and international debate and literature. The question is not whether TEMAG will impact on the profession, but how the profession pursues its historic purpose in the interests of the broad citizenry for justice and knowledge.

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The search for a teacher education 'fix'

John Loughran

The recent Teacher Education Ministerial Advisory Group Review (TEMAG), not unlike the very many that have preceded it, outlines that which could reasonably be regarded as the major or most pressing issues that influence the nature of teacher education and the foundations for the profession of teaching. Naturally, my response to the report is coloured by the experience I have of teacher education in my own institution (Monash University) and the manner in which generalized claims and recommendations stand up to scrutiny with regard to that specific context. Therein lies one of the difficulties for a report of this kind, no matter how it is worded, the perception created is that teacher education is in need of 'fixing' and that the teaching profession itself is somehow lacking. However, if the simple view of fixing is to carry merit, then questions around appropriate levels of resourcing, career development, recognition and reward for excellence, and creating conditions for better valuing the work of teachers and the sophisticated practice of teaching must be to the fore. Sadly, it appears as though the notion of fixing is based on increased compliance measures and doing more with less. Disheartening as that may be, the general areas of concern in the report clearly warrant deeper consideration.

TEMAG put forward 38 recommendations which can be grouped under five themes (outlined below) and the Federal Government response to the report ambitiously suggests that fixing the problems will take two years. Rather than outline each recommendation and the implications associated with what it might mean to implement them, I briefly consider the five themes with regard to a university system that clearly has a diverse array of teacher preparation programs.

John Loughran is the Foundation Chair in Curriculum & Pedagogy and Dean of the Faculty of Education, Monash University. John was a science teacher for ten years before moving into teacher education. He is well regarded in the fields of teacher education and science education. John was the co-founding editor of *Studying Teacher Education* and is an Executive Editor for *Teachers and Teaching: Theory and Practice* and on the International Editorial Advisory Board for a number journals including *Teacher Education Quarterly*, Journal of *Reflective Practice* and *the Asia Pacific Forum for Science Teaching and Learning*.

1. A strengthened national quality assurance process

It seems reasonable to suggest that teacher education providers should be able to attest to the quality of their programs. The use of the Graduate level of the Professional Standards is one basis for so doing and many teacher education programs are structured in ways that appropriately take account of, and respond to, those Standards. Ensuring quality in teacher education, like all other aspects of degree programs in universities, tends to be heavily scrutinized internally with such things as: graduate attributes; employability; professional growth and development; consistency of purpose, teaching and assessment; and professional experience, all forming key aspects of ongoing measurement and evaluation. Thus, in many ways, teacher education programs already need to be responsive to at least two forms of quality assurance - the existing internal institutional measures and the external measures and expectations set down by accrediting bodies.

Just as the internal measures are continually refined in order to ensure ongoing and continual improvement, so too the same matters for accrediting bodies. That is an evolving process that clearly needs to be responsive to the changing times, issues, needs and expectations associated with completing a quality degree program and preparing graduates for their world of work. Obviously, developing consistency across a national system is a demanding task as institutions vary in that which they offer, how and why, and do so in response to their specific context.

Using standards to inform program development whilst also being able to move beyond them, is crucial. Especially so in light of the fact that universities are self-accrediting institutions. Failure to make clear the quality of their programs must inevitably impact that which is possible and viable. A debate to be had is around that which might define quality at more than the level of desk audit compliance. Resourcing then obviously matters. If compliance costs compete for the availability of program resources, quality must be negatively impacted. That would not be a helpful outcome.

2. Sophisticated and transparent selection for entry to teaching

There is no doubt that the teaching profession requires members with strong academic skills and personal qualities. Selection into teacher education can be a challenging issue. However, it is crucial to recognize the difference between teacher education programs and what selection means in that regard. For example, post-graduate programs by their very nature mean that prospective students have already completed an undergraduate degree. That clearly makes a major difference as to who is able to consider teaching as a career. The academic skills and ability of graduates have already been shaped by their first degree

program in another area of a university (Science, Commerce, Arts, Engineering, etc.) and will be further impacted by their work in teacher education. Successfully completing a degree is surely a measure of ability that matters in defining entry. So a question that must first be asked concerns the level (under-graduate or graduate) of program offerings in order to better understand to what extent and across what program type substantive selection issues are being raised.

In a similar vein, double degree programs typically need to respond to selection criteria from two disciplines (e.g., Bsc/B.Ed). A case in point is that selection into an Education double degree program at Monash Clayton for 2015 required a minimum ATAR of 85. Although ATAR is not the only measure of quality applicants for program selection, it offers a guide; one that is often seen by prospective students as a proxy for course/program status. So again, defining the level of a program is important in considering selection issues and the generalizability of the issues being raised.

Beyond first (or second, Masters or PhD) completion and ATARs, selection based on personal attributes and experience requires very careful consideration and tends to be very highly resource-dependent. From time to time it is suggested that prospective teacher education students should be interviewed. With thousands of applicants across teacher education courses, it becomes very difficult to imagine how that might be physically possible much less organizationally viable. Despite that, transparency in selection criteria is important and again, should not be something that an institution should shy away from.

3.   Integration of theory and practice

TEMAG rightly states:

> *"Theory and practice in initial teacher education must be inseparable and mutually reinforced in all program components. Pre-service teachers must develop a thorough knowledge of the content they will go on to teach, and a solid understanding of teaching practices that are proven to make a difference to student learning. Professional experience placements must provide real opportunities for pre-service teachers to integrate theory and practice" (p. x).*

This aspect of the report begins to touch on the essential links between teacher education programs and the profession. The need to develop strong and meaningful relationships between teacher education programs and schools is crucial to developing deeper understandings of teaching so that learning about teaching can be seamless across contexts, and that teaching itself is not only an attractive profession, but also a highly valued one.

The nature of the professional experience in teacher preparation is an aspect of teacher education that demands more serious attention. The traditional view of a 'practicum' with a supervising teacher overseeing an individual student teacher does not attend to the complexity and increasing demands associated with being a teacher and developing one's teaching expertise. A professional experience must go beyond an apprenticeship model of learning to teach and become much more about a whole school experience rather than an isolated, individual classroom experience. Experience matters, and the nature of that experience must be defined by more than an industrial approach to 'learning on the job'.

The development of the next generation of highly capable professionals requires serious and meaningful teacher education-school relationships, and that immediately means that resourcing comes into sharp focus. If teaching truly is a profession, the professional experience must be at the centre of a teacher education program. Working in partnership is essential and shapes the possibilities for career development as students of teaching embark on their careers.

Teacher education is a starting point, not an end unto itself, and should set a vision for what it means to develop and grow as a highly valued professional. That can only happen if genuine partnerships are fostered and supported.

4.   Robust assurance of classroom readiness

TEMAG states that:

"Genuine assessment of classroom readiness must capture the complex skills required for teaching. Beginning teachers must be supported to reach their full potential following entry to the profession" (p. xi).

This theme further reinforces the importance of the Professional Experience. How well beginning teachers are prepared for the challenges of full-time teaching begins with classroom readiness, but is perhaps better viewed in terms of career readiness. Again, the need for meaningful partnerships is key to ensuring that the transition from teacher preparation to full-time employment is focused and meaningful.

A crucial aspect of the search for 'robust assurance' is that beginning full-time teaching should not be an isolating, individual experience. The ways in which partner relationships between schools and universities can be used to mentor and support beginning teachers offers an insight into the demands and expectations associated with transitioning into the profession. Robust evidence of developing expertise carries with it expectations that professional satisfaction, reward and value are also available. In so doing, it should be

anticipated that a sense of pride in professional growth and development will lead to greater recognition of the knowledge, skills and ability that underpin quality practice. Teacher education is a starting point for that development, the status of the profession is the key to its enhancement.

5.   National research and capability

The education sector is rightly seen as the engine that drives economic development and change; teachers shape the leaders of tomorrow. Teacher education should be at the forefront of innovation and change. In order for that to be the case, the system itself needs to be able to be nimble, flexible and responsive. A research base that informs the ways in which teacher education programs can push beyond the status quo and lead the development of teaching is a key issue raised by TEMAG. This hints again at the importance of teacher education programs not being constrained by compliance but free to work in different ways in different contexts where informed decisions influence program curriculum, structure and pedagogical action. Typically, universities are about the development of new knowledge. A research base on which the knowledge of teacher education is based should drive development. Teacher education should be research-informed and be able to demonstrate that through the ways in which a program is conceptualized, structured, developed and delivered.

As part of this theme, TEMAG also considered the nature of the teaching workforce and the challenges confronted nationally. TEMAG offered suggestions to assist in addressing teacher shortages in specific subject areas, hard to staff schools etc. TEMAG noted that targeted long-term interventions may be necessary. One long-term intervention that matters, but perhaps went beyond the remit of the report, is the status of teaching itself.

What TEMAG makes clear yet again, is that for all of the time, energy and effort that continually goes into seeking to 'fix' teaching and teacher education, it is difficult to see how the profession itself will be more highly regarded when that issue is at the end of the fix rather than the start. Teaching needs to be seen as an attractive career with recognition, rewards and outcomes commensurate with the knowledge, skills and ability essential to high quality performance. If all of the recommendations from TEMAG lead to changes that impact the status of teaching and that then leads to appropriate professional recognition and rewards derived of enhanced quality in practice, it will be a job well done. If not, the real lever of change will yet again be ignored and the search for another fix will begin.

Understanding the current teacher workforce: supply and demand

Paul Weldon

Introduction

This paper provides a brief overview of the current teacher workforce situation, focussing largely on Victoria. It highlights workforce trends and projected growth, and areas where the collection and analysis of additional data may assist in the targeting of effective policy. The context for reviewing our understanding of the current teacher workforce is the significant rising demand for teachers in most states over the next 10 years.

The rising demand for teachers

Based on ABS Series B projections (ABS 2013), the number of children in Victorian primary schools is likely to increase by about 2.1 per cent per year for the next decade (compared to a growth of 0.2 per cent per year in the previous decade). In 2001, there were 454,126 children in primary school in Victoria. In 2010, that number had risen to 461,732. By 2020 there could be as many as 569,406, an increase of about 23 per cent on 2010 figures, or the equivalent of 449 additional classes (of 24 students) each year for 10 years (see Figure 1).

These are large numbers. The rise in students will flow through to secondary schools from about 2018. State-wide data can only provide a general picture. It is likely that some areas will be affected more than others, such as outer metropolitan growth areas. It is not known to what extent rural and regional areas will be affected. Presumably, some schools will need new buildings while in some areas new schools will need to be built. Additionally, the Catholic sector and independent schools may not have the infrastructure to maintain their current share of students and cope with the resulting high demand. This may lead to a rise in the proportion of students entering government schools, at least in some areas.

So what do we know about the teacher workforce?

Dr Paul Weldon is a Senior Research Fellow at the Australian Council for Educational Research. He has a particular interest in teacher supply and demand and managed the surveys and co-authored the reports for the Staff in Australia's Schools (SiAS) surveys 2010 and 2013.

Number of children in primary schools in Victoria, 1999-2013 and projected numbers, 2014-2025
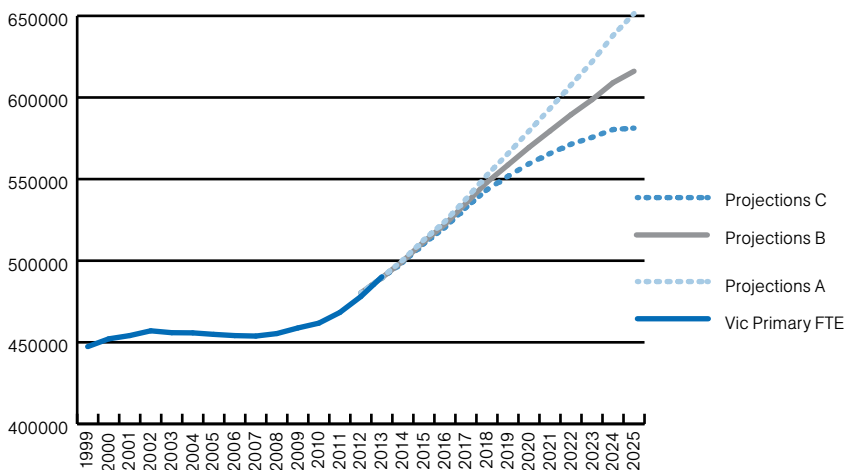
Figure 1. Number of children in primary schools in Victoria, 1999-2013 and projected numbers, 2014-2025

The gender imbalance

In primary schools eight out of every 10 teachers are female and this has not changed in more than 10 years, suggesting that a threshold has been reached. At the secondary level, ABS data show that the ratio of men to women is falling and has been for some time (ABS 2014). In 1981 there were more male teachers (55 per cent) than female: 30 years later, just 42 per cent of secondary teachers are men. The picture is more complex than that, however. The gender balance differs by subject. Data from the Staff in Australia's Schools (SiAS) survey shows that across Australia, about three-quarters of physics teachers are male and more than 40 per cent of them are aged 50 years or older. Chemistry, computing and information technology (IT), and mathematics all have more men teaching in the area than women. Nearly half of the men teaching mathematics are aged 50 years or older. Conversely, only about one-third of English teachers and less than one-quarter of language teachers are men (Weldon et al. 2014).

This suggests that physics, computing and IT, mathematics and chemistry remain largely male-dominated subjects and are more likely to suffer a shortage of teachers as men teaching these subjects retire.

Out-of-field teaching

Little is known about the extent of out-of-field teaching. SiAS data[1] shows that about 20 per cent of mathematics and physics teachers are teaching out-of-field, as are 25 per cent of history teachers, 30 per cent of teachers in computing/IT and 40 per cent of teachers in geography (Weldon et al. 2014). Out-of-field teaching in subjects such as mathematics and physics is likely to become more prevalent over the next 10 years if the forecast rising demand for teachers is not addressed on the supply side.

Part of the reason for out-of-field teaching, and one of the reasons the ratio of students to teachers (about 15 to 1) is much lower than average class-size, has to do with the size of schools in Australia. About 35 per cent of secondary schools enrol fewer than 400 students (including the total enrolment of combined primary and secondary schools), and this is more common outside the major urban centres. Schools are generally expected to teach a diverse curriculum, regardless of size or location. Thus each school needs to have the teaching staff to cover that range of subjects, even if the classes are very small. Small schools and small classes require more teachers. This is particularly the case at the senior level, where the average class size across Australia drops from about 23 students in Years 7 to 10 to between 14 and 17 students in Years 11-12 (McKenzie et al 2014).

The rise of part-time teachers

Teaching is increasingly a part-time profession (see Figure 2). About 27 per cent of primary teachers are part-time and 20 per cent of secondary teachers (31 per cent of female primary teachers and 27 per cent of female secondary teachers) (Weldon 2015).

Employment flexibility has advantages. It allows people with young families or aging parents scope to manage their family commitments and still participate in the workforce, and older people are also continuing to work but at reduced hours. Job-sharing may make it easier to cover illness and holidays. On the other hand, additional administration is likely to be required to manage timetables and job-sharing, and part-time teachers have fewer opportunities to access professional development, to innovate, redesign and plan lessons, to collaborate with colleagues or team-teach, or to find new resources.

There is also potential for the wider life and community of a school to be impacted. Part-time teachers may be less likely to participate in co-curricular activities, to be assigned a class of students, or to take on coordination roles. This may adversely impact full-time teachers. As the part-time teaching workforce grows, schools will need to carefully manage expectations to ensure that part-time teachers are able to participate fully.

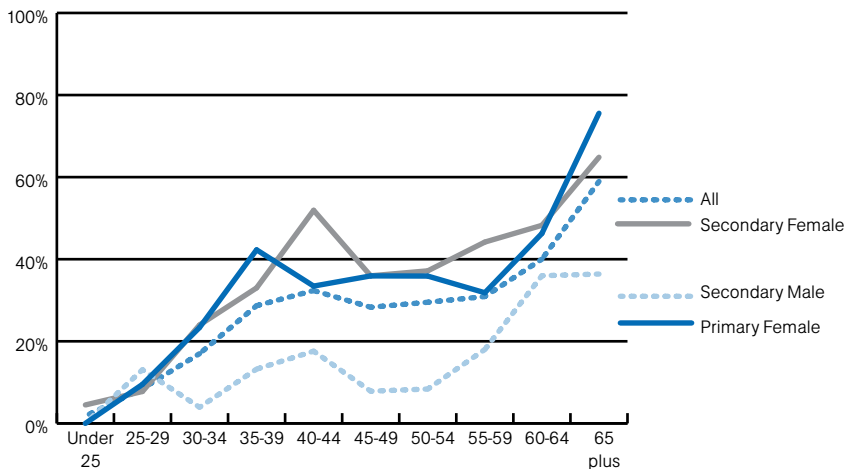**Proportion of teachers working part-time, by age and gender**

Figure 2. Proportion of teachers working part-time, by age and gender, Australia, 2013

Note: Male primary teachers are not included due to the small sample size in SiAS 2013.

Research into the factors constraining teachers to part-time work may result in policies aimed at encouraging greater workforce participation.

The supply of teachers

A lot more is known about the current teacher workforce and the likely demand for teachers than is known about the pool of teachers available to work or the likely future supply of teachers. In part, this is currently due to significant changes occurring in the higher education sector, potentially with more to come.

A high-quality teacher workforce is a necessary component of the provision of high-quality education for all students in Australia. All teachers in Australia are required to be registered and must have obtained the requisite tertiary qualification, for which the minimum requirement is a four-year tertiary degree.

From 2012, the number of undergraduate course places supported by funding from the Australian government was uncapped. The government no longer controls the maximum number of funded places in undergraduate initial teacher education courses, allowing course providers to enrol as few or as many students as they want, or can attract. There has been strong recent growth in undergraduate enrolments in initial teacher education (ITE) courses.

The Australian government, in its 2014-15 budget, signalled the intent to remove the cap on the maximum student contribution to Commonwealth Supported Places (CSP). It is unclear at this point whether the payment cap will be removed. The consequences are equally unclear but are likely to be governed by the extent to which providers raise their fees, the availability of scholarships and loans, their terms, and student willingness to undertake debt.

In 2011, a national approach to the accreditation of ITE programs was endorsed by the Ministerial Council for Education, Early Childhood and Youth Affairs. This new standard required postgraduate ITE courses to be of two-year duration. The new accreditation process is ongoing and one-year postgraduate courses are still widely available. At this stage it is not known what impact the move to two-year postgraduate ITE courses will have on enrolments, particularly in the case of mature-age students considering a career change.

Data from Victoria in Figure 3 show that undergraduate offers and acceptances have seen high growth, while first preference applications to teaching courses are about the same as they were a decade ago. These data suggest that the pool from which additional offers are drawn is either of those for whom teaching was not a first preference, or those with a lower level of academic achievement than has previously been the case. On this basis, the present rates of growth may be unsustainable, given that the pool from which candidates are drawn does not seem to be showing the same levels of growth.
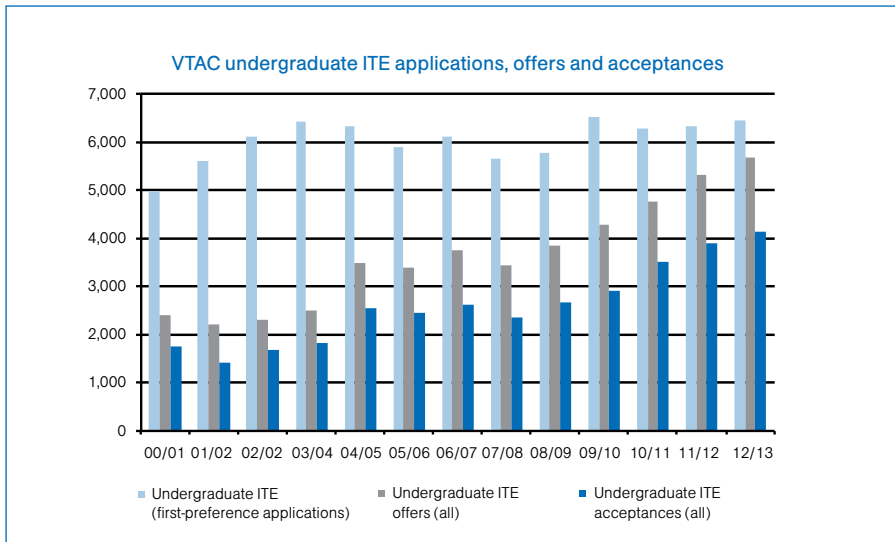

Figure 3. Applications, offers and acceptances for ITE courses in Victoria, 2000-01 to 2012-13

Subject areas

As noted earlier, the teacher workforce is not homogenous. ITE course providers can supply data on the number of graduates in different subject areas. Most secondary graduates, however, graduate with two or more subject areas. It would be interesting to determine what subjects are commonly associated with each other and how schools choose to deploy their teaching staff, given that assigning one staff member primarily to one subject renders them unavailable in other subjects. A better understanding of this area may assist better targeting of potential teachers in shortage areas.

A further area for research is the extent to which in-service teachers obtain the necessary qualification to enable them to teach an additional subject. What courses are offered in this space, what incentives are available for current teachers to undertake additional education, and what impact would (or does) obtaining additional subject qualifications have on teachers, schools, and the wider workforce supply and demand parameters?

The registration process for teachers requires a recognised qualification but does not endorse a registrant for a given level or subject. That is, a registered teacher is a registered teacher, not a registered primary teacher or a registered secondary teacher specialising in history and economics, or a registered teacher (P-10) or a registered teacher (middle years). From a data perspective this represents an enormous gap in our understanding of the teacher workforce, as much of these data are not collected.

Dual qualifications

The Australia-wide source of initial teacher education (ITE) data comes from the Higher Education Statistics (HES) Collection, currently managed within the Australian Government Department of Education and Training. The accuracy of this dataset is difficult to determine. For example, ITE courses that provide a qualification in more than one area (such as early childhood and primary) are not always specifically categorised so it is not possible to categorise accurately all graduates with a primary qualification, or all graduates with a dual qualification.

Graduates with a qualification at more than one level of schooling (i.e. early childhood and primary, primary and secondary, middle years) are becoming more common, with Victorian data suggesting the figure is about 15 per cent of all ITE graduates. Most early childhood qualifications form part of a dual qualification with primary education. Research suggests that graduates with an early childhood and primary qualification are likely to prefer employment at the primary level, for reasons such as better pay and conditions (Productivity

Commission 2011). While preferences and influences on preferences are known to a limited extent, there are no data on the actual destinations of graduates with a dual qualification.

Where to from here?

In summary, the demand for teachers is currently strong and trending upwards, and is forecast to remain high in most states at least until 2025. In addition, the workforce is becoming increasingly part-time and the gender imbalance is increasing, with fewer men choosing to teach. Retiring teachers are being replaced, however certain male-dominated subjects such as mathematics and physics are still seeing an aging workforce and, in these subjects at least, supply does not appear to be increasing.

In Victoria, supply generally has outstripped demand, particularly for generalist primary teachers, and in some secondary subjects. Supply has also increased considerably over the past four years. The extent to which supply has to be maintained at current levels will depend in part on how many of those graduates who have qualified over the last few years, and have not managed to obtain regular work as a teacher, remain in the pool of prospective teachers.

It would be helpful to undertake a more in-depth analysis of population growth, in order to identify locations where teacher shortages are likely to occur. Further study of the experience of graduates in the first five years of their career may assist to identify subject areas and locations experiencing higher levels of attrition, and may assist the creation of policies to increase the retention of early career teachers.

Endnote

1. SiAS does not collect data on whether teachers have satisfied the qualification requirements of registration bodies in different curriculum areas. Teachers are therefore assumed to be notionally qualified if they have studied a subject for at least one semester at second year tertiary or have trained at tertiary level in teaching methodology in the subject concerned. Therefore, the definition of out-of-field teachers in this case is those teachers who have not studied teaching methodology in the subject, and have not studied the subject itself beyond year one at tertiary level.

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Note

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Declining school equity since the Gonski Review

Bernie Shepherd

The *My School* website came in to being in 2010, around the same time that the Review of School Funding ("Gonski Review") began to collect its evidence and the Review used a considerable amount of the data that had been collected by the Australian Curriculum and Assessment Reporting Authority (ACARA). In a sense, the Review's report can be seen as a benchmark statement about the situation of schools at that time. It's now a good time to start looking at some of the concerns raised by the Review to see whether things have changed.

The *My School* website operated by ACARA is now in its sixth iteration and it currently holds seven years of school NAPLAN averages and five years of school finance data for some 9,500 government and non-government schools all around Australia.

For those who aren't daily visitors to *My School*, the site gives access to around ten pages of data about each school's demographics, finances, NAPLAN results and so on. Most of these pages give you useful information about your target school. The last page is different. It lists other schools in the vicinity of the target school, with locations, distances and even a pop-up map of where they are.

With this *'Local Schools'* page, ACARA is emulating a kind of "Good Schools" guide, offering parents the thought that there might be greener educational grass just a few kilometres away and a providing hyperlink so that they can check it out. Whatever else *My School* might be doing, this page gives the website a role and function squarely inside the philosophy of a competitive, marketplace approach to education delivery.

Bernie Shepherd AM FACE is not quite retired. He is engaged in policy research and writing in education and is a serial grandparent, concerned with the future of schooling in Australia. He was founding principal of the first senior high in the NSW state system; formerly a science teacher, active in curriculum development, assessment and professional learning. He was a member of the inaugural Board of Studies in NSW and held executive office in the NSW Science Teachers' Association, NSW Secondary Principals' Council and the Australian Secondary Principals' Association. He is still a union member after some 52 years.

Whether competition is a good or bad thing for education in Australia is not the question I want to pursue here: it *is* a fact of life and this page is one symbol of the choice we have made as a society, through governments of both persuasions, to use competition and choice as a driver of educational quality. That choice has consequence, as this article will show.

The question of equity

The Gonski Review found ingrained anomalies in the way we fund our schools that generate serious inequity in the terms that they defined it, which is to say that *differences in educational outcomes should not be the result of differences in wealth, income, power or possessions*. At the moment, outcomes are very much linked to those differences and the evidence is that they persist right through schooling[1].

In a recently updated paper[2] I draw attention to one, rather direct measure of equity, similar to one found in the Gonski Report[3]. Socio-educational gradient (SEG) is taken to be the slope of the trend line in a plot of school NAPLAN performance against the Index of Community Socio-educational Advantage, or ICSEA. In figure 1, the NAPLAN measure is a composite index derived from each school's NAPLAN averages. The school ICSEA value is constructed by ACARA and reflects some non-school background variables that impact on school outcomes.

Socio-educational Gradient 2010 -2014
Composite NAPLAN Index
■ 2010 ■ 2014

2014 Slope = 37%

2010 Slope - 32%
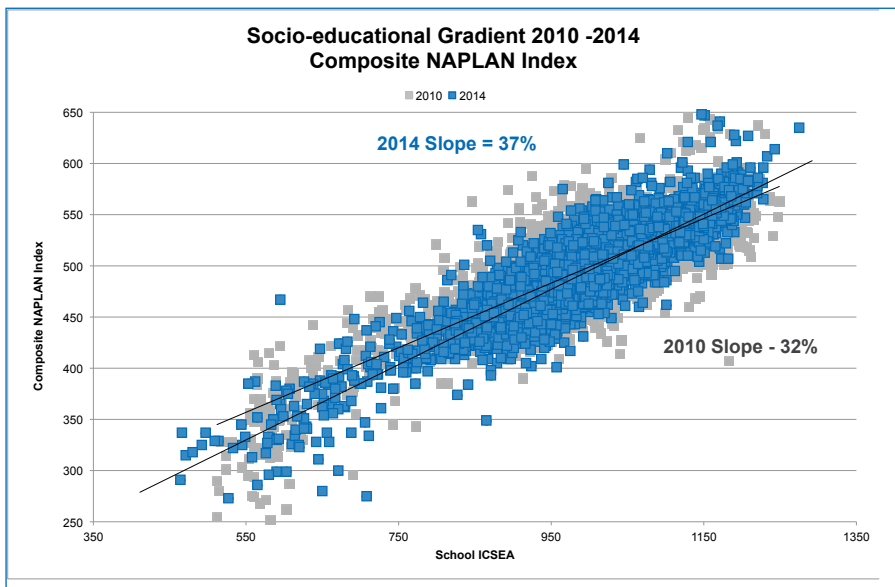
Y-axis: Composite NAPLAN Index
X-axis: School ICSEA

Figure 1 Socio-educational gradients of national NAPLAN data; 2010-2014

The steeper the slope, the more influence those socio-educational factors will be having on outcomes. If they had no influence at all, the line would be horizontal.

In 2010, when the Gonski panel began its work, the slope was 32%. In 2014 the same plot had a 37% gradient. What this says is that schools in the lower range of socio-educational advantage are scoring more poorly on average than they did four years earlier. Conversely, schools in the upper range are scoring better than they did in 2010.

Both of the slopes are lower in the case of Victorian schools (figure 2), however the change in slope between the two measures is rather greater (i.e. 27% to 34%), suggesting that whatever influence has produced the change, it is stronger in Victoria than nationally.
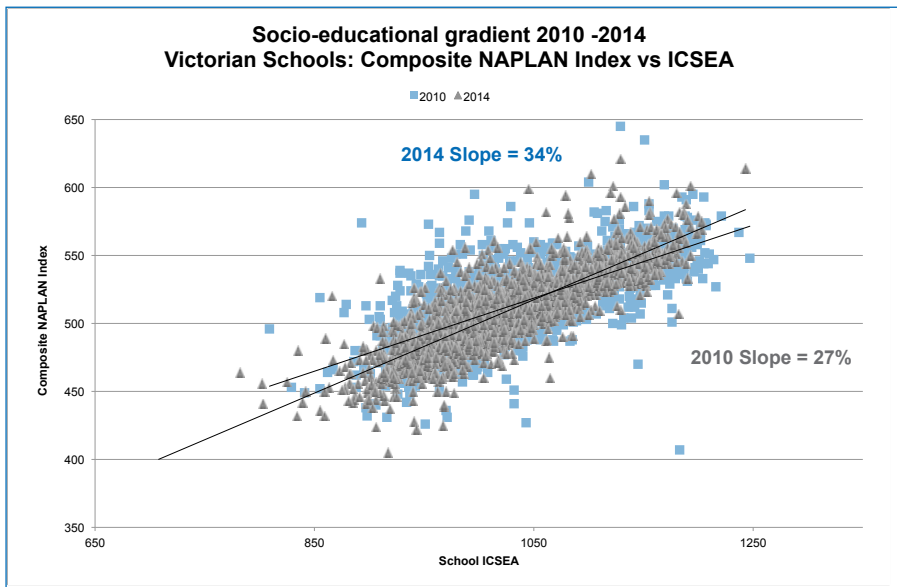
Figure 2 Socio-educational gradients of Victorian schools' NAPLAN data; 2010-2014

Those extraordinary findings over just four years might suggest that the quality of teaching and learning has declined in the low-ICSEA schools and improved in the high-ICSEA schools, but before leaping to such conclusions, we should recognise we are dealing with school averages, not individual student scores and while averages will certainly shift if students' performance changes, they can also shift if the students move out of some schools and into others.

Looking for answers

So which is it? To examine this and other questions I examined the histories of two groups of schools that:

    (i)   appeared on My School with a full range of relevant data from 2008 to 2013 and

    (ii)   were in one of two ICSEA ranges in 2013: 900-950 or 1050-1100.

–and looked at the changes that brought them to where they were in 2013[4].

Mean percentile rank of sample groups based on composite Naplan Index
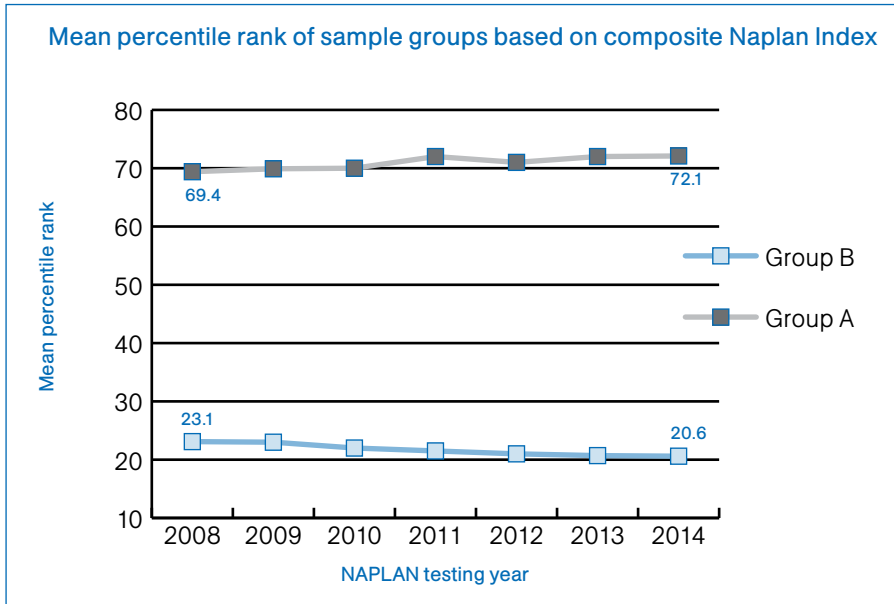
Figure 3 Mean percentile ranking of the two sample groups on a composite NAPLAN Index over time

The NAPLAN performance of the two groups is demonstrated in figure 3. It confirms what the SEG graphs suggested: the rankings[5] of the lower-ICSEA (group B) schools declined over time and the rankings of the higher-ICSEA (Group A) schools rose.

    To clarify what the socio-educational gradients are actually saying, we can now examine some other features of those schools that might have changed over the time, apart from their NAPLAN results.

    The enrolment picture (figure 4) is quite striking. On average, the high ICSEA schools steadily increased in size between 2008 and 2014. At the same time, the enrolment in lower-ICSEA schools contracted.

Figure 4 Average school enrolment of the two sample groups over time. The full lines represent the whole group in each case and the dotted lines represent the subset of Victorian schools.

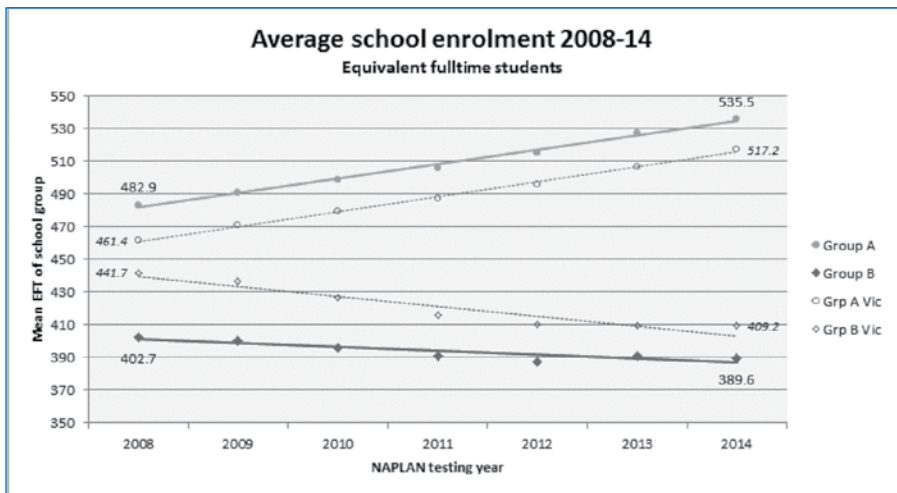The dotted lines represent the Victorian schools sub-set in each sample. Despite the fact that school enrolments increased around the nation, the more advantaged schools have been growing more than - and perhaps partly at the expense of – the disadvantaged schools.

Is it possible to characterise which families are making the move? *My School* publishes percentages of each of the four "quarters" of the national socio-educational advantage (SEA) distribution in each school. It is quite coarse-grained, but it can give us a rough profile of school communities. See figure 5.

In the low ICSEA schools, the proportion of relatively disadvantaged families – the Q1 and Q2 groups on *My School* –seems to have increased between 2010 and 2014, at the same time as their presence in the group B schools appears to have declined. Taking the inverse view, we can say that the proportion of advantaged (Q3 and Q4) families in disadvantaged schools is declining, while it is increasing in the more advantaged schools.

In summary

At the very least we can say that there is an association between the population drift towards more advantaged schools and the increasing concentration of advantaged families in the higher-ICSEA schools. Although it cannot be proved from these data, it is difficult to escape the conclusion that it is the more advantaged families – on average – that are making the transition. Since we know that these families are likely to be the parents of the more

motivated and engaged students, this could easily explain the direction of the changes in NAPLAN performance evident in figures 1-3.
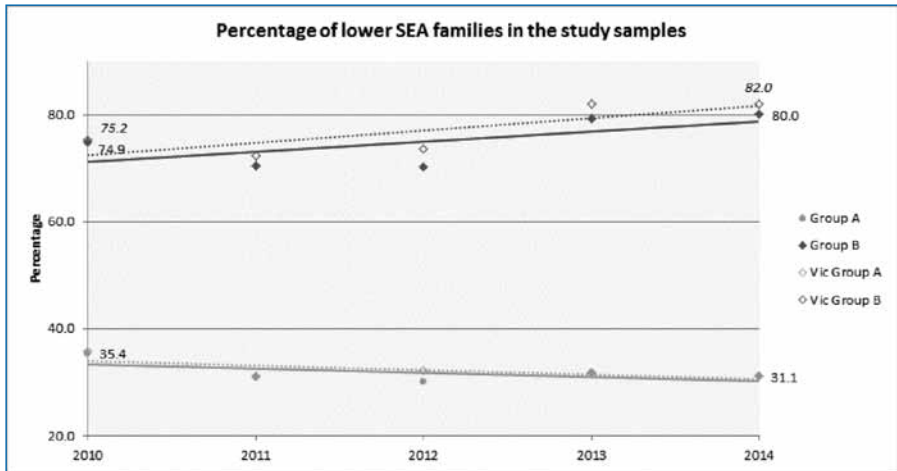

Figure 5 The changes in the percentage of Q1 and Q2 families between 2010 and 2014. The dotted lines represent the subset of Victorian schools. The two group A lines are almost coincident.

So to that extent, the "market forces" policy of encouraging competition and facilitating choice has worked: some students have shifted to schools where academic success is more aggregated; the schools they move to gain the benefits of growth and the resources that brings; and the government benefits too, because student subsidies are generally lower in high-ICSEA schools. The corollary is that the low-ICSEA schools now have a greater concentration of *disadvantage* which is itself a further impediment to success.

In any competition there are winners and losers. If the students who get to move among more advantaged (and successful) peers are seen as the winners, then how do we view the students/families that do not or cannot make such a choice? The children in those contracting, low-SEA schools are equally entitled to the best opportunities we can give them. If a choice we've made as a society puts them at a further disadvantage of our own making, then the least we *should* do is the best we *can* do to redress it.

Redressing the changes

The Gonski Report acknowledges that money, of itself, does not improve outcomes for students: skilled teachers are the key to kids' success at school. Teachers who choose to work day-to-day in disadvantaged schools are among our profession's heroes. The best of them have great ideas and we need to support them as they try innovative and specialised

approaches to the challenges they find. It is a fact that almost all of those innovations and specialisations begin with, or eventually require, spending more money.

So what have we done over the post-Gonski years to help our low-ICSEA group to grapple with decreasing enrolments and increasing disadvantage?
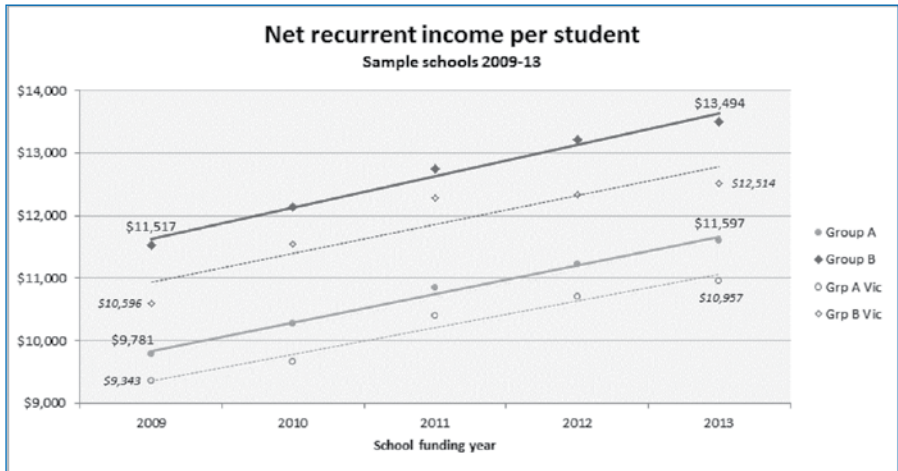
Figure 6 Average net recurrent income per student from all sources for each of the sample groups and the Victorian subsets; 2009-2013

In a national sense, the answer appears somewhere between nothing and not much. The net recurrent funding graphs in figure 6 tell us a lot. We can see that:

(i)   the lower ICSEA Group B schools have consistently received greater funding ($1800 per student each year) from all government and private sources than the Group A schools as we would expect, however

(ii) the rate of funding *increase* was marginally greater for the more advantaged group A schools than for the Group B schools, over the period.

At the state level, Victorian schools in both groups received less funding than the full group average: around $530 per student per year less for Group A schools and $770 less for the more disadvantaged Group B schools.

While the difference between the two groups in terms of their educational need was slowly increasing over the period, Table 1 shows that the difference in their funding was slowly decreasing. This is exactly the opposite of what we would expect of a funding system that was responsive to student need.

		Funding Year					Total Increase
		2009	2010	2011	2012	2013	
Group A	Mean TNR/Student	$9,781	$10,270	$10,845	$11,215	$11,597	$1,816
	Increase (%)		5.00%	5.60%	3.41%	3.41%	18.6%
Group B	Mean TNR/Student	$11,517	$12,132	$12,751	$13,214	$13,494	$1,976
	Increase (%)		5.34%	5.10%	3.64%	2.11%	17.2%

Table 1 Mean total net recurrent income (TNRI) per student for each group; with associated annual percentage increases.

While the two major system providers (i.e. government and Catholic) claim to distribute funds at least partially on the basis of need, we should ask whether the funds that the system providers themselves receive from the public purse reflect student need.

Figure 7 echoes a similar graphic in the Gonski Report. In this case it shows how the quarters of SEA, Q1 to Q4, were distributed across the three main sectors in Victoria in 2014. Government schools come closest to a proportionate distribution, although more than half of their students are from families in the two least advantaged quarters, Q1 and Q2.

By contrast, fully half of the enrolments in Victoria's Independent schools are from the most advantaged section of the national distribution. The Catholic schools sit between the two, with a generally more advantaged profile than government schools, but a considerably less advantaged profile than Independent schools.

So we might ask the question: did government funding (i.e. exclusive of parent contributions and other private sources) over the past four years reflect those differences in need?

SEA quarters distribution 2014 - Victorian Schools

Figure 7 Socio-educational advantage (SEA) quarter distribution for Victorian Schools by school sector: 2014

Q4 is the highest SEA: Q1 is the lowest SEA
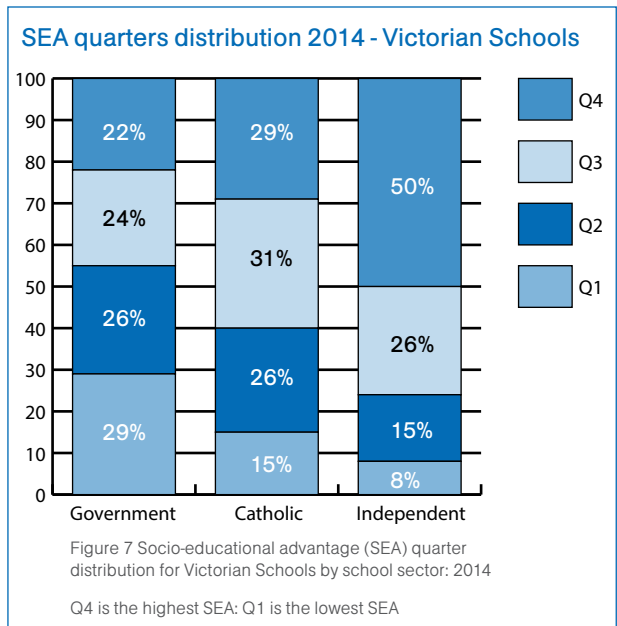
According to figures reported on *My School*, the total of state and federal government funding for Victorian government schools increased at about 2.7% per annum since Gonski and up to 2013. Over the same period, government funding of non-government schools increased by around 7.5% per annum. Whatever the basis for the funding decisions might have been, student need appears to have formed little or no part of it.

The Gonski review's solution

The former federal government wrote a new formula for school funding into the Australian Education Act, 2013. In the full paper, I attempt a "back-of-the-envelope" calculation to see what difference, if any, this Gonski-principled funding might have made to the metropolitan government schools[6] in our Group A and Group B samples in 2014. The details are in the paper, but the bottom line seems to be that in attracting a loading of only around 0.3 (i.e. an additional 30% of funding) for social disadvantage, those particular schools would not have received much more than they would from current projections. Which raises the question: does the new formula do what we want? If it leaves our Group B schools still struggling, then the answer would probably be "No".

This is where I must point out that the Gonski review took pains to say that their initial loadings were intended for 2014 only and they recommended ongoing research to build a more solid evidence base for the numbers. So far as I am aware, that work has not been done, but if we look at overseas examples – always a problematic exercise –we find funding interventions for social disadvantage that were successful in eliminating differences involve loadings beginning around 0.65 and going over 2.0 in some cases.

Most of the public debate on Gonski has been about dollar totals and their rollout – or not. We've allowed the public and some governments, it seems, to forget that the major recommendations of Gonski pictured a sector-blind process that would ultimately sweep aside ad hoc, opaque and educationally unjustified arrangements that successive governments have made with school system operators. The educational needs of children were to be the determining factor, irrespective of who ran their school.

As we have seen from this analysis, current methods of determining school funding aren't coming anywhere near the mark, either nationally or in Victoria. While some state governments, notably New South Wales, are making an effort to correct the system, the Gonski recommendations proposed that the funding process and the research should be overseen by a school funding authority, at arm's length from politics. Many would now understand the wisdom in that proposal

Certainly, the quantum of dollars available for schools is an issue that will always be in the political domain. But the *distribution* of whatever dollars are available should have nothing to do with squeaky wheels or closed-door negotiations. Gonski has shown us a way to cut through traditional public-private acrimonies to deliver excellence and genuine equity for Australian students while preserving parent choice. If we only focus on the dollars and continue to distribute them on the basis of arrangements that ignore student need, we have missed the point – and a possibly unique opportunity.

Endnotes

1   Australian Early Development Census 2012 Summary Report; **http://www.aedc.gov.au/resources/detail/aedc-2012-summary-report**

2   Shepherd Bernie (2015), Gonski, My School and the Education Market: Updated **https://drive.google.com/file/d/0BxK25rJrOw-edGFOLU9sTzNXdjg/view?pli=1**

3   Gonski; P 107; Fig. 36

4   While maintaining substantially the same group of schools, I have now extended the study's time scale to include data from the 2015 *My School*, however the group selection is still based on the 2013 ICSEA.

5   For a discussion of percentile rankings in this context, refer to the full paper

6   The metropolitan government schools were chosen as a "litmus test", since their entitlements were relatively easy to estimate from available data

Teaching children who have a diagnosis of Autism Spectrum Disorder

Suzanne Carrington and Keely Harper-Hill

Best practice dictates that the Autism Spectrum Disorder (ASD) diagnostic process is informed by experienced professionals from at least two disciplines, for example psychology or speech pathology, with the diagnosis ultimately provided by a specialist medical practitioner e.g. child psychiatrist, neurologist or paediatrician. Irrespective of a child's age, diagnosis relies upon information about their early development.

Current information and observations on a child's behaviour, communication and socialisation are considered by the specialist medical practitioner against the signs and symptoms detailed in one of several diagnostic systems. Two recently used classification systems in Australia have been the fourth edition of the Diagnostic Statistical Manual of Mental Disorders (DSM-IV) published by the American Psychiatric Association (1994) and the tenth edition of the International Classification of Disease (ICD-10), published by the World Health Organisation (2003).

From publication of the DSM-IV in 1994 and the ICD-10 in 2003, learners on the autism spectrum have had a range of diagnostic labels, all of which were included under a broad, umbrella classification: Pervasive Developmental Disorder (PDD). Across the two systems, the PDDs comprised different sub categories including Autism, Autistic Disorder ('Classic'

Suzanne Carrington is a Professor and Head of the School of Cultural and Professional Learning, Faculty of Education at Queensland University of Technology (QUT) and has published in national and international journals in the areas of education for students who have disabilities, inclusive culture, policy and practice, and teaching/professional development for inclusive education. She leads a number of research and consultancy programs in schools to develop a more inclusive approach to education for children who have disabilities. She is the Program Director of Program 2: Enhancing Learning and Teaching for the Autism CRC www.autismcrc.com.au.

Dr. Keely Harper-Hill is a speech pathologist who, after a decade of clinical practice in education and health services with children on the autism spectrum, undertook a Masters in Education (Special Education: Autism; Birmingham University). At this time Keely was also closely involved in the development of a curriculum for students with ASD, from which she co-authored and co-produced written- and dvd-teacher resources. In 2014 she was awarded her doctoral degree by publication from the University of Queensland. Keely has published in a number of autism-specific journals and is the Research Associate for the second program of the Autism Co-operative Research Centre: Enhancing Teaching and Learning.

or Kanner's autism), Asperger's Syndrome (or Asperger's Disorder in the ICD-10), Atypical Autism and Pervasive Developmental Disorder: Not Otherwise Specified. There now exists a fifth edition of the DSM and an eleventh edition of the ICD is expected shortly.

As the majority of current students will have received their diagnosis using the DSM-IV or the ICD–10, it may be useful to consider that the final PDD diagnosis was made on the presence of a 'triad of impairment' (Wing & Gould, 1979). One regrettable consequence of this is that the diagnostic information can paint a picture of the learner only through the lens of impairment: "*What isn't this child doing that his peers are doing?*", e.g. taking turns in conversation; "*What is this child doing that his peers aren't doing?*", e.g. solitary walking around the playground at lunchtime, engaged in 'downtime' activities such as moving his hands in a way that his classmates don't.

As educators in schools, it is important to focus on the strengths that children have as well as acknowledging where the child needs support in their academic and social learning. Frequently a diagnosis can be critical to ensuring access to appropriate services and information. A diagnosis of autism can also help to explain why a child is feeling so anxious or is displaying behaviour that is difficult to understand. School principals and teachers should be aware of the triad of impairment or the characteristics of autism so that they can support children and families in their school community.

The first of the domains in the triad of impairment we refer to is *social impairment*. The social domain explores joint attention and social reciprocity. In the classroom, this can include the threshold for tolerating the presence and actions of other people, appropriately starting, maintaining and finishing social interactions and relationships. Secondly, we refer to the domain of *communication* which includes the understanding and use of verbal and nonverbal communication which is in keeping with the listener, the speaker and the situation. Verbal communication includes the ability to understand and use literal and nonliteral language. Literal interpretation of a trigonometry question is shown in this example.

3. Find x

3 cm

4 cm
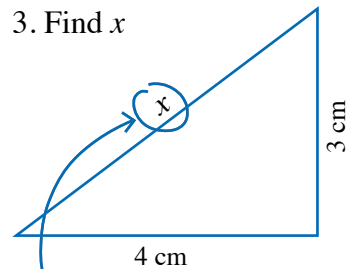
Here it is

Thirdly, the final domain of *imagination* comprises far more than imaginative play abilities and addresses the presence of restricted or repetitive routines. Examples in the classroom

include rigidity or flexibility around 'hobbies', or obsessions, which pervade and even dictate conversations and interactions. Translation into the classroom can include outbursts of frustration or anger when peers use an 'incorrect' label or word, e.g. Insisting that members of the class call author Mem Fox using her 'correct' name, Merrian Fox, because she hasn't legally changed her name. Children also can have significant anxiety when classroom routines change. Diagnoses also reflect a myriad of factors including the age at which a child's difficulties became apparent to parents, the length of time certain behaviours may have been present, the combination of symptoms or the severity of different symptoms.

Education departments in Australia invariably require verification of a student's disability or learning needs. The educational needs of learners on the autism spectrum can change over time and as children learn to communicate and participate in school, behaviour for example, may improve or become more challenging. In 2013 the fifth edition of the DSM collapsed most of the sub-classifications of the PDDs and introduced one overarching diagnostic category of Autism Spectrum Disorder (ASD). Still covering all elements in the triad of impairments, the social and communication domains were combined into a single social communication domain. Under the DSM-V, any child previously diagnosed with a PDD classification such as Asperger's Syndrome or Autistic Disorder would now be eligible for a diagnosis of ASD (Huerta, Bishop, Duncan, Hus, & Lord, 2012).

Changes to diagnosis in this fifth edition of the DSM include replacement of criterion regarding spoken language development with specification that the ASD diagnosis is given "with or without accompanying language impairment". Age of onset was previously specified as "prior to 3 years" whilst it is now specified as symptoms presenting "in the early developmental period". For the first time, the presence of sensory processing differences, e.g. hyper (over)- or hypo (under)-reactivity to sensory input, have been incorporated into the diagnosis. In a significant departure from previous editions, learners who receive the diagnosis of ASD are allocated to one of three levels of severity which may vary by situation and fluctuate over time.

Is this change in diagnostic label important for learning and teaching? The reality is that it is the combination of an individual's strengths, interests and motivations coupled with access to great educational opportunities which shape educational outcomes for all learners. Thus, a diagnosis of ASD does not prescribe the same educational response or outcomes for each learner on the spectrum. Rather, learners who are recognised for their strengths and interests, who are motivated by teachers and whose challenges are appropriately accommodated, can be successful at school. Understanding that learners on the spectrum have both idiosyncratic and shared characteristics of their peers is relevant to Australian classrooms because the

reported increase in ASD prevalence means that most schools will have multiple learners on the spectrum.

Current prevalence rates of ASD are estimated at around 1 child in 152 (Presmanes Hill, Zuckerman & Fombonne, 2014). With an unexplained 25-fold increase in diagnosis in the past 30 years, there are now more children with ASD than the combined number of children with cerebral palsy, diabetes, deafness, blindness and leukaemia. Of course incidence and prevalence are not one and the same – incidence reflects the actual number of occurrences whilst prevalence indicates the number of those cases identified. This distinction becomes important when considering the rise in diagnosed cases of ASD.

Some increase in the *incidence* of ASD cannot be excluded but it is unlikely to be solely responsible for the increase in prevalence reported. In part, the increase in recognising those learners who are 'on the spectrum' may be attributable to the broader diagnostic criteria of PDD and, more recently, ASD than the narrower definitions historically used to classify 'autism'. There is also greater awareness of the disorder which may lead to more educators or allied health professionals suggesting the utility of a diagnostic assessment. Surveillance of pre-school children means that diagnoses can be, but are not always, made at earlier ages. Finally, recognition of ASD as a lifelong condition means that whilst some symptomatology changes shape over time e.g. rigid obsessions become strong interests, the core challenges faced by the learner on the spectrum are understood as arising from ASD.

The children who have a diagnosis of ASD are often challenged by school due to the difficulties they have with the social and communication skills that are required to participate in classrooms of today. Our current approach to teaching draws on social constructivist perspectives and requires children to work in groups, talk about what they have learnt, and complete a range of academic activities that require focus and skills that children with ASD find difficult. The challenge for teachers is that many children with ASD can learn and participate at school but require adjustments or use of particular resources and supports to facilitate successful learning.

Let us share the story of Jack in grade 1. His class was learning about the categories of animals: reptiles; birds; mammals etc. The children were required to cut up pictures of animals from a worksheet and then paste them onto various charts with the categories of animal headings at the top of each chart. Jack was having tremendous difficulty and his teacher was getting upset because he was making a mess. Jack was obsessed with the glue and had it all over his hands and fingers. There was a mess of half cut pictures covered in glue on his desk and he was struggling to get this task completed on time. After some

discussion with Jack about his project, it was discovered that he actually knew the scientific names for the categories and names of animals. He could talk at length about the animals he had seen in the city museum and he could use sophisticated scientific language. So instead of not being able to complete a simple grade 1 science activity, he was most likely working at university level in this component of the curriculum!

In contrast, teachers may also be supporting children who have ASD who have great difficulty with verbal communication and also be intellectually impaired. These children frequently have challenging behaviour and it can be difficult to ascertain the cause of the behaviour. This type of child, their families and their teachers require significant support from a team of specialists such as speech pathologists, occupational therapists, and psychologists. As children learn to communicate and become better understood by people around them, their behaviour can improve and they can engage successfully at school.

An inclusive approach to education is a focus in Australia as in other countries around the world. Inclusion is often associated with education of children who have disabilities but inclusion is much broader than that. Inclusion provides a theoretical framework for education reform that is political and cultural. It requires challenging the status quo of our traditional education system so that all students are welcome and taught in their local school (Slee, 2001).

Our current policy context assumes that teachers have a responsibility to design differentiated curriculum to enable students who have disabilities in an inclusive educational context. Curriculum encompasses the culture of the classroom. For example, we can ask – "Are all children and families welcome at our school?" Curriculum also encompasses how resources, teaching and assessment approaches and strategies are utilised to support successful learning for all students. In Australia, school principals, staff in education systems and university academics are aware of the considerable stress on parents, teachers and children who have ASD. Recently the Commonwealth government of Australia funded the world's first national, cooperative research effort directed towards ASD.

The Cooperative Research Centre for Living with Autism Spectrum Disorders (Autism CRC) is implementing a highly innovative "whole-of-life" research portfolio. The Autism CRC Program 2 – Enhancing Learning and Teaching will equip educators, parents, and other professionals to effectively accommodate the needs of individuals with ASD at school. Children's specific needs make mainstream inclusion challenging, but inclusion could be significantly enhanced if the individual needs of students with ASD could be more effectively met. Inclusive practices and supports, universal design for learning principles

and appropriate environmental adjustments will be investigated to provide evidence-based models of ASD-friendly classrooms and learning principles. Investigations currently underway are eight three-year projects and three one-year projects, all aimed at enhancing the learning and teaching of children on the autism spectrum alongside their peers. Details of these and future projects can be found on the Autism CRC website, www.autismcrc.com.au/research-programs/education.

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Interview (part two): Jill Blackmore
On teacher education, teacher quality, leadership and inequality

Interview by John Graham

JG   *What do you think about the calls for improvements in teacher education? Various politicians argue that to fix "teacher quality" you need to fix teacher education, that ATAR scores are too low and there is a need to recruit more high achieving students into teaching. Do you think teacher education providers need to lift their game?*

JB   First of all the ATAR score has nothing to do with the quality of teacher education courses, it's about how many students want to come in and whether universities are prepared to take them. Quite often education is used to buffer other courses because they don't have enough students in them. There is research which shows that ATAR scores are not necessarily good indicators of how well a student will do at university, and this applies to teaching as well as other courses.

I know that at Deakin we are moving towards well established university- school partnerships with 75 schools organised in clusters. This approach means that in-service teachers and student teachers work in groups across school clusters to gain different experiences. It also means that teacher education is becoming embedded in schools in ways that encourage professional learning of all teachers. It also makes it possible for academics to go out and be with groups of student teachers on a longer term basis, and that schools can recruit teachers with whom they have already good relationships. Teacher educators, I would argue, are adapting to meet quite rapidly changing conditions. There are always debates about the theory/practice tension, but this addresses that head on in terms of theorising practice.

Dr Jill Blackmore is a Professor of Education in the Faculty of Education, Deakin University; and Director of the Centre for Research in Educational Futures and Innovation. Her research interests include globalisation, education policy and governance across all sectors of education; educational leadership and reform; organisational change and innovation; teachers' and academics' work; and the changing relations between the individual, community, family and the state. She has undertaken professional development and policy consultancies with professional and community organisations (principal, teacher and parents), government and NGOs (e.g. Victorian Council of Social Services, Oxfam International), and community organisations.

At the same time teacher education courses are constrained by accreditation authorities which have a pretty narrow way of understanding what constitutes a good teacher education curriculum to develop creative and innovative pedagogies.

JG   *Teacher education seems to be in a state of constant review.*

JB   We have had about 35 reviews in the same number of years. How do you fix the practicalities of putting out so many people into school practicums? The UK experience indicates that focusing merely on practice without a theoretical underpinning treats teachers as technicians and not professionals. While every student loves the practicum, teaching is more than classroom practice now. It is about understanding policy, contributing to professional knowledge as well as practice, about being able to read and do research. At the school end you have teachers who may not want to be supervisors or who have workload issues. Locating students in school clusters means they can become more self-supporting, learn to work in groups across networks and it requires fewer dedicated teacher supervisors who take responsibility for them. So it is a better approach which treats learning to become a teacher as a process based on an interaction between the university and the school.

JG   *Another element of the teacher quality argument is the call for more "robust" teacher performance evaluation, and differential pay based upon that performance. What's your view about teacher performance and development processes and the link between those processes and teacher pay?*

JB   I think you have to make a distinction between teacher performance review and teacher development as quite often the two are confused. I think teachers need to have professional development that meets the needs of both the school and themselves as individuals. Teacher professional learning should be part of their everyday practice. Everybody needs to be able to work together and I think that you find in a lot of schools now teachers working a lot more collegially.

We know performance pay does not work; it never has and never will. Doctors' pay isn't judged on how many die or survive on their tables. Doctors have a far more technical approach to their work, more like an engineering project than what teachers face in their classrooms. Learning is about relationships more than knowledge transmission. Teachers are responsible for something as broad as the educational development of young people as well as having the technical skills. With teachers context is so important, who your student population is, and in these circumstances it would be

unbelievably unfair and certainly counter-productive to introduce performance pay as some have less diverse student needs to address.

JG   *What do you think are the best ways to improve the quality of teaching?*

JW   What do we mean by "quality" anyway? You may have a teacher in one class and they do really well and then you put them in another classroom or in a different school and they are not that crash hot. It is all about the class, the school, it is so complex. All we can do as teacher educators is to give them a set of tools, a pedagogical repertoire, which they can use to work with socio-economic and cultural differences and to recognise issues around health and well-being etc. I also think it's about getting them to have a sense of professional commitment to each other and to collaborate and to value learning from each other.

So to me it's about collaboration. It is also about systematic enquiry, as much as possible, a whole school approach. Principals that encourage teachers to innovate, to think differently, to take some risks, find they can see the benefits. Unfortunately the schools in high poverty areas etc that need to be more innovative are the ones that are under greatest surveillance and not allowed to take risks, because the focus is on numeracy and literacy. It should be about valuing teachers as professionals and giving them the capacity to make professional judgements. Professional standards are just a bottom line; you have got to push it a bit further.

JG   *The context question is an important one, isn't it? There is an argument that teacher education courses should be doing more to provide relevant school experience to prepare teachers, for example, to meet the complexities of teaching in low SES schools.*

JW   And they do. But those low SES schools can only take so many students and a lot of those schools don't want students because they are struggling any way. And a lot of schools that should take our students don't, but they are still happy to recruit them. Many private schools cream off the top by offering higher salaries even before the student teachers graduate but they are not prepared to invest in their training.

JG   *Another area of attention, common to most of the recent government documents on school improvement, is leadership and I know that you have done a lot of work in this area. What has your study in this field indicated are the dos and don'ts of improving the quality of school leadership?*

JB   First of all, stop expecting one leader to make all the difference, and stop focusing on leaders. It's called "leaderism". It's the belief that if you put a good leader in there everything will be OK. I think that a single person can make a difference only when there is a conjuncture of events; when a school is in crisis but when there are enough staff to make the decision that something radically different has to happen, and perhaps when someone who has had some experience doing this work can come in and work with that staff. I think there has to be systemic support and schools have to have the resources to do whatever it is they want to do.

In most instances for change to happen there needs to be some sort of catalyst – a realisation that something is radically wrong with the NAPLAN scores, disaffection by the kids, high truancy figures or it might just be a sense that things are not working that well, or losing staff. There are lots of reasons. Then it comes down to some agreement amongst the staff and the principal that something radically different has to happen. After that it's about setting up the processes about how judgements (some of which will be really difficult) are going to be made. Some people say I can't be involved in this and they leave. It's about trust and establishing good relationships, but it is also getting everyone to think systematically about what they are doing, and why they are doing it, and using an array of indicators to evaluate it as they go along.

JG   *Are you talking about some form of distributed leadership?*

JB   It is more than distributed, I think "distributed" sometimes just means delegation. I talk more about deliberative democracy, where processes of deliberation requiring judgement about a range of factors are set up. I think it is about having a basic set of principles. Nancy Fraser talks about three principles of social justice: redistribution, recognition and representation. Redistribution is about sharing resources; recognition is about recognising and valuing everybody and mutual engagement; and representation is about not just putting individuals onto a committee but actually listening to them. The quality of engagement is important, so that might be with the community or it might be with the staff, but it is more about the quality of what happens in a decision-making process that counts, not just representing groups on a committee or council.

Leadership is not actually about ticking off measurable competencies, it's about capacities, dispositions and values and how they all come together as a set of social practices we recognise as leadership. There is an argument that there is a set of generic leadership competencies and this is what you should concentrate on. However, women or someone from a different race or ethnic background can display the same leadership behaviours and they will be judged completely differently. They are judged

not just on what they do but on what they look like or their gender or race. The notion that there are generic leadership competencies that are gender, race and class free is not the case.

JG   What about the notion of being a principal in a public school, do you think there is something unique about that?

JB   Yes, I think there is. I think there is a sense of the public. It's about not treating your parents merely as customers and respecting the community which tends to be the geographic region. I think it's also about an obligation to all children. I would argue that any teacher is only a professional when they are committed to the education of every child, not just those in their class. Being in a state school means you work in a system not a set of independent schools. I think a principal or a teacher in a public school has to have a strong sense of what that means.

JG   One of the distinguishing characteristics of Australia's school system, highlighted by the 2012 PISA results and the research undertaken for the Gonski Schooling Review, is the strong relationship between the achievement of students and their socio-economic status. Analysis of PISA results, for example, concludes that there is a gap between the highest and lowest SES quartile 15-year-olds of 2.5 to 3 years of schooling. What do you think can be done (at a macro and micro level) to reduce this gap?

JB   It goes back to the paradox that in affluent countries across the world there is growing education inequality. It is happening in the UK, New Zealand and the States as well as Australia. It is happening particularly in those four countries because they are the ones driven most by marketisation and devolution to self-managing/self-governing schools. We know what happens when you let parental choice be the only driver of how you distribute education. It ultimately leads to social fragmentation. A recent OECD report reviewing the use of school choice concluded that there are no benefits at all, and if anything it's counter-productive.

We know that in Australia the long tail on PISA is largely due to indigenous kids and to the concentrations of poverty in certain areas. So it is how we can address issues around indigenous schooling and there are debates within the aboriginal community about how to do that which have to be listened to.

I know people who have been principals at schools with indigenous kids and it is unbelievably difficult and unbelievably complex. It's about inter-agency collaboration on the ground, it's about having child care there, it's about having health and well-being

services. It's also about doing some of the things they were trying to do at one stage in Victoria, by putting schools in precincts, setting up alternative schools, establishing multiple pathways, and not decimating the TAFE sector.

JG   *And you also need more people on the ground, actually more bodies, where you can have one-to-one intervention programs etc.*

JB   Yes, you need more people there, but you also need to have jobs in the area. If you have parents unemployed and no jobs and the kids see the parents unemployed with no prospects of a job, why would you go to school? The only reason most of us stay on at school is because we are told that you will get a job afterwards. It is the main motivator to go to school, isn't it? It goes back to governments and industry doing something to create employment opportunities.

JG   *The Gonski review did make some very important recommendations in relation to what should be done to address educational disadvantage, for example, linking funding directly to education needs.*

JB   Definitely, that goes without saying. Needs-based funding is the bottom line, that's the principle of redistribution and we have lost it. You have to have it because that's the only way you are going to get the sort of support I have talked about with the system and all services collaborating to support the school. It is also critical in a democracy and to maintain social cohesion.

JG   *At the moment of course it's the very opposite where kids who have the least needs get the most and those with the greatest needs are unable to get the support they need.*

JB   That's right, and the problem is that most politicians, even the ones that went to state schools, send their kids to private schools and that's all they see and know about. Most of them don't have any idea about what it is to be in the public sector. One Labor Minister told me: "Do you know what it's like to talk to Cabinet, when they all send their kids to private schools themselves, for me to tell them that they have to take money away from the private schools to give it to the public?" This is our dilemma in Australia – the lack of political will to deliver social justice.

Professional Voice

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