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Top 5 or middle of the pack?

Are international
comparisons valid?

Raising the level of
education debate

Ensuring that (almost) all
children learn to read

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Raising the
level of
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debate

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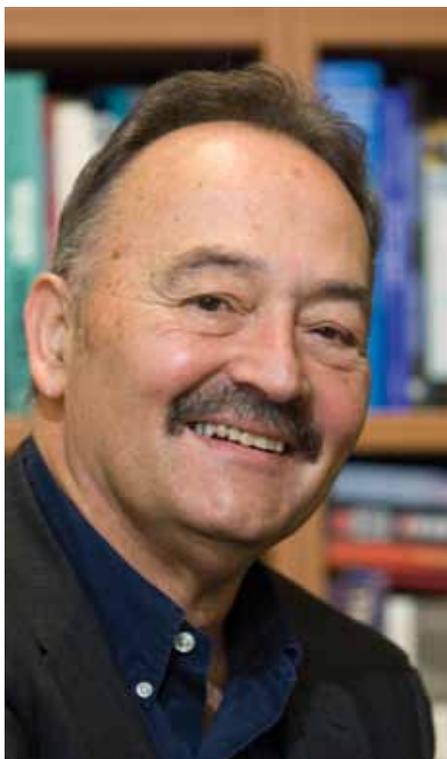
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In pursuit of a top five ranking

Addressing the National Press Club in Canberra in September last year Prime Minister Julia Gillard said 'By 2025, Australia should be ranked as a top 5 country in the world in Reading, Science and Mathematics – and for providing our children with a high-quality and high-equity education system.'

If Australia's place in the top five is to be measured by international league tables, such as those offered by the OECD Programme for International Student Assessment (PISA) or the IEA's Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS), recent evidence suggests we have a long way to go to reach the PM's lofty goals.

According to Australian results of TIMSS and PIRLS released by the Australian Council for Educational Research (ACER) in December 2012, Year 4 students from 21 countries significantly outperformed Australia in reading. Australian Year 4 students were also significantly outperformed by

17 countries in mathematics and 18 in science. Australian Year 8 students fared better being significantly outperformed by students in 6 countries in mathematics and 9 in science.

Australia had not previously participated in PIRLS, making comparisons over time impossible. However, Australia has participated in TIMSS since its inception. The latest results revealed that Australian performances in mathematics and science largely stagnated over the past 16 years. In contrast, over the same period, a number of other countries including Hong Kong and Singapore made considerable improvements. In this day and age, we cannot stand still, while others race ahead.

These results led to a flurry of media commentary, some of it ill-informed, involving diagnoses of underlying problems and prescriptions for 'cures.' In this our first 2013 edition of *Professional Educator*, we consider some of the issues arising from Australia's participation in international studies.

Lead author of the Australian TIMSS and PIRLS reports, Dr Sue Thomson, writes for *Professional Educator* that if we want Australia to be ranked as a top-five country in reading, mathematics and science by 2025, we'll need to address a substantial tail of underperformance.

There is much evidence from all three international tests of the socioeconomic correlation with performance. This is why the Gonski recommendations are so important: Australia must confront the issue of inequality in and through schooling.



Are international league tables the best or only way to measure Australia's progress towards providing all Australian children with the high-quality and high-equity education system called for by the Prime Minister? In his article Alan Reid argues that 'it is simplistic to use test results from just two year levels in only three areas of the curriculum to make claims about the quality of Australian education.'

A recent Dateline program on SBS television suggested that the pressure on Hong Kong's high school students to be high performers at school might lead to high stress levels and even thoughts of suicide. Would we want to see such pressure imparted on Australian students and their teachers in pursuit of a higher international ranking? Are there better,

fairer ways to measure the quality of Australia's education system? These are among the issues that will continue to be debated by educators and ACE aims to have a leading role in encouraging discussion of issues of importance to educators.

Also in this edition of *Professional Educator* we present the next in our series of Great Australian Educator articles prepared by some of our Adelaide-based College Fellows based on information accessed through the College archives. Jan Lokan provides an excellent insight into the life and work of Ruth Gibson. In our September 2012 edition we featured an article by James Dwyer about Edward (Ted) Mulvihill, described as a pioneer in modern Catholic education in South Australia. Sadly Ted passed away not

long after this article was published and the College expresses our condolences to Ted's family and many friends and colleagues.

In future editions of *Professional Educator* we plan to introduce a 'your say' page featuring comments on articles published in previous issues. Please do let us know your views on the issues addressed in this edition, and the publication's new look, by sending an email to ace@austcolled.com.au

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ALAN REID

Raising the level of education debate

The release of the international TIMSS (Maths and Science) and PIRLS (Reading) test scores in December last year unleashed a wave of commentary bemoaning the state of Australian education. Unfortunately, much of it was simply hyperbole and misinformation which distorted the subsequent discussion about the results.

One set of responses simply labelled the results as disastrous: our schools are in crisis and education systems have failed our children.

A second set took the results at face value and used them as an opportunity to argue for the immediate adoption of a favourite policy direction or strategy which would address the (unidentified) 'problem'.

A third set of responses urged that Australia should adopt the strategies of those countries which are at the top of the international league table.

The sad thing is that these responses, singly or in combination, go nowhere near to assisting in the ongoing quest to improve the quality of education in Australia. Indeed, in my view they actually do damage. Yet again we have foregone the opportunity to use comparative information in productive ways. So how might the data from the tests have been interpreted and used?

It is important to understand where the test results come from. TIMSS involves tests in science and maths which are conducted in a number of countries by an international association every four years, at years 4 and 8. PIRLS is a reading test conducted every 5 years at year 4. Both tests use samples of schools and students. In 2011 the years for the tests coincided, and about 50 countries participated in each test. Both tests are described as curriculum-based in that the test items are drawn from the official curricula of the participating countries. In addition, there are surveys

of teachers, parents and principals about a range of teaching and learning issues.

Undoubtedly, the information that is garnered from the tests has the potential to supplement the data that educators are always gathering about the complex practice of teaching and learning. Unfortunately, however, commentators have misused the data, removing many of its subtleties and complexities and making simplistic and superficial claims. This has happened in a number of ways.

First, it is simplistic to use test results from just two year levels in only three areas of the curriculum, to make claims about the quality of Australian education. The fact is that although reading, maths and science are important, they tell us nothing about outcomes in such other crucial areas as the Arts, History, Geography, Health and PE, English Literature, Civics and Citizenship, and Information and Communication Technology, to name just a few areas

of the formal curriculum. In addition, we get no sense of how students are faring in such critical domains as problem solving, inquiry, creativity and intercultural understanding. That is, at best the international test results present a very narrow picture of student progress. Certainly the information is far too limited to enable the kinds of sweeping judgements about the quality of education in Australia that appeared in the media after the release of the TIMSS results.

Second, the commentators took the test results at face value, without asking any questions about the nature of the tests themselves. There are a number of issues associated with the construction of the tests which bear closer examination. Not the least of these is how a curriculum-based test at the international level can possibly ensure that students from every country at year 4, for example, have covered the same material – key concepts, skills and understandings – to the same depth and in the same sequence before taking the test. This would be hard enough to engineer across Australia with its various state curricula, let alone across 50 countries. More than this, given what we know about how students read texts, the question of how test material can present as culturally neutral—without advantaging or disadvantaging students from particular backgrounds—is another important consideration for an international test. The point is that unless students are taking the same test under the same set of circumstances, its results need to be treated with some caution. After all the quality of the information is only as good as the means by which it is produced.

Third, the commentators invariably read the test results in isolation without looking at the whole picture. In maths at year 4, Australia's mean score was significantly higher than 27 countries, but below 17 countries; but by year 8 the mean score was below that of only 6 countries. Similarly in science at year 4, Australia's mean score was significantly higher than 23 countries but below 18 countries; whilst by year 8 we were below just 9 countries. Now, there could be any number of reasons given to explain the improvement from year 4 to year 8. But the point is that commentators

can't cherry pick results to make their point. There could be any number of reasons for the improvement, including that the foundations for study are being laid well in the primary years. Taken together, and indeed adding results from PISA (an international test of 15-year-old students in Maths, Science and Reading), the international tests regularly place Australian student outcomes in Reading, Maths and Science in the top 10 countries. Certainly this means that there is room for improvement, but it is hardly the stuff of which educational crises are made!

“...superficial and knee-jerk readings of international test data are more likely to impede than to advance the quality of education in this country.”

Fourth, commentators have tended to accept the test outcomes as presenting a problem and immediately jumped to advocating strategies to address it. This takes a number of forms. A favourite tactic is to propose following the policies of those countries which are in the top 5 of the international league table. There are many obvious problems with such an approach, including the vast differences in contexts between countries, and the fact that it ignores the reality in some countries. In Singapore, for example, there is a concern that although students are successful in tests, their creativity is being stifled by a narrow and strait-jacketed curriculum. Clearly it is useful to share information between countries, but importing policies and practices from other countries is fraught with danger.

Another tactic is to use the 'problem' as a springboard for advocating a pre-determined position. In the wake of the publication of the TIMSS results, various commentators have proposed such disparate strategies as the provision of specialist science and maths teachers

at primary schools, greater school autonomy, revamped teacher education programs, and voucher systems to enable school choice – all as means to improve Australia's standing in international tests. The problem with these approaches is that they jump from apparent 'problem' to solution without some important intermediate steps such as gathering and assessing the evidence, clarifying the problem, and making a connection between the solution and the problem.

These four points are not a defensive educator's response to adverse data. I am not dismissing the data, nor am I suggesting that Australian education can't improve. I am arguing that superficial and knee-jerk readings of international test data are more likely to impede than to advance the quality of education in this country.

We need to be more rigorous in our public discussions by asking what the data is telling us, clarifying what it is not saying, and identifying what extra information is required. Importantly, we need to investigate some of the issues that the test results do highlight, such as unacceptable differences in educational outcomes between students from affluent backgrounds and those who suffer educational disadvantage such as Indigenous students and students from low socioeconomic backgrounds. The irony is that we know from extensive research that many of the proposed 'solutions' mentioned above can only exacerbate disadvantage.

Commentators should stop grandstanding and recognise that progress in education can only be made if we respect evidence, recognise complexity, and are willing to inquire and investigate, rather than manufacture crises or propose solutions that bear no relation to the evidence.

After all, a quality education system can only be achieved when we have quality public debates about education.

Alan Reid is Professor Emeritus of Education at the University of South Australia. A shorter version of this article appeared in the Age and the Sydney Morning Herald on December 19, 2012.

Ensuring that (almost) all children learn to read



KEVIN WHELDALL

The truly appalling performance of Australian Year 4 students in the international 2011 PIRLS study of reading has led to much breast beating and the generation of more heat than light. We should concentrate on the solution to the problem of how to ensure that (almost) all children learn to read. ►



► Literacy is at a premium. It is increasingly difficult to gain employment in the twenty-first century without having acquired, at the very least, basic functional literacy. Contrary to the earlier popular myth that IT would somehow make traditional literacy less necessary or important, it is now clear that the advent of IT into all spheres of human activity requires greater literacy skill, not less, and from a far wider spectrum within the population. Someone who struggles to read and spell is severely disadvantaged in such an environment.

Given these considerations, it is particularly disturbing to find that unacceptably large proportions of the population still struggle with reading and writing, as recent surveys have repeatedly shown. That there is a bottom quartile (25%) of the population who continue to struggle in this way is a cause for shame; and this may even be an underestimate of the problem.

What does reading entail?

In order to be able to read written text, there are two basic, vital processes to be mastered. First, we need to be able to translate or decode the marks on the page (or screen) into words and secondly we need to be able to make sense of those words. There is no point being able to decode, even to decode fluently, if we have no idea of what the words actually mean. Similarly, no matter how vast our vocabulary, general knowledge and facility with the English language, we shall make no sense of the written word if we cannot decode the letter strings into words in the first place. This sounds painfully obvious, in fact it is known as 'the simple view' of reading, but its importance is all too often ignored or under-emphasised.

We can unpack this 'simple model' into five key factors, sometimes known as the five pillars of reading instruction or the five 'big ideas', which scientific research has shown to be essential in learning to read. The first of these is phonological awareness, which refers to the ability to chop up the stream of continual sound that constitutes speech into recognisable and meaningful units. Children need to learn where words begin and end in the

speech stream and, equally importantly, how these words are made up of smaller units of sound. They need to be able to recognise the syllables within words and, especially, the phonemes that make up syllables and words. This ability to break up spoken words into their constituent sounds and to reassemble them has been found to be an essential prerequisite for learning to read.

The second 'big idea' that children have to master is what is known as the alphabetic principle. They have to learn the common sounds associated with the letters of the alphabet. Moreover, they need to learn that printed words can be decoded by using this letter sound knowledge to sound out written words. A focus on teaching these letter sounds explicitly and directly as a part of early reading instruction is known as phonics and has been the subject of considerable controversy among reading educators. The scientific evidence is unequivocal, however, regarding the centrality of phonics instruction in the effective teaching of reading to children from all backgrounds.

The third pillar of effective reading instruction identified by the research is fluency. Being able to decode written words into spoken words is an important skill but, like all skills, it needs to be learned to the level of automaticity so that decoding written words becomes literally effortless. When children can decode fluently and effortlessly, they can give all of their attention and mental capacity to understanding what it is that they have decoded.

This brings us to the fourth 'big idea', *vocabulary*. Children from disadvantaged backgrounds, in particular, often have restricted vocabularies compared to their more advantaged peers. This is why, in the interests of equity, it is important to include specific instruction in vocabulary knowledge as part of any program of initial reading instruction, so that all children can learn to read with understanding from the outset.

This brings us to the fifth and final pillar of reading instruction; the fifth big idea. Being able to decode, even to decode fluently, and even given a

“ Children who do not learn to read in the first few years of schooling are typically destined to a school career of educational failure...”

good vocabulary is not enough for children to make good sense of what they are reading. They also need to have developed good *comprehension* skills. As well as knowing the meanings of words, they also need to know how words are put together in sentences and how to relate their knowledge of the world to the words they are reading, if they are going to be able to read with understanding. A sound general knowledge of the world is, then, also important in learning to read.

How should reading be taught?

As well as identifying the critical components of learning to read, the five big ideas, research has also informed teaching practice of the most effective ways of teaching these five pillars of reading. In essence, it has been shown that, to be the most effective, reading instruction should be *direct, explicit and systematic*; that the five big ideas should not only be recognised as such but should also be taught directly and explicitly and in a systematic way.

This sounds painfully obvious to the layman but classroom practice in recent decades has tended to favour a more implicit approach to teaching reading where children are expected to pick up these ideas largely for themselves by being bathed in a rich environment of spoken language, story and exposure to books. While such an environment is very important for young learners, it is not enough for these key skills to be readily learned and this is particularly true for those children coming from less advantaged backgrounds. It is true that

some (fortunate) children seem barely to need much by way of formal instruction before they are off and reading on their own in a very short space of time; but this is not true for the vast majority. Moreover, we do not know beforehand, until they have actually learned to read, just which children will learn to read quickly and easily with little instruction. This is why we need a direct, explicit and systematic program of reading instruction in place to ensure that all children learn to read. We also need to build in failsafe procedures to make sure that no child is left behind in the learning of this all-important skill of learning to read.

How then do we ensure that all children learn to read?

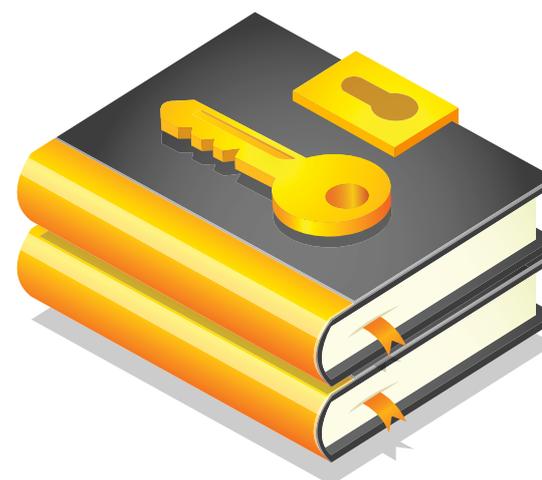
If we are to ensure that all children learn to read to a good level of proficiency in the first few years of schooling, we need to have a clear plan in place to make sure that no child falls through the net. Such a plan needs to be both effective and cost-effective. In recent years, it has become increasingly accepted that a three-tier, phased model of reading instruction, known as *Response to Intervention (or RtI)* is the best means of achieving this. Before detailing this model of effective school instruction, however, it is worth considering briefly the role of pre-school education.

Pre-school literacy instruction

If we are serious about our aim of ensuring that all children learn to read within their first few years of schooling, we should ensure that the basic building blocks of literacy are in place for all children when they begin formal schooling. The research shows that children commencing school with both phonological awareness and well developed general language skills are far more likely to learn to read easily and quickly. If all children were to receive a program of instruction in these essential pre-requisites in the year prior to commencing school, far fewer children would struggle to learn to read. It would also mean a levelling of the playing field so that all children, regardless of their

family background, would be starting to learn to read from a more similar knowledge base. It is currently the case that many children from less advantaged home backgrounds beginning school are already way behind their more advantaged peers in these key pre-literacy skills.

The idea of teaching these skills to pre-school children may sound off-putting to some but there is no reason why these skills may not be taught effectively in an engaging and play-based way that is more appropriate for young children and more comfortable for early childhood educators. An effective pre-literacy program for pre-school children should comprise instruction in the two key areas identified by research as the most important pre-requisite skills for learning to read. First, they should be engaged in games and play-based routines that teach systematically the skills of phonological awareness so that children come to school already able to break up words into their component sounds and to manipulate the sounds in words. The second key component is an emphasis on developing good oral language skills more generally, including vocabulary instruction. The best means of achieving this is by structured book reading activities where children are encouraged to engage with the story being read, to answer questions about the story and to relate the events in the story to their own lives. A focus on these two prerequisite skill sets provides an excellent foundation for learning to read.



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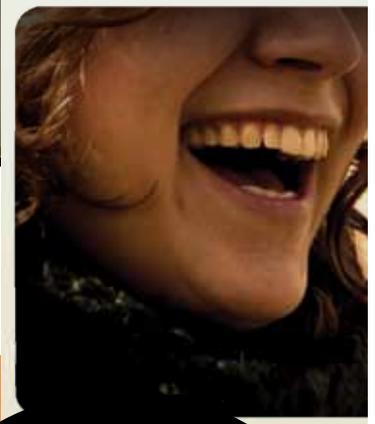
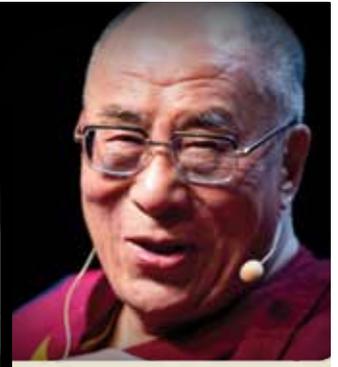
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► Response to Intervention – Tier 1

The three-tier RtI model is predicated upon a first tier of exemplary, quality initial instruction in reading for all students during their first year of schooling (Kindergarten in New South Wales). This first tier of instruction offered to all children beginning school should essentially comprise scientific evidence-based best practice instruction; we should base our initial teaching on what scientific research conducted internationally has shown to be most effective. Again, to the layman, this sounds patently obvious but this is not what is currently the case in most Australian schools where an *implicit* model of reading instruction has held sway for the last few decades. As already mentioned, much of what occurs as part of this implicit approach to reading instruction is highly desirable as a bedrock upon which to build effective reading instruction; but it is not enough if we are to ensure that all children learn to read. It may be enough for a minority of children but most will need *direct, explicit and systematic instruction* in the five pillars, the five big ideas, of reading instruction, as previously described. What is often lacking in initial reading instruction, in particular, is effective instruction in what is known as *synthetic phonics*; specific instruction in how to relate letters to sounds and to blend letter sounds into words. There are a number of commercial programs that teach synthetic phonics systematically and that have been shown to be very effective. These include Jolly Phonics and Read-Write Inc, for example.

Response to Intervention – Tier 2

Even when afforded exemplary reading instruction, there will always be some children who take longer than others to catch on to what reading is all about. It is important to identify these low-progress readers as early as possible so that they do not fall too far behind their peers. Children who do not learn to read in the first few years of schooling are typically destined to a school career of educational failure, as their difficulties

compound, because reading underpins almost all subsequent learning. A safe strategy is to target the bottom quartile of the population (the bottom 25%) for remedial reading intervention as soon as their difficulties become apparent. These may become apparent at some point during the first year of schooling but it is certainly important to check on students' progress, *at the very least*, at the end of Kindergarten so as to be able to provide remedial intervention from the beginning of Year One.

“...we need to have a clear plan in place to make sure that no child falls through the net.”

The RtI model recommends that struggling readers, the low-progress readers comprising the bottom quartile, should be offered intensive Tier 2 intervention but in *small groups* of three to four students. Again the instruction provided to these students is based on what the scientific research evidence has shown to be most effective. In effect, this is essentially the same emphasis on the same five big ideas of reading instruction but it is more intensive and more individualised, and teachers are able to be more responsive to the specific idiosyncratic needs of the students with whom they are working. Clearly, if this approach were to be shown to be effective, it would be much more cost-effective than one-to-one alternatives such as Reading Recovery. The research evidence, in fact, suggests that this is the case: good small group instruction can be just as effective as one-to-one instruction.

Response to Intervention – Tier 3

Even with a solid Tier 2 small group reading intervention in place for young low-progress readers, there will still be a very small number of students who 'fail to thrive', perhaps about 3-5% of the total population of Year 1 students. This

small number of students whose reading problems seem to be more entrenched and who are resistant even to specialised intensive small group instruction are the ones for whom we should reserve Tier 3 one-to-one intensive reading instruction, preferably with a specialist reading teacher with a sound background in special education teaching.

By now it will come as no surprise to note that the general nature of the instruction provided in a one-to-one Tier 3 intervention is no different in kind from that offered at Tier 1 and Tier 2. What is different, of course, is the intensity of instruction provided to this very small minority of students. Because we have successfully taught the vast majority of Year 1 students the basics of learning to read by Tier 1 and, where necessary, Tier 2 teaching, we can afford to provide these remaining students with the support that they will need to learn to read. Some of these students may need support for some time, taking far longer to learn what the vast majority learn quickly and easily, but this is a far more manageable proposition.

Of course, the RtI model does not stop at the end of Year 1, it is important to monitor reading progress closely for all students, especially for the first three years of schooling during which children learn to read. By continually monitoring progress over these three years, students who are slipping behind may, at any point, be readily identified and offered the appropriate tier of supplementary support. By employing these procedures rigorously and teaching scientifically, it is not too much to ask to expect very nearly all of our children to learn to read.

Emeritus Professor Kevin Wheldall, AM is Chairman of MultiLit Pty Ltd and Director of the MultiLit Research Unit. You can follow him on Twitter (@KevinWheldall) where he comments on reading and education (and anything else that takes his fancy). He also has a blog "Notes from Harefield: Reflections by Kevin Wheldall on reading, books, education, family, and life in general": <http://kevinwheldall.blogspot.com.au>

Going for gold: Are international comparisons valid?

History, we are told, repeats itself – in studying History at university, I learned about the original Olympic Games being used as a political weapon by some city-states to assert dominance over others. Perhaps this happens whenever nations participate in any event where comparisons are made. Although memories of the recent Olympics are still fresh, academic quests rather than athletic ones have been attracting recent attention following the publication of results from TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study).

The findings of these international comparative studies have aroused the masses, leading to uninformed comment in the press and on social media. Of course, when the comment is more positive (as in the latest PISA results) the public is happy. When the results show us in a disappointing light, as the TIMSS and PIRLS results have done, and we are less than amused, people look for someone to blame.

Fortunately, now that we are used to the idea of publicly scrutinised comparisons with NAPLAN, we are less likely to be swept away by generalisations. Our NAPLAN experiences, then, should warn us that caution about national results should lead to even greater caution when making international comparisons. This doesn't mean we should ignore the results; it is useful to compare our school performance with other nations, if the measurement criteria are valid.

In making decisions based upon the results, we must remember these international tests were established

to stimulate discussion about the relative merits of policy changes in educational systems.

In Singapore, for example, significant government action over several decades has led not only to greatly improved results for that country, but has also led to an enhanced social awareness about education. It has reduced social and economic divides, offering significant support to strugglers in the classroom, employing quality teachers and paying them well, developing ongoing and supportive teacher appraisals, and implementing sound pedagogical training. A colleague of mine, recently returned from Singapore, spoke glowingly about our neighbour's shift from a disadvantaged backwater to a world leader in 50 years.

Other education policy initiatives may influence a country's performance. For example, if a nation introduces a longer school day, this could be reflected in their results; if another country opts for smaller classes or no homework or higher teacher salaries, again these decisions could affect results, and they might inspire future policy guidelines elsewhere. If Australian students appear to be performing less satisfactorily than their peers elsewhere, we cannot ignore this but let us treat the findings with care. After all, are we sure that measuring simple academic performance is the goal of the tests, and are they conducted in a way that such a goal is validly measured?

Despite massive increases in educational funding of all primary schools by our federal government, the international scales do not seem to reveal any resultant progress. This might highlight the inefficiency of throwing money

at a problem or it might simply reveal the flow-on effect of such munificence has not yet been manifested.

In deciding what actions should be taken based on results of international comparative assessments, it is important to remember that these are only one way to measure the success of an education system. What success looks like can change when viewed from a different angle as this Olympics analogy shows.

We are probably all familiar with that huge international 'league table', the Olympic Games. We often measure a nation's sporting prowess by the number of gold medals won each four years but how valid is that 'result' in assessing a nation's sporting ability? Is one indicator enough to form a judgement? What happens if we use some other measure?

Examining results for London 2012, we see that the USA won 46 gold medals, China won 38 and Australia (in tenth place) won 7. However, if we used as our measure the gold medals per million inhabitants—not an unreal basis, since the options for excellence must be better if you have larger populations—the picture changes.

In 2012, the USA had approximately 314 million people, China had 1350 million and Australia had 22 million. Using our new scale, Australia had one gold medal for each 3.1 million people, USA had one for each 6.8 million people, and China could only earn one gold medal for each 35.5 million. Just in case we become arrogant, the New Zealanders gained a gold medal for each 733,000 people – leaving us way behind.

This breakdown is presented for one reason only: to illustrate that results in any measuring exercise are only as valid as the selection criteria.

I am not suggesting we ignore the lessons of TIMSS, PIRLS or PISA (Programme for International Student Assessment), but I do caution against over-reaction. Let's leave that to Shadow Ministers or headline-hunting media commentators. From our position as serious educators we need a more balanced approach.

Certainly let us recognise that some nations do well in teaching reading,



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mathematics and science – and let's see if we can learn anything from them. However, just because they score well in these subjects, we should not be depressed. We must ask other questions: Do these results tell us anything about teacher-training programs, parent-support rates, intelligent and inspiring system leadership or professional development requirements for all teachers? Let us also ask whether the 'successful' students succeed in creative thinking, crisis management or exercising initiative, to name just a few life-management skills.

In this public breast-beating, where do teachers fit? I hope we recognise that experts must explore the results and offer us advice so that we can carry on teaching as well as possible to serve the needs of our students. I see no need to

go rushing about in a self-defence mode, because to do so presumes that we are somehow responsible for the so-called decline. If anything is to be learned from the results, our system authorities will do that in due time, and then we might be called upon to modify the way we teach. Until then, let's not overreact.

When we first saw national comparisons based on NAPLAN results, there was a temptation (resisted in the main) to prevent future embarrassment by 'teaching to the test'. However, sanity soon prevailed, and most observers soon learned the limitations of those tests. We saw their value as a guide but refused to get too bothered about the Domsday scenarios being painted by the mass media. Professionally prepared NAPLAN reviews from education authorities, rather than incomplete 'league tables'

prepared in twenty-four hours by media outlets, have proved useful. The same is true of those detailed studies by ACER on international tests. However, it is not our job as teachers or principals to prepare such materials. Our job is to teach as well as we can, learning from assessment experts, and one day we will see Australian students occupy positions in such tests that will satisfy all stake-holders, especially the students themselves.

Author: Dennis Sleigh BA DipEd GDipEdAdmin GDipRE MEdAdmin MA(Theol) FACE FACEL recently retired as a principal after 47 years in education. He now acts as a mentor for new principals and continues to contribute to education journals.



Q & A

with Gerald White

Dr Gerald (Gerry) White is a Principal Research Fellow, Teaching Learning and Leadership at the Australian Council for Educational Research (ACER) where he currently manages the Digital Education Research Network (DERN). DERN can be accessed at <http://dern2.acer.edu.au>.

He was the inaugural CEO of Australia's national Ministerial education and training Internet agency, Education.au Limited, from 1997 to 2006. Education.au Limited, a MCEETYA owned company, was responsible for national internet developments such as Education Network Australia (EdNA), MyFuture and other national projects, as well as international alliances to benefit Australian education.

Gerry was a member of the Australian ICT in Education Committee (AICTEC) and its schools, training and higher education sub-committees and related bodies from 1997 to 2006.

Gerry is a regular writer, researcher, keynote speaker, and panelist at numerous national and international conferences. He will present a keynote address to ACE's Forward Thinking: Emerging Answers to Education's Big Questions in Melbourne in June on some of the successes and failures of the past as well as some future challenges of using digital technologies and digital media in education.

Professional Educator asked Gerry for his thoughts on some of the major issues impacting on the use of ICT in education and what conference delegates can expect from his address.

PE: What do you think is the major issue facing teachers wanting to incorporate the use of ICT devices in their classroom teaching?

GW: The integration of ICT into teaching practices has not been well researched and explored sufficiently, so that good practices can be demonstrated and observed. Teachers lack the confidence to use ICT in their educational programs because they have had very little support from educational leaders to do so. The serious issues that need to be addressed are ICT pedagogical leadership, professional development and professional learning. If using ICT in education received the same level of support that Occupational, Health, Safety and Welfare (OHS&W) received by educational authorities, then we would have more teachers confidently using ICT and good practices to improve learning would spread. Using digital technologies and digital media in teaching and learning are a high priority and the Internet is an essential resource in education today. Decades ago students did not have access to books which is equivalent in educational significance to students not having access to the Internet for learning today.

PE: Is adequate training and professional development for teachers a significant problem?

GW: Yes. Its priority and importance in teaching and learning by education authorities, educational leaders and teacher education programs is regularly underestimated and underrated. Integrated use of digital technologies and digital media in education can demonstrably raise the levels of student engagement in learning programs, student performance and achievement of results, as well as expand and enrich limited individual knowledge. Professional development and professional learning are underestimated in funding by education authorities and leaders, and also underrated for its importance in teaching and learning. The net result is that many of our students at all levels are missing out on a challenging and rewarding high level of education.

PE: How can ICT be misused in classroom teaching?

GW: ICT can be used for productivity and creativity purposes such as teaching and learning or it can be used for entertainment and personal social gain. The latter e.g. using Facebook in education, is a serious distraction to teaching and learning, and is known to be a cause of decreased academic achievement and learning outcomes.

ICT can also be misused in classrooms when its place in pedagogy is not planned and when students lack the guidance to use it appropriately for specific purposes in learning programs. ICT by serendipity in teaching and learning can be quite disruptive and detract from sound learning.

“...using Facebook in education, is a serious distraction to teaching and learning, and is known to be a cause of decreased academic achievement...”

PE: Why do you think some teachers fear adopting the use of ICT in their teaching?

GW: Since 1993, when the Internet and the World Wide Web became widely used, its application in education was poorly supported both technically and educationally. Technically, the development of adequate broadband and wireless infrastructures, essential for effective connectivity, has lagged behind in education. Education has not been advantaged as in several other countries and local technical support has only recently been appreciated, although in a minimalist way. And many ICT education evangelists and sales people overlooked the time that it took for teachers to experiment and the expertise that using ICT required. So, many teachers often failed to see its relevance to their teaching and learning programs, even though teachers are known to be prolific users of the Internet at home.

Additionally, because of a lack of educational leadership in the use of ICT, there has not been sufficient drive for appropriate policies e.g. ethical use, copyright, privacy and digital citizenship, in educational institutions. Instead, teachers have been assailed by the media and a number of over reactive government agencies, by exaggerated statistics and fearful narratives about bullying and anti-social behaviour as a focus for ICT in educational settings. Although instances of online bullying should not be diminished because of their very serious nature, teaching digital citizenship and ethical online behaviour could have averted many such instances.

PE: What is the best example you've seen of teaching with ICT?

GW: I have seen instances of teaching using an array of ICT multimedia where the students were engaged in projects, using research, engaged in inquiry, sharing knowledge and group discussions. The teaching was initially directed, then students were supported in groups to examine and analyse resources, and finally group discussions occurred where the patterns of what had been learnt were extracted and highlighted. The students knew clearly what was expected of them when they were using online resources. After the establishment of the project, the students were able to research a wide range of resources without being bound by physical spaces such as classrooms and they had clear guidance about how to decide on information attributes such as authority, accuracy, coverage, objectivity, date, and significance of information. The instances that I have seen where this has been successful have been in primary schools, secondary schools, training and tertiary teacher education.

PE: What can teachers and school leaders expect to hear at your conference keynote?

GW: Where the evidence is for successfully developing good teaching and learning practices and how online professional communities have affected and improved teaching practices will be two of the major issues that will be addressed. I will also discuss what we have learned from the past and how we should go into the future using digital technologies and digital media.

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Blame politicians not teachers

DON WATTS

The quality of the current discussion on the so-called failure of schooling in Australia, as evidenced by ill-informed reactions to the findings from the recent TIMSS and PIRLS reports, reflects the superficial nature of the political debate between the two major parties and whoever controls the balance of power. The problems have been obvious for long enough to test the understanding of all sides of our political establishment. Further, there are areas of state and Commonwealth difference maintained even when the same party is in power at both levels of government. Reforms seem improbable.

My experience and training have led me to conclude that strong and constant elements in the politics of education benefit from this stagnation. There are, of course, two of them. They are the teachers' unions and the bureaucracies operating within both the states and the Commonwealth. All these protagonists maintain their power through disputations that have little to do with the quality of education. Their roles benefit from processes that centralise decisions in both the state and Commonwealth systems.

It must be conceded that governments occasionally constitute inquiries but inevitably one finds believers appointed, unions represented and the bureaucracy empowered through their roles in writing. Of critical importance, manipulation of the terms of reference seldom allows creative propositions to gain visibility.

None of this posturing, despite massive revenue wasting, adds anything to the vitality of schools. Quality education derives from the nature of the informal contract between teachers and their classes. Teachers know that every child is different and that each child must be challenged constantly and taught in ways that recognise individual readiness.

The more we impose regulation by bureaucratic decree the more we damage this contract, and worse, the more we degrade the standing of teachers. Of course, a few teachers will fail within this contract. Evidence of such failures are best resolved within schools not through the excessively complex battle lines that are the life blood of unions and bureaucracies.

National curricula, a product of centralisation, are a solution to a problem where none really existed. The differences in the expectations defined in state curricula were marginal and certainly very much smaller than the range of achievements of the students in any classroom in any subject.

Where students experience difficulties in transferring from one state to another, the problems derive from attitudes within the state bureaucracies not from state differences in intent. Higher standards are applied to interstate transfers than for progression upwards through grades in any state or school internally.

If there is a role for the Commonwealth, it might be in exposing, through occasional

longitudinal testing, any real differences between state outcomes and international expectations. It should not be in attempts to take over state responsibilities. In no endeavour is the dead hand of remote regulation less appropriate than in the work of teachers facing the diverse learning challenges to be found in any classroom.

The most compelling evidence that schools must be released from centralised governance and management lies in the success of independent schools. It is within these schools governed by independent councils, with parent participation, that local values can be recognised and appropriate disciplinary functions endorsed within the school community. These are the schools that consistently out-perform our state school systems.

Rational discussion about the merits of independent schools is too often polarised by the use of inappropriate language. All schools receive public funding in a just but rather poorly means-tested national system of schooling. Wisely, both our major political parties have shown support for this equitable philosophy for the national provision of schooling. It is time that the term 'Private Schools' was dropped from educational debates. It is misleading and polarising.

Within this national framework of schools there are state-governed public schools, each part of a system of schools, in which state funding is supplemented

► by Commonwealth grants. These are our major set of 'Systemic Schools'. There is a second significant group of systemic schools governed within state Catholic Education authorities. These schools are collectively funded. There is lively discussion about the benefits that would derive from a loosening of controls imposed by these authorities on most Catholic schools. Some of the old prestigious schools have been conceded independence.

The rest of our schools are more truly 'independent' although some remain with some systemic control, particularly small schools with less resources, where scale relates to a lack of readiness for independent governance. All schools work within regulations applied under various government authorities of the states and the Commonwealth.

There seems little doubt that governments are content with a system so complex that electoral accountability is the remote dream of a few. A wider understanding of the membership of our national system of schooling and its operation is a necessary prerequisite of worthwhile discussion of the future of schooling.

Of this total national system of schooling, most concern is expressed about the performance of the state systemic schools. It is in this very significant provision of schooling that centralist governance and management is most damaging.

It is here that the bureaucratic mindset and union philosophies are orientated to the establishment of solutions that depend on comparing schools with averages that describe the system as a whole. The so-called difficult schools, normally those in remote areas and those city schools in less affluent suburbs, are so far removed from these averages that their needs are effectively ignored. Their needs and solutions demand governance, leadership and funding capable of solving often unique difficulties that are simply beyond the range of system-wide corrections that are driven by comparisons with averages elsewhere.

Any serious attempt to confront concerns about equity demands a totally new approach to entrenched disadvantage. The current approaches to the management of schooling are destined forever to leave these schools untouched.

Australia must find new approaches for the distribution of resources to those schools that are simply unable to meet the demands of delivering equal learning opportunities. We need an independent Commission to define schools unable to meet average outcomes with standard solutions. This Commission must make recommendations to government with public disclosure. It is only then our governments will be truly accountable. Governments must make sure that such Commissions have only a minority of members who represent unions or whose life has been within a bureaucratic culture.

The differentiation of schools where learning achievements are unacceptably low might need some one-off injections of capital, the usual ineffective way to win votes. However, successful differentiation will flow only from special treatment in the provision of the highest quality teaching. This of course means some selective differentiation in class sizes and in attractive reward structures for successful teachers willing to accept the challenges. This type of differentiation is an anathema to teachers' unions and bureaucracies. It is also rejected by governments who will not entertain initiatives with ongoing cost implications. It is just these costs that are necessary to reverse the legacy of long-term neglect.

It is also obvious to those outside the wonderland of the bureaucracy and those deluded by the spin of politics that there is a period after about ten years of schooling when some are lost in the current culture of schooling aimed at university education. Vocational Education and Training (VET) Programs taught in state schools will never meet the aim of providing our youth with a fulfilling career or a learning challenge quite different from the standard culture of schooling.

“ *Quality education derives from the nature of the informal contract between teachers and their classes.* ”

The path to employment-focused learning demands, for some, new institutions where the aim is to motivate a significant section of the young through applied education concentrating on employment related skills. This must become one of Australia's respectable paths to a fulfilling life. Remember, we once had technical schools? They were attractive to about 25% of those who had not prospered in 10 years of schooling. Australia badly needs 'the twenty-first century technical schools' removed from the culture of our Education Departments.

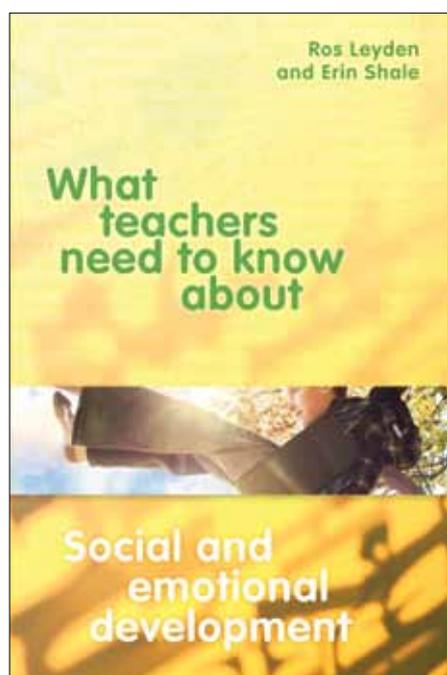
It is time to establish that equity will become a reality only when the education we provide is seen as the sum of a number of experiences designed for different purposes where people make a choice. Forcing the young into a model designed to serve the average, simply ignores everyone who is not average. Twelve years of schooling, based on the current model is failing for many.

Above all, we must put aside the values of our current Prime Minister who clearly believes education in a university is the only path to equity and self-fulfillment.

Emeritus Professor Don Watts held a Personal Chair in Chemistry at the University of Western Australia before becoming Director of the Western Australian Institute of Technology, Vice-Chancellor of Curtin University and then Bond University. He retired from the position of Executive Director of the Northern Territory Education and Training Authority in 1995 and since then has been an Emeritus Professor at the University of Notre Dame, Australia.

What Teachers Need to Know about Social and Emotional Development

Ros Leyden & Erin Shale



RRP \$34.95

Available from shop.acer.edu.au

ACER Press 2012 ISBN 9781742860336

Teachers are busy people and often have the 'busy-ness' of their workplace erode good intentions to probe more widely or deeply in certain areas of their professional reading. Long-winded or overly academic writing is not immediately translated to useful application in the classroom because of the concentration required to unlock the careful and thorough research in these types of publications. Leyden and Shale's book is different in that it has a simple fluency unencumbered by the patronising style that over simplification can produce. The authors aim to provide practical classroom strategies for teachers to support diverse student needs, including indicators that children may exhibit if suffering from conditions such as anxiety or eating disorders. They write as if they respect the experience their audience brings to the book, covering a number of different aspects of the social and emotional development of children from age 5 through to 12 and over. This may seem to suggest it is aimed only at primary and early middle-years teachers but, having taught in these areas as well as all the way to Year 12, I am confident the information covered is just as relevant as a series of basic reminders for teachers of senior students as well.

The aspect of the book I most enjoyed were the 'takeaways', the strategies offered to deal with issues such as: building resilience, dealing with grief, supporting angry and aggressive children, bullying and developing independence to name but a few. Usually these were common sense truisms most of us would know from our general experience anyway. From time to time there were some good ideas I had not previously

heard and it is the presence of these nuggets of wisdom that experienced teachers seek from such books to act as an extra tool for their kitbag. Leyden and Shale also demonstrate an effort to provide research support to a number of their points which can offer a pathway to deeper understanding, should the reader be inclined to pursue it. I also enjoyed the sampling of professional opinions and anecdotes which appear as italicised excerpts within the text.

While I was pleased to see specific sections devoted to discussion of ADHD and ASD children, I felt there could have been some reference to the way that the rest of the class can be assisted to adapt to the presence of a child with these unique issues. There is a short 'anecdotal' on this but a list of strategy points as provided in other sections of the book may have been a useful addition by extension here. The irony is that the social and emotional development of children thus afflicted can be further stymied when their peers ostracise or exclude these students because they do not fully understand their issues. A teacher who enlists the effort of the rest of the class in understanding and developing a tolerance for the quirks of an ADHD or ASD classmate can go some way to minimising the negative impacts of that condition on the collective class as well as the individual in my experience.

Overall, I would recommend this book to all teachers from prep to senior because it is always useful to remind ourselves about the important position we have in influencing the lives and development of our students.

David Bell MACE

Racing for a top five place? Australia sits in the middle of the pack

SUE THOMSON





When Prime Minister Julia Gillard announced her ambitious goal for Australia to be ranked in the top five countries in reading, mathematics and science by 2025 she was referring to international rankings in the Programme for International Student Assessment (PISA), which tests national samples of 15-year-old students on their preparedness to use the knowledge and skills they have gained at school to meet real-life challenges.

We will know Australia's PISA results in December. Meanwhile, reports on the results of two more curriculum-based assessments – the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS), released by the Australian Council for Educational Research late last year – indicate that we face a huge challenge if we are to achieve the PM's goal.

In late 2010, more than 6000 Year 4 students in 280 primary schools, and more than 7500 Year 8 students in 275 secondary schools around Australia participated in the TIMSS and PIRLS assessments. At a similar stage of the school year, students in a further 58 countries at primary level and 44 countries at secondary level also participated in the same assessment, translated into their language of teaching. In addition to undertaking the assessment of skills and understanding in reading, mathematics and science, students completed a background survey, asking not only demographic questions but also questions about liking for learning, motivation and confidence. The parents or guardians of the younger group of students completed questionnaires about their child's pre-primary education, as well as other relevant details such as early literacy and numeracy activities in

the home. The classroom teachers of the primary school sample and the maths and science teachers of the secondary school sample completed a questionnaire asking not only about their demographic background, teaching experience and qualifications but also about their attitudes to teaching, to their students, and their perceptions about school climate and student attitudes. Finally, principals completed a questionnaire asking about the school environment, principal's role, and student's attitudes.

TIMSS revealed that Australian Year 8 students were significantly outperformed by students in six countries in mathematics and seven countries in science. Year 4 students were significantly outperformed by students in 17 countries in mathematics and 18 countries in science, but, to compare like with like, of the countries who participated at both year levels, Australia was outperformed at Year 4 by 10 countries in mathematics and 10 countries in science.

Australia has participated in each four-year cycle of TIMSS since 1995. According to the TIMSS data, with the exception of a small improvement in Year 4 mathematics scores, performances over the 16 years have stagnated. This has happened at the same time that jurisdictions like England, Hong Kong



and Singapore, and other countries, have seen dramatic improvements in mathematics or science performances, or steady improvements in countries like the United States and Korea, among others.

Australia's participation in PIRLS provides our first ever data on reading levels in Australian primary schools compared with standards in other countries. These results show that Australian Year 4 students were outperformed by their peers in 21 countries, including all of the English-speaking countries other than New Zealand.

Overall, Australian students performed at a level between the intermediate and high international achievement benchmarks. Alarming, however, the data for both TIMSS and PIRLS show that there is a substantial tail of underperformance at both year levels and in all subject areas. More than one-quarter, and in some cases more than one-half, of our students failed to achieve the Intermediate international benchmark, the minimum proficient standard set by the Ministerial Council for Education, Early Childhood Development and Youth Affairs (now known as the Standing Council on School Education and Early Childhood) in mathematics and science, and extrapolated to reading in PIRLS.

Student socioeconomic background is measured in a number of different ways in international studies of achievement. Books in the home has traditionally acted as a proxy for a family's educational and social background. Generally there is

a strong correlation between books in the home and parental education and income (Ammermueller & Pischke, 2009), and moderately strong positive correlation between books in the home and achievement, particularly in reading (Mullis et al., 1998). The suggestion from the literature is that the number of books in the home is an indicator of a home environment that values literacy, the acquisition of knowledge, and general academic support. Students are asked to estimate (within bands) the number of books in their home.

At both year levels, the difference in scores in each of the subjects between those students from homes with more than 200 books (*many books*) and those from homes with fewer than 25 books (*a few books*) is substantial. The score for the average student reporting many books in the home pushes their ranking to not significantly different to some of the top five ranked countries in the world. In addition, the proportion of students not achieving the intermediate international benchmark is striking. Figure 1 shows this by showing the proportion of students at each year level and all subject areas who did achieve this basic standard. At least 80 per cent of students who reported many books in the home achieved this minimum standard in each curriculum area at both year levels. In contrast, less than half of the Year 8 students with *few books* achieved the minimum benchmark in either mathematics or science (40% in maths and 48% in science), and a little

more than half achieved the minimum benchmark in all areas at Year 4 (51% in maths, 54% in science, 60% in reading).

As illustrated in the previous paragraph, equity is a major issue in Australia. The gap between high and low achievers in Australia, at both year levels and in all three subject areas, is consistently amongst the five highest across all OECD countries. Many of the students who are not achieving the minimum benchmarks come from families that do not have the option of sending their children to private or better resourced schools.

Positive attitudes

The PM's goal is unlikely to be realised if the attitudes of students are not changed. Around one in ten students at both year levels are disengaged from school, reporting that they do not like being in school and do not feel as though they belong. Meanwhile, according to teachers, 70 to 80 per cent of students at both year levels are limited to some extent by their lack of knowledge and prerequisite skills.

Developing positive attitudes towards reading, mathematics and science are important goals of the curriculum, particularly in primary school. Within Australia, students who expressed more positive attitudes and reported a higher level of self-confidence in reading, mathematics and science scored higher in the cognitive assessments than those who expressed less positive attitudes.

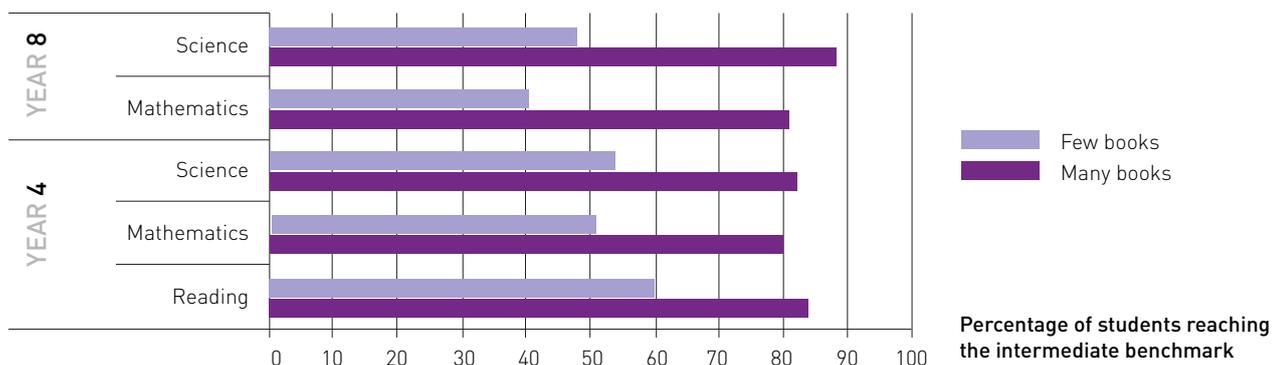


Figure 1 Proportion of students achieving the intermediate benchmark in all subject areas at Year 4 and Year 8

A lack of motivation to read was associated with lower achievement and the difference in achievement between those who were motivated to read and those who were not was greater among males and Indigenous students.

Female students in Australia were more likely to express a liking of and greater confidence in reading than male students, while male students were more likely than female students to express a liking of and greater confidence in learning mathematics than female students.

Attending a pre-primary education program was associated with higher reading, mathematics and science achievement. In general, students whose parents often engaged their child in early literacy and numeracy activities before beginning primary school had higher

reading and mathematics achievement, respectively, than students whose parents only sometimes engaged them in such activities. Correspondingly, students whose parents reported that their child performed very well on early literacy and numeracy tasks when they entered primary school had higher reading and mathematics achievement, respectively, than students who were reported to perform moderately well or not well.

Parental influences

Parents are the first influences on children's own attitudes and beliefs about education, which can then influence children's achievement in school. Therefore the behaviours modelled by parents (such as reading), the attitudes they express (through conversations

about schooling) and their educational aspirations for their children could all be expected to influence student achievement.

Parents' own attitudes towards reading may be important in terms of modelling behaviour and also through the provision of books in the home environment. Parents of Year 4 students were asked a number of questions about their reading for enjoyment. Around half the parents surveyed said that they liked reading, agreeing to statements such as "I like to spend my spare time reading", and "Reading is an important activity in my home". Around ten per cent of the parents surveyed reported that they did not like reading. The reading achievement scores of the children of the parents who liked reading were

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substantially higher than the scores for the children of parents who did not like reading.

Parents were also asked about their aspirations for their child's educational level. In Australia, and on average across all participating countries, higher parental expectations were associated with higher achievement in reading, mathematics and science. Curiously, a greater proportion of Year 4 male students in Australia had parents who expected them to complete post-secondary education (such as a TAFE diploma or certificate) compared to their female peers. Correspondingly, a greater proportion of Year 4 female students had parents who expected them to complete a university degree.

“...22 per cent of students are being taught by teachers who are only “somewhat confident” of their mathematics or science teaching.”

School environments

There is a body of literature that argues that successful schools have ambitious but reasonable goals and cultivate supportive school climate to build better

morale among teachers and students, leading to higher student achievement. The results from TIMSS and PIRLS suggest that reading, mathematics and science achievement was highest in schools in which principals and teachers had a positive view of the school climate, including high levels of teacher job satisfaction, expectations for student achievement and parental support.

For students to have the opportunity to learn, they need to attend school regularly. As well, student learning can be more difficult in schools where students are frequently absent or late for class. Internationally and in Australia, achievement was highest among students attending schools with few attendance or disciplinary problems.

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An essential part of a positive school climate is student safety and security. For Australian students, those who reported being bullied *rarely* had significantly higher reading achievement than students who were *sometimes* bullied, and both of these groups of students had significantly higher reading achievement than students who were bullied *weekly*. For mathematics and science, there was no significant difference between the achievement scores of Australian students who were bullied *rarely* or *sometimes* but these students had significantly higher achievement than students who were bullied *weekly*.

The proportion of students being taught by teachers who reported their schools as being *safe and orderly* at both year levels was substantially higher than the international average. Primary schools were considered more *safe and orderly* than secondary schools internationally. While lower than the international average, however, it is still of concern that around four per cent of Year 4 students and nine per cent of Year 8 students were attending schools that their teachers reported as being *not safe and orderly*. Achievement at both year levels and in all curriculum areas was substantially higher in safer schools.

Resources to support learning

Teachers can be considered the most important resource of all and the supply of qualified teachers is problematic in some areas, such as remote schools and schools in poorer socioeconomic areas. Relatively few students were taught by younger teachers; the majority of students were taught by teachers aged between 30 and 50 years of age. Just over half of the Year 4 students, and only around 40 per cent of the Year 8 students, however, are being taught by teachers who are satisfied with their careers.

The TIMSS Year 8 report also found, however, that around one-third of Year 8 students are being taught mathematics and about 15 per cent taught science by teachers 'out-of-field' – lacking the strength in pedagogical and content knowledge to be able to provide adequate extension for high-achieving students or

able to provide alternative structure for students who are having difficulties or who are disengaged.

Teacher confidence in teaching the subject matter is, perhaps, a reflection of the preparation of teachers for teaching their subject matter. Three-quarters of Year 4 students were being taught by teachers who expressed a high level of confidence in teaching mathematics, but only around 40 per cent were taught by teachers who were very confident of teaching science, with teachers showing a particular lack of confidence in teaching physical science and earth science. At Year 8, it might be imagined that as teachers are specialists in the area in which they teach, they should all be very confident of their teaching. Perhaps as a reflection of the proportion teaching out of field, however, 22 per cent of students are being taught by teachers who are only "somewhat confident" of their mathematics or science teaching. Earth science is particularly problematic, with only 58 per cent of students being taught by teachers confident in the area.

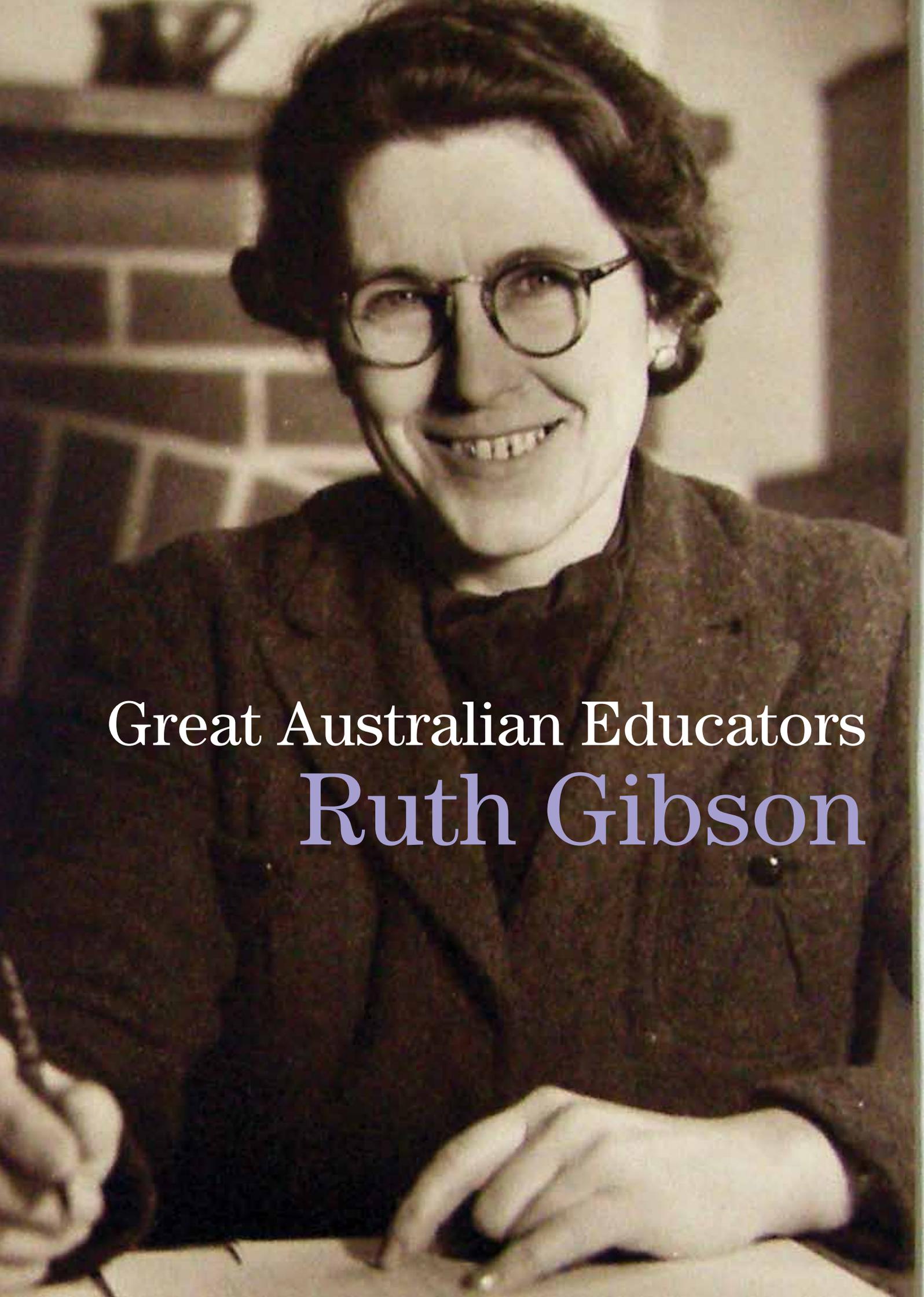
Access to facilities, equipment and materials can enhance curriculum implementation and instruction, and certainly lack of access can hinder instruction and learning. Principals were asked to report on the level of resourcing available in their school for reading, mathematics and science, and to what extent instruction was affected by resource shortages. Achievement levels were indeed found to be higher in schools in which principals reported that instruction was *not affected* by shortages. However more than half of the Year 4 students were being taught in schools in which lack of reading resources or lack of mathematics resources *somewhat affected* their instruction, and almost 70 per cent of Year 4 students in schools in which lack of science resources was an issue. For the older students, around half of the Year 8 students were *somewhat affected* by resource shortages in mathematics and more than half by shortage of resources in science.

To be in the top five school systems in the world by 2025, Australia will need to lift the achievements of our lowest-performing students – in many cases the most underprivileged students in our society – and to focus research and practice on this. It's worth remembering, though, that the goal of a top five place in international assessments is not an end in itself, but the means to an end, which is to provide the highest quality education to all Australian students. The achievement of this goal would be something in which we could all take pride. To achieve it will require a well-planned and coordinated effort on the part of governments, education systems, schools, parents and the broader community.

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Great Australian Educators
Ruth Gibson

The accolade of 'mighty educator' was bestowed on South Australian Ruth Gibson by her friend and colleague Albert Jones. After he retired in 1977 from the position of Director-General of Education in South Australia, Jones undertook doctoral studies on 'The Development of the Role of Inspectors of Schools 1875–1970', which led him to realise just how valuable the work of Adelaide Miethke and her successor Ruth Gibson was to South Australian education: 'two mighty female educators, the likes of which (sic) we may never see again in the Education Department'. This article is based on an ACE Archival Brief published in the second half of 2012, the fortieth anniversary of her death.

Gladys Ruth Gibson was born in Goodwood Park, South Australia, on 29 December 1901, the first child of James Ambrose Gibson and his wife Emma, née Keeley. She had two younger brothers and a sister. James had no hearing or speech, and worked as a collector for the local Blind, Deaf and Dumb Society.

Ruth attended Goodwood Primary and Unley High Schools and began working as a student teacher at the age of 17. She was an excellent student and had successfully completed her teaching apprenticeship and Teaching Diploma from Adelaide Teachers College by 1921, when she was barely 19 years of age. Her first position was at Westbourne Park Primary School as an assistant teacher.

During the 1920s and '30s Ruth taught at several South Australian primary, higher primary and central girls schools in both the city and the country. In 1939 she became Chief Assistant at Welland Primary School, but moved, in the same role, to Unley Junior Technical School the following year.¹ She undertook further part-time studies at the University of Adelaide while a full-time teacher,

gaining a Bachelor of Arts in 1937 and a Diploma of Education in 1940.² Her early years as a teacher would have been particularly hard because her mother was already in ill-health by 1921 and died in 1923. Ruth willingly assumed the role of 'mother' to her younger siblings and managed the household for the family.

After 20 years' teaching Ruth applied successfully for the position of 'Inspector of Schools (Girls' Departments)', in June 1941, at a time when most of the school inspectors were male, as were most of the people in management positions in the schools.

Before her appointment as Inspector, Ruth had already been active in aspects of education apart from teaching. She spoke up as early as 1934 when teachers were putting forward a claim for differentiation of salaries in association with higher qualifications. There was a Women Assistants' Association as early as 1903, which was later renamed the Women Teachers' Association in 1906 and the Women Teachers' Progressive League in 1917, all the while lobbying for improved conditions and status for women teachers. By 1937 a new group,

the Women Teachers' Guild, was formed as a breakaway group from the Public Sector Union, with Ruth elected as its secretary.

Alongside her concerns for improving the lot of women teachers, Ruth also had a strong interest in bettering conditions for women in general and joined the National Council of Women, South Australian branch. By 1938 she was a significant enough member of this group to be selected to attend the Jubilee Conference of the International Council of Women (ICW) in Edinburgh in July.

The Women Teachers' Guild held its first annual conference in May 1939, making many resolutions on conditions and salaries of women teachers, particularly the lowest paid teachers and teachers in country areas.

One of Ruth's duties as an inspector was to prepare an annual report for the Education Department, extracts from some of which were included in the Education Gazette in its 'Overview of Inspectors' Reports'. In her first year, Ruth wrote about the change from Central Schools to Junior Technical Schools which was occurring at the

time, hoping that the new type of school would be a modern school in which academic subjects could be taught alongside more practical subjects. She cautioned that what was finest in the Central School would need to live on, 'the same ideals and the same high purpose', while equipping students to be 'intelligent men and women with a sense of responsibility towards their fellow citizens'. Her philosophy was reinforced in her conclusion:

*If in the class and staff room are found laughter ... good humour and tolerance for the viewpoint of others, then surely the foundations are being laid for happy living and working conditions in the homes and workrooms of the future.*³

In 1943 a much longer extract of her annual report was included in the Gazette of 15 May.⁴ She foresaw the 'important part that education can and should play in shaping the structure of the post-war world' and called for reforms to begin without waiting for the war to end. Teachers themselves could bring about changes now that new curriculum boards were in place, and there would be opportunity for project work, excursions and clubs to lessen 'the rigidity of the timetable' and 'bring more reality to lessons'. She believed in the need for 'knowledge of the privileges and duties of citizenship (to be) fostered from the child's earliest years by actual participation in activities calling for tolerance and co-operation'. Most importantly, the 'new education must provide, not for the needs of a few, but for all', with the needs of the child 'paramount'. While such rhetoric is often heard or read nowadays, 70 years ago, in the days of rigid lock-stepped week-by-week and year-by-year syllabuses, it would have taken some courage and conviction to spell out this kind of thinking.

Ruth, as she travelled around the state inspecting schools, was known for her keen interest in and empathy with women teachers, particularly those in country areas. She would seek them out for a conversation, ask about their wellbeing, and bring messages from friends and colleagues in other places, and would speak up on their behalf in meetings with

school management. During the 1940s, in addition to her regular duties, she was an organiser of Children's Book Weeks; presented trophies at school sports days; helped organise a public exhibition of area school students' work in the School of Arts and Crafts building in Adelaide; and set up evening classes in several Girls' Technical schools for adults wishing to learn or improve dressmaking and millinery skills.⁵ She also presided at a conference of women teachers held at Thebarton Girls Technical School in 1946 on 'modern educational methods'.

In the late 1940s enrolments in South Australian schools increased considerably with the arrival of post-war migrant workers who came with their families to settle. In 1949 Ruth was chosen by the Education Department to join Albert Jones, then Inspector of schools in the Far West region, in travelling around the state visiting secondary, area and some higher primary schools, talking to senior students, conducting public meetings and distributing publicity materials – all in the hope of persuading more students to enter the Teachers College. Their task was particularly difficult as their candidate pool was born during the Depression, when birth rates averaged about 8500 per year, compared with post-war birth rates of around 16,000 per year.⁶

The recruiting campaign continued for several years, helped in 1950 by training allowances on a par with first year salaries at banks, an attractive recruiting booklet and emphasis more on contact with students and parents than on public meetings. In later years either trainee teachers or young high school teachers joined the team, in an attempt to increase the appeal of the message. The young teachers, Hedley Beare and Julie Bender, were 'carefully chosen for their enthusiasm and vigour'.⁷ In Jones's words:

It was with Ruth Gibson ... that I did some hard and valuable work for the Education Department. We both ... believed in the value of the work that teachers did with children and in the profession, if you are suited to it, you can lead a spiritually rewarding life if not a particularly financially rewarding one. And we told this to the boys and girls all over South Australia.



Ruth relaxing at home – characteristically well-dressed and replete with elegant necklace.

I believe we did set the climate ... (to help alleviate) South Australia's great shortage of teachers.

Ruth was appointed to the more senior position of Inspector of Secondary Schools in 1953,⁸ a post she held until her retirement at the end of 1961. For these eight and a half years she was the only woman Secondary School Inspector among four men, while all of the District Inspectors were also men. Her interest in educational issues did not stop at school level – at various times she was a member of the Public Examinations Board, the Technical Schools Curriculum Board and several subject-based curriculum committees.⁹

Before Ruth retired from the Education Department, moves were afoot to establish a national professional body to represent educators at all levels and

from all sectors. Named the Australian College of Education (now 'of Educators'), the national group was constituted in May 1959 at the Founders meeting held in Corio, Victoria. The South Australians who attended returned eager to set up a local branch of the national group. Some preliminary meetings were held, additional senior educators were invited, and a South Australian Chapter of the College was officially established in November 1959. At that meeting Ruth was elected as the Chapter's first treasurer, a position she retained until mid-1967. She became a Fellow of the College in 1963, at the time the highest honour the College could bestow.

For many years after her death, members of the Chapter committee ensured that her grave in North Road Cemetery was kept in good condition.¹⁰



Ruth, aged 10, with Cyril and Eric.

Ruth's interest in furthering women's opportunities remained with her after retirement. In 1962 she was appointed to the newly formed South Australian Equal Pay Council, which presented a submission to the Premier, Sir Thomas Playford, in 1964. This included an 'incisive appendix' on the 'Case for Equal Pay for Men and Women Teachers in South Australia'.¹¹ It had an early effect for teachers, as the Industrial Court approved equal pay for equal work in teaching to be implemented over five years from 1966. By 1972, the year of Ruth's death, the Conciliation and Arbitration Commission had accepted the principle of 'equal pay for work of equal value' in all areas. Her efforts on behalf of teachers were thus a significant stepping stone towards this outcome.

Recognition

Ruth's work in education was recognised in her promotions to senior ranks in an environment that was still heavily male-dominated, and her attainment of a Fellowship in the Australian College of Education. In the community as a whole, though, it has been her work on behalf of women that has been more widely recognised. She was awarded an OBE in the Coronation Honours List of 1953 and the higher honour of CBE in the Birthday Honours List of 1970.

In 1973 a brass sundial, commissioned by the NCWSA and made by Australian sculptor Owen Broughton, was presented to the Adelaide Festival Centre in Ruth's memory. It is installed on the Festival Plaza. In addition, a capital fund was set up to provide an award at least once every three years to assist South Australian women with special projects, further studies or research. The award is known as the Ruth Gibson Award. The first awards were made in 1979, and since then 26 women, on 17 occasions, have benefited from receiving one. The SA Chapter of the College has had two representatives on the Ruth Gibson Memorial Award Management Committee since the committee's inception in 1978. Ruth was also honoured in South Australia's 150th Jubilee year, 1986, by a plaque on North Terrace, Adelaide, awarded for her contributions to education and for her work on behalf of women, both in education and in the wider community.

The person

Ruth Gibson is remembered for her contributions to education and for her work on behalf of women, both in education and in the wider community. However, there is another dimension to her life and work that needs to be highlighted – her concern and consideration for others.

While there were occasional mumblings in the 'old guard' inspectorate about Ruth's numerous overseas trips on behalf of women's groups, the teachers she was responsible for had nothing but praise for the ways in which she helped them. The last words in this article were spoken by the Archdeacon of Adelaide, who gave the address at Ruth's memorial service on 27 August 1972 in St Paul's Church, Adelaide, which was attended by over 400 people:¹²

Ruth Gibson, like all of us, had her faults but these often sprang from her ability and determination. She was no militant suffragette but was ever ready to put all her tremendous energy and efficiency into any cause which she believed would be in the interest of women generally and to raise their status in the world. ... Despite such a truly amazing number of achievements (she) remained a kindly, thoughtful, generous, humble person.

Jan Lokan had a long career in educational research, first with the Ottawa Board of Education in Canada and then with the Australian Council for Educational Research (ACER) in Melbourne, of which she was an Assistant Director. She was elected Fellow of the Australian College of Educators in 1990 and was awarded a Centennial Medal in 2003 for services to educational research.

This article is a condensed version of ACE Archival Brief Number 14, Ruth Gibson – A 'Mighty' South Australian Educator, by Jan Lokan, published in October 2012. The full paper, including notes on sources and additional references, can be accessed on the ACE website at www.austcolled.com.au/archival-briefs

Acknowledgements

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End Notes

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- 10 Personal communication from Peter Davies, SA Chapter secretary for many years
- 11 Jones, H, op. cit., p. 371
- 12 Address given by the Ven. N C Paynter, Archdeacon of Adelaide (copy filed with Jones's papers in the ACEOA – see Notes on Sources above)

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