Commentary

The Influences and Implications of PISA: An Australian Perspective

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Abstract

This article is a commentary on Australia's involvement in the Programme for International Student Assessment (PISA) tests. It provides a rationale for Australia's participation in the PISA programme, the influences of PISA involvement on education policies and practices, and considerations and implications for school leaders and education researchers. It provides commentary on the positive and negative aspects of PISA involvement and concludes that there are many more disadvantages than benefits, each of which is explained. The article has applicability across the many standardized testing programmes to which Australian students are subjected. Furthermore, the Australian experience and this perspective may hold resonance for colleagues in countries with similar education systems, policies, and standardized testing regimes.

Key Words

PISA, standardized testing, Australian education.

This article provides an Australian perspective on the PISA (Programme for International Student Assessment) tests. In particular, the article provides a rationale for Australia's participation in the PISA program, the positive and negative influences of PISA involvement, and considerations and implications for school leaders and educational researchers.

While focusing on the PISA tests, the article has applicability across the many standardized testing regimes to which Australian students are subjected. PISA is highlighted, however, because a policy aim of the recently deposed Gillard Labor federal government was to raise Australian education standards such that the nation would appear amongst the top five countries as determined by PISA testing. In general terms, however, the Australian experience and this perspective may hold resonance for colleagues in countries with similar education systems, policies, and standardized testing practices.

PISA and Rationale for Australian Involvement

PISA evaluates participating education systems worldwide by testing a randomly chosen sample of 15-year-old students in mathematics, science, and reading. Introduced by the Organization for Economic Cooperation and Development (OECD), PISA assesses students' application of skills and understandings learnt during the compulsory years of schooling and aims to provide comparative data to assist education policy making and benchmarking.

In 2009 there were approximately 26,000,000 eligible 15-year-olds in the 73 countries and economies (which includes cities) participating in PISA, with 470,000 students undertaking the tests, which represents a sample of 1.8 per cent across the globe.

Assessment tasks included multiple-choice questions and problems requiring students' own responses.

It is no surprise to learn that comparative measurement tools such as PISA have arrived at a time when the emphasis on student learning outcomes is increasing. There are many interconnected reasons as to why this is the case.

Globalization has intensified international economic competition, with governments wanting to increase national productivity and efficiency via a well-educated, innovative workforce and citizenry.

In Australia, education is seen to play a major role in enhancing the nation's productivity potential (Productivity Commission, 2013). Globalization has also fueled the internationalization of schooling, including the enrolment of full-fee paying international students and a concomitant movement of students and teachers across the globe.

Besides being used as a barometer of Australia's schooling effectiveness compared with other nations and major cities, international test scores also assist potential international students to make choices about where to study. This latter justification is significant in Australia, where education is the nation's third largest export earner, and for states like Victoria education is its largest income earner. Education is big business!

The economic structural reforms that have occurred progressively since the Reagan/Thatcher era have been fully embraced by Australian governments ever since, irrespective of their political hue. The shift from Keynesian economics to a free market

economy heralded attendant shifts in social policy, with a social democratic policy agenda making way for neo-liberal policy values corresponding with the laissez-faire economic stance.

Policy values highlighted small government, efficiency, flexibility, sovereign individualism, public choice, market competition, entrepreneurialism, user-pays efficiencies, local decision-making, quality assurance, continual improvement, and accountability.

In this context, both governments (state and federal) and education "consumers" (parents and students) required greater transparency and more information to aid choice and accountability in autonomous, locally managed schooling arrangements. In Australia, public choice and market competition have been aided by the introduction of the *My School* website which provides comparative data about every school in the nation.

The neo-liberal shift to small government entailed previously centralized tasks being transferred to the local school level. As a result, there has been a significant change in the nature of school leadership since the 1990s.

The policy shift to self-managing schools and small government brought about increasing workloads for schools and rising demands for accountability, while governments' expectations about the return on education investment also intensified. Any spending increases needed to translate into greater "quality" (never defined), higher standards, and improved student learning outcomes.

Hence, although schools are self-managing, they are under increasing scrutiny and surveillance through numerous compliance, regulatory, accountability, and audit regimes.

The introduction of standardized testing served not only as a means of measuring school success, but also as a way of comparing schools and schooling systems with the assumption that this would spur competition between them, thereby promoting improvement, entrepreneurialism, and innovation.

Through this period there has been a growing consensus that it is no longer acceptable for some students to fail in school, unlike the past where it was acknowledged that some less successful students would drop out of schooling.

Schools are now charged with finding each student's strengths, interests, and learning needs. Policies demand individualized programming ("individuation") to ensure each student succeeds and realizes his or her highest learning potential.

Furthermore, schools are being held to account for statements on their websites and in their policy documents through litigation, adding emphases to transparency and new accountabilities to a broad range of stakeholders.

A further factor contributing to the increasing emphasis on student learning outcomes is the politicization of education, with education policy being a major electoral bargaining chip, alongside "bad" press leveled at educators and schools as a legitimation exercise, giving the impression that Australian education is in a perpetual state of crisis.

Standardized test scores, especially international scores, are seen as measures of how the country is performing against economic competitors. For example, commentators opined that Australia "was one of only five countries, and the only high performing nation, to record a decline" in recent PISA scores (Harrison, 2012, p. 1).

In 2012, then Prime Minister Julia Gillard commented on Australia's poor PISA showing in comparison with Asian neighbors to the north, saying that Australia was "in danger of losing 'the education race' to its regional neighbors, four of which – Shanghai, South Korea, Hong Kong, and Singapore – make up – with Finland – the top five systems in the PISA tests" (Harrison, 2012, p. 2).

A final reason for Australia's participation in PISA could simply be that most other competitor countries are involved; that is, a large number of respected countries are engaged in PISA testing (including all advanced economies), and hence evading participation could be construed as national defensiveness or self-doubt.

If such a proposition holds a grain of truth, then PISA participation may represent membership in an international "club" that currently holds currency and credibility.

Besides the reasons behind PISA participation, there are some positive reasons behind Australia's involvement, but only a very few. In my view, these are far outweighed by their negative impact, as discussed below.

Benefits and Disadvantages of PISA Testing

The PISA tests are said to provide evidence of improvement or deterioration in student learning over time, place, and school context (OECD, 2010). Test results are indicative of progress over time; for example, performance in one year compared to the next across schools of similar type, performance of one school compared to a school with similar attributes or in the same geographical area or of changes in light of new policies, practices, or personnel, and performance as a result of a school implementing new pedagogical practices.

Such data is very useful and provides evidence for introspection and educational praxis, with theory and practice viewed as essential in informing each other (Grundy, 1987). Hence, PISA test results can be diagnostic and helpful in teaching and learning processes.

We also know there is always room for improvement in every human enterprise, with none being more important than education. Test participation provides information on which decisions for improvement can be made with the aim of achieving higher outcomes.

A further benefit, some believe, is that we owe it to students to make them aware of their true learning abilities and not to mollycoddle them through concerns about their self-esteem, luring them into a false sense of security if they are failing (Ng & Earl, 2008; Loveless, 2006; see also Chua, 2011). In other words, students and parents should not be shielded from factual assessments of a child's performance and how these compare with those of counterparts of the same age.

Education departments regularly introduce new curriculums or promote particular pedagogical practices. For example, in Australia current emphases are individualized programming for every student, interdisciplinary learning, and teacher teams working intensively with a group of students in newly designed learning facilities catering to

all curriculum areas, with students pursuing different activities--individually, in small groups, or working intensively with a teacher. It is conceivable that governments would want some independent measures by which to gauge the impact of such radical curricular and pedagogical changes. PISA tests might be one such indicative measure (OECD, 2010, 2012, 2013; Schleicher, 2013).

Despite these advantages, however, extant research literature suggests there are many reasons why PISA and other forms of standardized testing should be viewed with skepticism.

A common criticism is that the information derived from testing instruments adds little to what teachers already know. Teachers know what students know and can do and what they cannot. Teachers know what students must do to improve.

In this sense instruments like PISA de-professionalize and de-skill teaching, with test data being privileged above teacher knowledge (McNeil, 2000). Valorizing "point in time" test results above teachers' professional judgments is wasteful and disrespectful.

A second common criticism is that tests do not account for the contextual differences that create educational advantage or disadvantage. Schools often perform at levels that are indicative of the level of social capital they have available to them in the local community.

Over decades, educational research has demonstrated that students may be advantaged or disadvantaged at school depending on their home circumstances (Connell, Ashenden, Kessler, & Dowsett, 1982). League tables provide stark academic distinctions between advantaged and disadvantaged students. Many factors such as socioeconomic background, household functionality, physical disability, language proficiency, or geographical location influence schooling outcomes. Polesel, Dulfer, and Turnbull (2012) argue that standardized testing has a disparaging impact on some students, some schools and some communities, which is unconscionable when it comes to educating the nation's children and young people.

We assume that education should be an "equalizer."

> The OECD (2010, p. 13) admits that: Home background influences educational success, and schooling often appears to reinforce its effects. Although poor performance in school does not automatically follow from a disadvantaged socioeconomic background, the socioeconomic background of students and schools does appear to have a powerful influence on performance.

Hence, students from low socio-economic backgrounds tend to achieve lower test scores than their advantaged counterparts.

In light of this acknowledgment PISA tests occur alongside a questionnaire delivered to students and principals to extract local information. However, in Australia these data are seldom the focus of national media and rarely acted upon by education systems on the basis of test results.

On the contrary, poorly performing schools can be punished for their failure (Ball, 1994). A telling example was that former Prime Minster Kevin Rudd threatened to close failing schools and sack their principals through his

government's "Education Revolution" (Grattan, Tomazin, & Harrison, 2008; Reid, 2009), despite the fact that constitutionally education is a state-based issue in Australia, not a federal preserve.

The media "beat up" on schools, educators, and education policy has led to a regular public endorsement of calls for a "back-to-basics"/"no frills" policy stance at the same time as enormous pressures are being brought to bear to expand the curriculum to solve a range of social woes from road safety to consumer literacy. Hurst (2013, p. 1) refers to this as "a vision of the future-– grounded in the past."

PISA tests target only certain areas of the curriculum and only certain elements within those curriculum areas. They foster a "core and options" basis for curriculum, revering mathematics, science, and reading above other areas of knowledge, which suits some students and their interests more than others.

This reversion to a "core and options" curriculum model has displaced equal weighting provided in all curriculum areas in the compulsory years of schooling, which may disenfranchise students whose talents reside in the arts, humanities, languages, sports, or physical education, for example. In this way the interests and learning strengths of all students are less likely to be catered to.

There have been criticisms about teachers "teaching to the test" and thereby narrowing the curriculum (Phelps, 2011; Polesel et al., 2012), of schools encouraging slow learners to be absent for high stakes tests in order to avoid lower aggregated school scores (ACARA, 2012; Topsfield, 2012), and there are even teachers' guides (Thomson, Hillman, & De Bortoli, 2013a, 2013b, 2013c) and test preparation texts available to yield a head start.

For all the reasons above, PISA testing hardly occurs on a "level playing field."

At the macro level, PISA sample sizes for any country are too low to make judgments about entire education systems (as mentioned earlier, only 1.8 per cent of eligible students sit for PISA tests across the world).

To fulfill OECD requirements, each country must draw a minimum sample of only 5,000 students—statistically, in most cases, a very small percentage of the total number. It is also unlikely that across the world students are studying the same material at the same ages and grade levels. Furthermore, test results do not indicate how improvements can be made.

PISA testing regimes are costly in terms of their development, administration, analysis, and reporting. The funds used to participate in tests could likely be better spent on teachers or learning resources closer to students and more attuned to their learning needs.

Where Should Focus Be In Terms of Student Learning Outcomes?

No one would dispute the need for a fundamental educational grounding in the "3 R's." Literacy and numeracy are basic learnings that everyone would expect of any education system.

When parents are asked what they want from schools, the "3 R's" are the most commonly cited need.

However, parents also want their children to be happy at school, to feel connected and not excluded or alienated by schooling processes (Starr, 2014, forthcoming;

Zeehandelaar & Northern, 2013). While some parents may seek high-test score results, most prefer their children to experience the joy of learning to become lifelong learners.

They want skills that enhance employability, citizenship, acceptance of cultural diversity, and creativity (Zeehandelaar & Northern, 2013).

Employers seek thinking skills, both analytical and critical. They want future employees to be able to apply interdisciplinary knowledge to real world problems, to demonstrate capacity for teamwork, to take personal initiative, to possess competent IT skills, intercultural understandings, and a "can-do" attitude (Career NZ, 2013); and it is assumed that these are developed in schools.

Further, schools that successfully engage students achieve the highest rates of retention and attendance. In sum, the community wants students to receive a well-rounded education that values all fields of knowledge and that recognizes and builds on students' strengths and interests in addition to providing a range of cross-curricular social learnings.

This is the antithesis of the focus of standardized tests such as PISA, yet the prominence they receive from governments elides so much of what schools do and what communities expect from education.

The OECD (2010) suggests there are factors that high performing and rapidly improving education systems have in common.

First, high performing nations are clear about their commitment to education, with citizens valuing education above other things. In the world's highest performing countries, therefore, students study longer and harder in order to achieve at school rather than spending time with friends or in recreational activities outside of school.

Second, high achieving education systems set high standards and expectations that are accepted across the education system with a focus on higher order thinking skills. Students are encouraged to succeed and do not progress through grade levels until they have mastered the requisite learning in each grade.

Third, and most importantly, these education systems emphasize the quality of teachers and principals. Teachers are respected and importance is placed on teacher recruitment, training, induction, mentoring, professional learning, and compensation. Such education systems have more autonomy at the school level with discretion over resource allocation, staff deployment, work organization, and school procedures. Traditional centralized "command and control" systems have made way for local management and accountability arrangements. Teachers work together to determine good practices and use research as evidence of the effectiveness of the approaches adopted.

Last, the most successful countries invest more money in education to make a difference for all students. They prioritize quality within teaching and use their most talented teachers for the most challenging classrooms (Harrison, 2012). Experience in challenging circumstances is a criterion for career progression as is peer-reviewed research, while the most resources are provided to socioeconomically disadvantaged schools. Systemically, there are high expectations for the success of every student and for the delivery of excellent learning opportunities.

Currently, countries such as Finland, Japan, Korea, and Canada and cities such as

Hong Kong and Shanghai all perform above the OECD mean performance level. These education systems have few students at lower proficiency levels (OECD, 2010).

While many of the attributes mentioned above could be said about the Australian education system, many do not accord with schooling reality; thus, there is much to be learnt, even though Australia actually achieves within the top ten countries each year.

Implications for Educational Leaders

While schools should take notice of PISA and other standardized test results, they are not the "be all and end all."

Schools should concentrate on their actual needs, collecting data from within the school to demonstrate improvements that have occurred, some of which may not relate to the formal curriculum (such as increased retention, attendance, sense of belonging, intercultural harmony, and integration of students with disabilities). Data on all forms of improvement are useful for accountability, annual reporting, and school leaders' performance appraisals.

Leaders should account for all improvements and use them as an internal gauge of performance and for their own public relations and accountability exercises, rather than relying on external, narrow measurements and priorities.

Schools have an obligation to base improvement activities on students' actual learning needs. Schools are always a work in progress and in a state of becoming. They are never perfect and needs and priorities change over time. The main concerns of the current principal will be different from that of predecessors and will be different again from those of successors. Hence, school leaders and governors need their prime focus to be on the stewardship of their school with its current needs, priorities, and desired initiatives.

I would argue most emphatically for a re-thinking of educational leadership whereby the profession takes responsibility for establishing systemic educational directions, needs, and priorities. Educational leaders should question why tests such as PISA are necessary, have the influence they do, and also question the purposes to which the data are put and ask, "Who wants to know and why?"

While the immediate school context is the prime focus, there is also a need to extend the purview beyond the school gate, beyond that of the local community, the state, and the nation.

As educators, there should be a concern for the education of the world's children and young people in general.

It is an indictment that the world is nowhere near reaching the millennium goal of primary school completion as a minimum level for all the world's children.

It is shameful that only wealthy countries can afford to participate in the PISA and that the countries that do are more concerned about out-ranking one another than they are about giving the children in less affluent circumstances the assistance required to receive a basic education.

Every Australian state and education authority has developed educational leadership standards over recent years (DEECD, 2007). These are usually presented as developmental learning frameworks to build school leadership capacity from aspirants and beginners, through mid-career, to very experienced and successful school leaders. At the highest standards of leadership, these frameworks suggest that

school leaders take responsibility for their profession and extend their leadership through networks and associations to reach schools and students beyond their immediate institutional responsibilities.

These higher levels of school leadership are seldom commented upon and are rarely a focus for performance appraisals.

However, "bad" education policy should be addressed and challenged rather than tolerated.

The most effective school leaders and practitioners should make it a priority to educate adults--the parents in their school communities, the politicians, the fourth estate, and the commentariat—about what really matters in education, what should and should not be done, while providing data about the effectiveness of home-grown practices that demonstrate student learning improvements in a variety of areas.

There is also a case for turning beliefs and statistics to the advantage of schools rather than have them held up for more criticism.

For example, the OECD argues that teachers are generally weak in skills that are required for the 21st century, most notably ICT skills (Ananiadou & Claro, 2009, p. 6). Then why is funding not forthcoming for this critical area of professional need? (Perhaps testing funding could be diverted through reprioritization.)

From equity and professional perspectives and using sheer common sense, PISA is divisive rather than ameliorative, encouraging competition rather than collaboration and delivering many more negatives than benefits. PISA is esteemed as a form of legitimate global research, yet the valid findings of equity-focused educational research is marginalized in its wake.

School leaders and their professional associations have a role in advocating on behalf of education and educators, for learning in its broadest sense, and for all children, everywhere. PISA is a sideshow that is taking attention away from the main game and disproportionately influencing education policy and practice to the detriment of Australian students.

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