

# Education: A global contest

iNET Australia 2007 National Conference  
*International Networking for  
Educational Transformation*  
30 April 2007

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# EDUCATION: A GLOBAL CONTEST

The success of education systems is no longer judged only by domestic performance. We are being challenged to contribute to economic and social prosperity in a globalised environment. This raises questions such as the skills and knowledge needed by young people, the capabilities of an education workforce to fulfil a global agenda and how to boost equity when there is a danger that the new divide will be between those who have global 'nous' and the rest.

My presentation is about education policy priorities for Australia to thrive in a global economy. The recently developed National Reform Agenda<sup>1</sup> establishes the primacy of education in supporting our businesses and individuals to succeed in the global economy. It argues for the necessity of a new focus on building our most important economic resource, the capacity of our people – or our human capital. This is a pressing agenda and, with respect to education, will focus national improvement to boost the quality of our human capital on early childhood, literacy and numeracy, youth transitions and adult skills.

I want to drop down from that level of national priority and discuss my ideas around three main critical pressure points that we will have to address if we are to meet these national expectations for education. These areas for attention are familiar ones but if viewed through the lens of the global knowledge economy and future challenges they assume far greater urgency and offer new policy possibilities. I use the metaphor of the 'burning platform' - an expression in the business world for the ultimate stimulus for change and innovation.

The three critical areas are knowledge and skills for 21<sup>st</sup> century - what is worthwhile knowing so as to thrive in the future and make full use of a rapidly increasing knowledge base and what is the best way to teach what is worthwhile? The second focal point is the education workforce - how to establish teachers as respected knowledge professionals and all schools as trusted and high performing contemporary workplaces? The third focus is the persistent patterns of inequity in Australian education, despite our improving quality- why are the same patterns of educational inequalities being perpetuated in Australia when others countries have improved and what can we do to change this?

Each of these questions will be explored in the sections that follow.<sup>2</sup>

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<sup>1</sup> *Governments Working Together: a third wave of national reform: a new national reform initiative for COAG (the Third Wave)*, August 2005

<sup>2</sup> NB The discussion that follows is to stimulate thinking and not necessarily to signal policy directions for Victoria.

## Understanding the global knowledge economy

Discussion of the implications of globalisation and the knowledge economy is familiar territory. Nevertheless, it is a formidable challenge for policy makers to absorb an understanding of the scale and rapidity of change flowing from globalisation and adjust the policy levers to anticipate the future environment for schools. Often our discussion is about the impact of ICTs on young peoples' lives and the challenges for reconciling the differences between learning in a classroom with young peoples' everyday experience with new learning technologies. This is of course a central concern, but I want to stress the need to understand and respond to the challenges from the global knowledge economy for schooling in a broader sense.

Two quotes are useful in sharpening the focus on globalisation and the implication for education.

First is to consider Thomas Friedman and his account of the globalised world in the 21<sup>st</sup> century.

There have been three great eras of globalisation... Globalisation 1.0 was about *countries and muscle*... how much horse power your country had to deploy... Globalisation 2.00 was about *multinational companies* ... with the movement of goods and information... and shrank the world from medium to small... Globalisation 3.0 is about *individuals'* power to collaborate... and has shrunk the world from small to tiny and is happening at an extraordinary pace<sup>3</sup>

Globalisation 1.0 lasted from Columbus in 1492 until around 1800. It was about countries finding their power base in the world through industrial innovation, might and imperialism. Friedman calls it globalisation driven by 'countries and muscle' - how much energy such as steam power a country could assemble and how much force it needed to exert through imperialism to ensure its powerbase.

Globalisation 2.0 was about the dynamics of the multinationals from 1800-2000 (Indeed my experience of the might and meaning of globalisation in the 1990s was through working for Exxon, one of the largest multinationals.) This era was about the global movement of goods and information from continent to continent and the creation of a global marketplace. It was about breakthroughs in hardware and the world shrank from medium to small. In the first half of the era, globalisation was powered by the reduced costs of transportation and the second half by telecommunications and the information revolution. I recall that in the mid 1980s I was connected globally in Exxon through an early version of e-mail and was encouraged to liaise daily with international counterparts - it was exhilarating. At the same time the Federal Government, where I previously worked, was using phones and faxes.

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<sup>3</sup> Thomas Friedman, While I was sleeping, *The World is Flat: A Brief History of the Globalised World in the 21<sup>st</sup> century*, Allen Lane, London, 2005.

Globalisation 3.0 according to Friedman is about individuals and their empowerment in a world that is being flattened – ironically the shape of the world that Columbus disproved. Moreover this flattening is happening at an alarming speed, unlike other eras. In this era, no region is unconnected to the globalising forces and individuals are empowered to act irrespective of where they are. While previous eras were driven by horsepower, then hardware, this era is driven by software that massively enhances interconnectivity. Individuals ask where do *I* fit in the global competition and opportunities of the day and how can *I* collaborate with others. And, of course, while previous eras were driven by Europe and America, this era is the whole world.

Friedman was stimulated to write this account from observing the extraordinary growth of sophisticated information services in India – please forget the image of the Indian call centre! While those services are in considerable number, there are also far more complex knowledge and service industries being established and fuelling a predication of growth of around 9 percent. A population of more than one billion, liberalisation of the economy, an expanding core of highly educated and the dynamics of the global knowledge economy will arguably take India to be the world's fourth largest economy by 2020.

Another perspective on globalisation comes from the late Peter Drucker, the longstanding commentator on business and the shape of the workplace. He too talks about disaggregating known hierarchies and predictable entities, the role of individuals and the power of knowledge. In commenting on the future workplace and the perspective of managers he says,

Would you believe that you are going to work permanently with people who work for you but are not your employees?<sup>4</sup>

The point is that hierarchies and predictable entities in working life will increasingly dissolve. Managers who talk about people who report to them will be outdated in a more flexible and information rich environment. You will no longer talk about subordinates but talk about success in terms of access to information to complete a job, the different kinds of relationships a job requires, how work is outsourced to specialist designers and so on. This is an environment where individuals will be taking more responsibility for themselves and where information will replace authority. (I will come back to this image in terms of the education workforce and schools as workplaces.)

In addition, the nature of information or knowledge is changing. The OECD has drawn a distinction between know-what, know-why, know-how and know-who.

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<sup>4</sup> Harris. TG., 'The Post – Capitalist Executive: An interview with Peter Drucker', in K Ohmae (ed), *The evolving Global economy: making sense of the new World order*, The Harvard Business Review Book series, 1995.

The rapidity of knowledge development, the immense capacity for storing and retrieving knowledge and increasing value of intangible assets has shifted the core focus in knowledge from know-what to know-how. The importance of relationships and collaboration also places a premium on know-who.

The themes that emerge from this perspective on globalisation are around the intensity of global economic competition in a shrinking world and the challenges for Australia, with neighbours India and China projected to have a substantial proportion of the world's population by 2020 and already in hot pursuit of the world's best education. How can Australia afford not to have the total population educated to the fullest extent to operate in a competitive knowledge economy? Australia will not be able to compete on price; the industries where Australia can hope to compete are at the high-skill, high value-added end of the scale, where knowledge it at a premium.

An educated population in the future is about individuals who have the skills of enquiry – of know-how, can grapple with higher levels of technical skills, have high degrees of personal autonomy, and are flexible and mobile. Institutional certainties will weaken and more abstract structures through networks and relationships will flourish. Australia will need accelerated innovation – like Finland and Ireland and other small population nations to compete globally as well as meet emerging demand for services that can only be delivered domestically.

Our school systems are centre stage in finding the solutions.

### **Knowledge and skills for 21<sup>st</sup> century**

*Burning platform 1: The rate of global change could be outstripping schools capacity to provide the knowledge and skills we will need.*

In any week anywhere in Australia the press will be commenting on the adequacy of the curriculum taught in schools and often linking that with the reputation of schooling and teachers in general and the public school system in particular. Whether the commentary is a simplistic attack on schools – such as failure in literacy or numeracy, predominance of soft options, the absence of important cultural content, or a failure to address skill shortages, or a more constructive critique of education policy – such as a tackling equity or the role of ICTs, the message is clear. Curriculum is rightly of considerable public and political interest; it matters what is being taught in schools and the community want guarantees of relevance and quality.

These public attacks may however have the unfortunate effect of talking the school sector in a corner where it adopts a more defensive stance rather than taking up the challenge and articulating the real dilemmas of curriculum design and learning and teaching challenges. If we look at the changing role and nature of knowledge in the global knowledge economy we do have challenging decisions to make. Most jurisdictions have redesigned their curriculum to take contemporary pressures into account. In Victoria, the Victorian Essential Learning Standards incorporates the disciplines, interpersonal skills and cross-disciplinary skills, and requires these strands to be integrated in the curriculum designed at the school for levels P- 10. We have diversified the senior years to incorporate applied learning alongside the academic. This are important foundations but it seems we need a considerably more confident and coherent engagement with the community on the purposes served by the curriculum and how it is constructed. We need consensus on what matters.

*Question: The fundamental question is what is worthwhile knowing to thrive in the future and make full use of rapidly increasing knowledge base and what is the best way to teach what is worthwhile?*

In my view contemporary curriculum design has three complementary – or often competing – aspects that systems and teachers juggle depending on circumstance and pressures. We need to bring these to the surface and ensure the rationale of curriculum design is explicit, contemporary and respected.

The explicit curriculum or subject content is the pre-eminent public face of curriculum; it is the locus for passionate arguments about cultural transmission. It is here we need settlement about the role of the major disciplines and the essential content for the different stages of learning. My view would be content should be assembled around understanding human society, science and technology, culture and language and be validated in terms of how well it equips young people to make sense of their world and have the knowledge and skills and feel capable of contributing to how it will evolve. It might be hard to agree on these dimensions but it is familiar territory and if well managed we could even have a national agreement around core content, benchmarked against the rest of the world for design and quality.

But it becomes more difficult from here. The second aspect teachers juggle with in curriculum design is more complex but arguably critical for 21<sup>st</sup> century capability. The term ‘soft skills’ has been in the curriculum debate and, indeed workforce skills debate, for around two decades but we are not much closer to providing a confident account of what matters and how to ensure these skills are core to what is taught and learned. Most jurisdictions have integrated skills for problem solving and thinking along with personal and interpersonal skills into the formal curriculum.

Unfortunately though, skills such as the ability to synthesise ideas and information, generate new ideas and communicate in multiple modes, work in teams to solve complex problems can still be undercut by many system and school practices, like assessment, school facilities, timetables, and a host of practices that belong to another era. We urgently need major thinking on how to take this aspect of 21<sup>st</sup> century skills forward.

The third aspect that contributes to curriculum design is a constant challenge in the classroom but strangely is not well understood in the community and indeed is where school practices are most criticised for being trendy or soft. This is the engagement factor; the everyday challenge of continuing to engage the full spectrum of young people in learning, selecting themes and approaches that build their commitment and excitement with learning and linking major themes with their everyday experience. This calls for curriculum design that is highly flexible and responsive to diversity with the capacity to tailor to interests and needs. There should be respect for this aspect of curriculum design rather than generating criticisms like ‘Soft options only add to trouble’ as recently seen in the press.

If we are pursuing the goal of not only universal schooling but near to universal post secondary education we need to deeply understand what engages all young people in learning and provide teachers with the capacity and professional skills to use curriculum flexibility for all to acquire 21<sup>st</sup> century knowledge and skills.

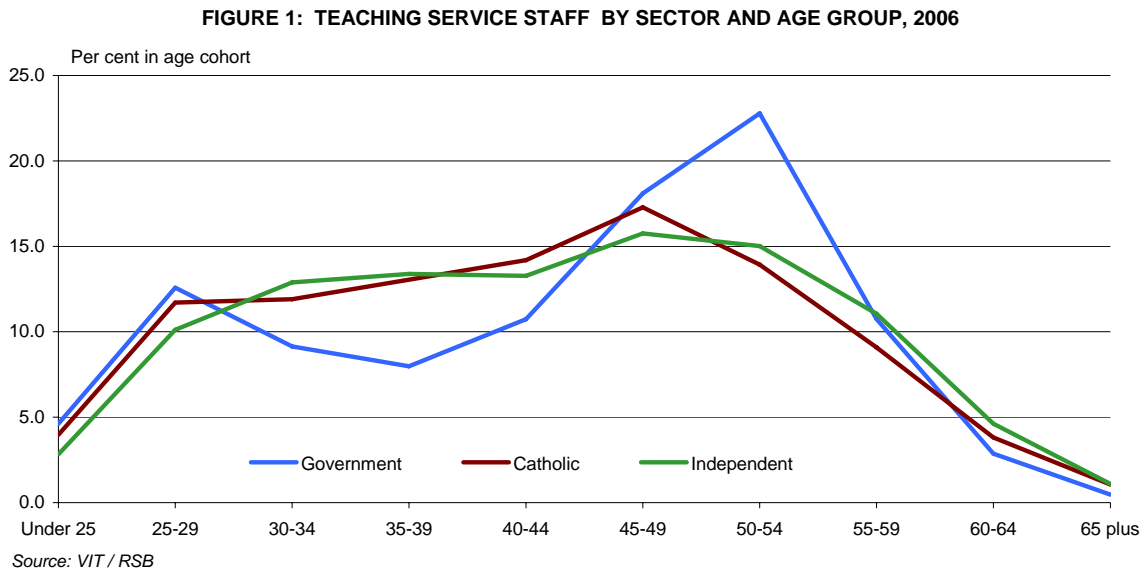
### **Education workforce**

*Burning platform 2: The challenge of the demographics and an ageing workforce and leadership, workforce rigidities and teachers skills not keeping pace with societal and global requirements.*

The demographic composition of the education workforce in Australia, mainly in terms of age and gender, is enough to get the attention of policy makers as is evidence of the reluctance of younger people to apply for principal positions and the relatively high levels of teacher stress reported by workplace insurers. Combine that with the still relatively low entry scores to Higher Education for teacher training and shortages in some crucial areas of the curriculum and we have some critical policy matters to confront.

This is not to challenge the quality of the current workforce; rather it draws attention to opportunities we may need to consider in the future if the education workforce is to continue modernise along with all other sectors in the economy.

Figure 1 below shows the age pattern of the Victorian teaching service in 2006.



We may need to change the perspective on the workforce. The parameters through which we routinely analyse the teaching workforce are mainly of an input kind - numbers of teachers, ratios with respect to pupils and class sizes, skill shortages and so on. Not only do we need to manage these factors on the input side but we need a major shift to focus more squarely on the levers that ensure the quality of the workforce and consider others factors like qualifications and professional training, potential and performance, responsibilities and breadth of role. The urgent challenge is to look afresh at education as a knowledge industry and see improvements to the workforce through that lens.

*Question: how to establish teachers as respected knowledge professionals and all schools as trusted and high performing contemporary workplaces?*

A useful starting is to ask what can or should education system and institutions learn from other areas of the workforce? Research over the past decade in Australia and elsewhere has consistently shown that successful and sustainable organisations are those that are not only operationally effective – get the job done – but also engage and develop the commitment and creativity of the people that make up the organization.<sup>5</sup> These are also the places where people want to work. A high performance workplace is a central feature of any organisation’s strategy to be successful in the 21<sup>st</sup> century.

<sup>5</sup> For example, Turner, D., and Crawford, M., *Change power: Capabilities that Drive Corporate Renewal*, Sydney, Woodslane, 1998; and Dunphy, D., et al, *Sustainability: The Corporate Challenge of the 21<sup>st</sup> century*, NSW, Allen and Unwin, 2000.

The broad characteristics of the high performance workplace found in the literature include features such as:

- evidence of innovation, creativity and advocacy for improvement
- a sense of workforce cohesion
- flexible attitudes and 'can do' workplace practices
- values aligned with behavior
- self management and professional capability building
- teamwork and leadership, and
- Capacity to look outwards, globally, and continually benchmark performance.

While the education profession has done important and successful work around the qualities of school leadership, it is now time to consider the broader workplace dynamics, similar to others sectors of the economy. The Boston Consulting Group did an innovative analysis for the Victorian department of the school as an organization similar to a professional services firm. The study demonstrated that there was considerable potential for reshaping aspects of the workplace like induction, peer feedback and a serious commitment to professional learning and growth.

One consequential policy innovation in Victoria along this track has been a mandatory accreditation scheme for all schools to improve what is called their 'performance and development culture'. The Performance and Development Culture broadens the thinking about school improvement as it focuses on reforming those organisational practices that have the greatest potential for substantially improving teaching and learning practices within classrooms.

The scheme has represented a significant breakthrough in thinking about schools as workplaces. It has introduced evidence-based performance improvement through multiple forms of feedback, tied development plans clearly to performance needs; shifted the focus of professional development from one-off external activities to on-going classroom/school focused professional learning. The scheme is inclusive; it assumes that all take part as each person plays a part in forming the culture of the school

The objective is for all Government schools to be accredited as Performance and Development Culture schools by 2008. The next steps are to invite non-government schools to join this improvement journey and to work with the leaders in government schools in defining the next level of organizational improvement.

The Boston Consulting Group's further analysis of parallels with professional service firms is again instructive. The analysis goes on to identify such matters as recruitment – that is where a quality workforce starts, with people who are qualified, motivated and are the best available; knowledge management – where evidence from successful practices globally are accessible to help professionals do their work and they are expected to be up to date; and the hot issue of financial incentives and rewards and pay for performance. Most industry sectors that employ professionals have techniques for counseling out those who don't fit the culture and performance that is required. A firm will often have a service to assist people leave gracefully, retain a positive view of the company and find a position that is a better fit.

The work of Richard Elmore has a similar analytical framework developed from comparisons with others areas of the professional workforce.<sup>6</sup> He sets up a case for a more expert and professionally tested view of teaching and argues that the profession should have both the capability to define teaching standards and the strength and reputation to uphold them – that is what a profession does and this is the guarantee to the community of the quality of the work.

Policy analysis around sustaining a high quality education workforce is happening in most countries – England has led a major initiative around workforce remodeling and the introduction of new education support workers to complement the work of teachers in the classroom.<sup>7</sup> In the United States there are initiatives to examine performance pay that differentiates among levels of effort and performance, as an alternative to a universal salary scales;<sup>8</sup> retention and retraining schemes for teachers<sup>9</sup> and a program *Teaching America*<sup>10</sup> that it highly prospective for consideration in the Australian environment for areas of priority such as mathematics and science.

This program enables young undergraduates and graduates (it started with law students) who may not intend to be teachers, but who welcome a short period of employment in education, to do so. They are trained in a short teacher training course have in-school mentors, and over a two year period support teachers in locations of need.

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<sup>6</sup> Elmore, R., *Bridging the Gap Between Standards and Achievement: The Imperative for Professional Development in Education*, 2002.

<sup>7</sup> *Time for Standards: Reforming the school workforce*, Department for Education and Skills, 2002

<sup>8</sup> *Performance Pay for Teachers: Designing a System that Students Deserve*, A teacher solutions report by 18 of the nations best teachers, Centre for Teaching Quality, 2007.

<sup>9</sup> Futernick, K., *A possible dream: retaining California's Teachers so all children learn*, Sacramento: California State University, 2007.

<sup>10</sup> [www.teachforamerica.org](http://www.teachforamerica.org)

This is an attractive idea not only because it brings a new mix of skills into schools, but it is consistent with what we know about modern working life and the millennials. They will have many jobs, retrain often, expect excitement and difference in the workplace, take up jobs in other countries, and so on. It goes without saying that the education sector will gain enormously if it sufficiently flexible to respond to their demands.

For us to ensure teachers are respected knowledge professionals and all schools are trusted and high performing contemporary workplaces, we need to go beyond the conventional input measures and the relatively modest advances we have made around leadership and the like. The sector will need a substantively more developed approach to workforce quality and be seen by the community to be doing such. We will need to consider further how schools function as contemporary workplaces, as signalled in Victoria through the Performance and Development Culture scheme; how we recruit and retain the best and how we counsel out those who aren't a good fit; we need to consider highly flexible modes of employment - that will be a competitive aspect of recruitment, including providing international experiences; and how we reward our best performers. Australian education is only at the beginning of this endeavour.

### **Tackling persistent inequities**

*Burning platform 3: persistent patterns of inequity in Australian education, despite our improvement of quality*

The OECD data from the PISA tests are proving to be a rich source of comparative information and most educational policy development by OECD participants uses the data alongside national sources. International benchmarking of educational performance is now the norm.

The somewhat startling finding for Australia has been that our achievement profile is classified as high quality but low equity. Even where we are currently high quality, such as tying with eight other countries in 2<sup>nd</sup> place in reading in the 2000 test, and in 5<sup>th</sup> place with 7 other countries in science 2003, the data show that other countries are not standing still. Countries like Korea, Hong Kong, Czech Republic, Finland and Canada are striding ahead as the pressure for improving educational performance accelerates in a global environment.

On the equity dimension there is considerable reason for concern. The recent paper *The Future of Australian Schooling*<sup>11</sup> shows an international comparison of performance with respect to schools' and students' social backgrounds. Given we know that social advantage is generally related to better educational performance, a special responsibility of education systems is to ensure they have policies in place to counteract that so that all young people have a chance to succeed and that the national quality of education outcomes is maximised.

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<sup>11</sup> *The Future of Australian Schooling*, Federalist Paper 2, A Report by the States and Territories, April 2007.

The chart below (Figure 2) shows that Australia and United States and Germany are significantly behind Finland and Canada with respect to the impact of low socio economic status background on reading performance. Other subjects show generally similar patterns and consistently Finland and Canada show they are high quality and high equity.

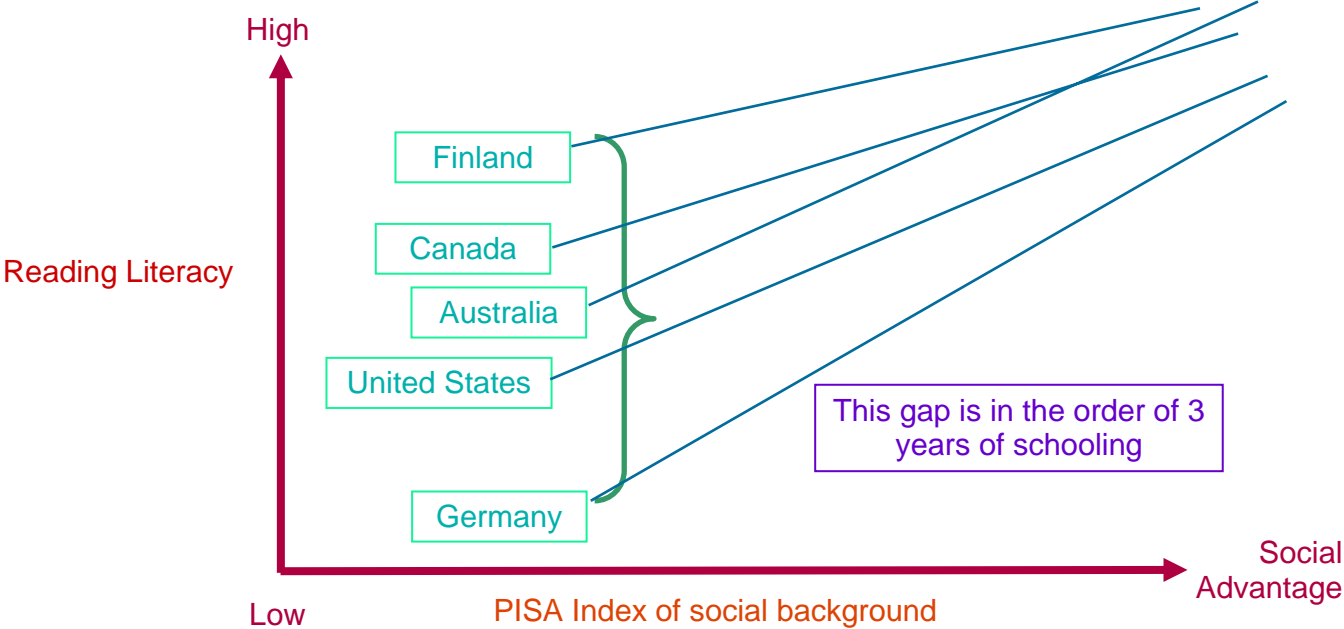


Figure 2 Relationship between social background and performance Reading 2000

On another measure of equity using PISA data, there is a calculation of the influence of social background as an explanation of the difference between schools outcomes. In Australia, 70 percent of the variation between schools can be accounted for in terms of social background- 40 percent individuals and 30 percent the average background of students in the schools. Moreover, the paper explains that the pattern of influence of social background on educational performance in Australia has not shown improvement between 1975 and 1998.

*Question: why are the same patterns of educational inequalities being perpetuated in Australia when others countries have improved and what can we do to change this?*

As we know there is a steady trail of visitors to Finland to understand why they have topped the PISA tests and minimised differences between schools, achieving high quality and high equity. International comparisons are always difficult. We do know that teachers and schools in Finland have considerable autonomy to operate within a broad set of standards, teachers are very well qualified and respected and they are not paid more than other countries. We also know that Finland is an innovation success story and a model in industry sector analysis.<sup>12</sup> It has continuously built on

<sup>12</sup> OECD, *Innovation Policy and Performance: A cross Country Comparison*, Paris, 2005.

its science, technology and innovation capabilities and the Finnish government has encouraged national debate around the qualities needed to sustain this success and the focus for innovation in the global knowledge economy. The country appears to know how education contributes to national economic and social well-being and that an international outlook is essential. We might have lessons to learn in that respect.

In 2005 in Victoria, we conducted research around inequalities in outcomes and analysed student, teacher and principal views on addressing inequities.<sup>13</sup> The study demonstrated that educational outcomes in Victoria persistently reflect predictable patterns of social disadvantage.

In seeking to understand what needs to change, the report proposes the solutions lie in a mix of responses in the fields of program and school provision – what’s on offer, and pedagogy – how teaching occurs. This is not just about classroom practice. It is firstly about offering the right programs and with a degree of choice, particularly for older students who may well leave as soon as they can. A highly limited program mix, particularly for adolescents and a narrow pupil mix are unfortunately the typical characteristics of schools in Victoria providing for those with lower socio-economic status. These schools have trouble attracting staff, their reputations decline and the spiral downwards in performance is inevitable. Program breadth and a critical mass of staff are the vital aspects to pursue for improvement.

As far as classroom practice goes, the report strongly concludes that all students, irrespective of background or performance see the quality of teaching as the prime factor in their success. They want ‘good teachers in every subject’. But there were differences in how students from different backgrounds saw good teaching with those from poorer backgrounds wanting more time in face to face dialogue, more time to ask questions and get help, more practical examples and so on.

There were also differences in what teachers saw as the issues. In the poorer localities teachers felt the main reasons for underachievement was that students were not willing to work hard enough, they have no-one at home to help them and the school lacks additional resources to provide the right assistance.

As in all systems we have case studies of individual schools, including those working with indigenous young people, who are succeeding - often with the ‘tough love’ approach. But these case studies are only a beginning in understanding how to address inequalities and break the pattern. It is not as though schools and systems have been unaware or have not been making an effort!

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<sup>13</sup> Teese, R et al., *Opportunities and Outcomes in the North West of Melbourne, A study of educational provision in a context of urban change*, The Office of Learning and Teaching, Victorian Department of Education and Training, 2006.

What adds to the complexity is that the arenas for inequality are broadening and the traps are increasingly hard to escape. Economic disadvantage has been compounded by the notion of the information – rich and the information – poor and what that means for individuals navigating their way in the economy and society. With globalisation, there is a new dimension of disadvantage – let's call it global 'nous'. This is about having the capital to engage in the best the world has to offer – education, employment, culture. Young Indians and Chinese coming to study in Australia are well aware of what this is and what will count for advantage in the future.

The European union has set a target for 10 percent of tertiary students to study internationally, which is up from around 2-5 percent; the United States aim to expand participation in study overseas by 2017 to 1 million which is around half the number of degrees awarded annually and , up from 200,000. In Australia, less than 1 per cent of domestic tertiary students study abroad, with most going to European or North American locations and only 15 percent to Asia.

What is clear is the imperative to face up to this responsibility. The global environment will require all Australia's population to be equipped to make an economic contribution and social prosperity requires all our population to have access to productive work and the understandings that will enable them to manage in an information rich global environment.

Three areas for attention have been proposed in this presentation – others could well be chosen but it seems the time is right to address these three.

The three critical areas are knowledge and skills for 21<sup>st</sup> century - what is worthwhile knowing so as to thrive in the future and make full use of a rapidly increasing knowledge base and what is the best way to teach what is worthwhile? Second, is the education workforce - how to establish teachers as respected knowledge professionals and all schools as trusted and high performing contemporary workplaces? The third focus is the persistent patterns of inequity in Australian education, despite our improving quality - why are the same patterns of educational inequalities being perpetuated in Australia when other countries have improved and what can we do to change this?

If we are grappling with these issues in the context of Australia's place in the global knowledge economy, we should surely be able to tackle them as a nation and across all education sectors in Australia.