
11 Institutionalising an evidence-based approach to policy making: the case of the human capital reform agenda

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Abstract

This paper is based on a case-study of evidence-based policy — that is, the development and implementation of the human capital reform agenda in Victoria and Australia. It is argued that this is an outstanding example of an evidence base generating a major reform agenda. It is also concluded that an outcomes framework which can be linked with progress measures and targets, and an associated evaluation framework, provides strong incentives for governments to adopt evidence-based policies that can be expected to have a desirable impact on the agreed outcomes. Third, it is argued that different kinds of evidence are useful in different circumstances and that often multiple sources of evidence are ideal. There are important differences between evidence needed for strategic policy design and specific policy initiatives. It is also suggested that the Council of Australian Governments' National Productivity Agenda is a very good illustration of how an evidence-based policy framework can support a federal–state reform agenda in the context of vertical fiscal imbalance. Finally, the way in which an evidence-based approach to policy development and advice to ministers is embedded in the modus operandi of the Department of Education and Early Childhood Development in Victoria is outlined.

11.1 Introduction

Policy decisions will be influenced by much more than objective evidence, or rational analysis. Values, interests, personalities, timing, circumstance and happenstance — in short, democracy — determine what actually happens. But evidence and analysis can

nevertheless play a useful, even decisive, role in determining policy-makers' judgments. Importantly, they can also condition the political environment in which those judgments can be made (Banks 2009).

In this paper I discuss the institutionalising of an evidence-based approach to policy making, in the context of a case study of the human capital reform agenda, initiated by the Bracks–Brumby Victorian State Government's *Third Wave of Reform* (DPC and DTF 2005) followed by the Rudd Federal Government's 'Education Revolution'.

I will also cover the way in which the Victorian Department of Education and Early Childhood Development has embedded an evidence-based approach to its policy advice to ministers and its evaluation of progress against objectives.

11.2 The human capital reform agenda

The third wave of reform

In August 2005, the then Victorian Premier, Steve Bracks, in association with the then Victorian Treasurer, John Brumby, launched *Governments Working Together: A Third Wave of National Reform* (DPC and DTF 2005). The first wave of the reform in the 1980s involved the floating of the dollar, the deregulation of financial markets and the effective end of tariff barriers designed to protect Australian industry. National competition policy was the centrepiece of the second wave in the 1990s. The Victorian Government was now calling for a third wave, in which a major focus would be a human capital reform agenda.

Victoria proposed this new National Reform Agenda to the Council of Australian Governments (COAG). In progressing the case for the agenda, extensive evidence was collected about the effects of early childhood development, schooling and vocational education on literacy and numeracy, labour force participation and productivity. This evidence was used in tandem with some computable general equilibrium (CGE) modelling, using the Monash Model, to simulate the potential economic effects of the reform agenda on gross domestic product (GDP) and tax revenues (DTF 2006).

Later, the Productivity Commission was asked by the Australian Government to undertake modelling of a similar kind, which resulted in an important report which also found substantial economic benefits for Australia from such a reform agenda, *Potential Benefits of the National Reform Agenda* (PC 2006).

In February 2006, COAG agreed to progress the human capital reform agenda. In the COAG communiqué, the focus of the reform and the framework for implementing it was outlined (COAG 2006). This included a list of ‘indicative outcomes’, such as the proportion of young people meeting basic literacy and numeracy standards, and the proportion of young people making a successful transition from school to work or further study.

To ‘hold jurisdictions accountable for achieving these outcomes’, COAG agreed that the progress of jurisdictions would be independently assessed and transparently reported. This led to the establishment of the COAG Reform Council.

Although this did not result in major federal–state investment in a human capital reform agenda before the 2007 election, the COAG Reform Council was still in place after the election of the Rudd Labor Government, which had committed to an Education Revolution.

Meanwhile, the Victorian Government produced a number of policy papers about the way in which it proposed to implement the human capital reform agenda in collaboration with the Australian Government, on the basis of joint Commonwealth–State investment, and a range of targets which an analysis of the evidence suggested were reasonable to aim for, and against which the progress of the policy implementation would be judged (DPC, DoE and DTF 2007; DPC, DHS, DTF and DoE 2007; DPC 2008).

The Education Revolution

In January 2007, Kevin Rudd, then Leader of the Opposition, announced with Stephen Smith, then Shadow Minister for Education and Training, the federal ALP’s commitment to an Education Revolution:

human capital development is at the heart of a third wave of economic reform that will position Australia as a competitive, innovative, knowledge based economy that can compete and win in global markets ... (ALP 2007, p. 3).

They went on to quote international evidence of the effect of education on economic growth:

OECD research estimates that a one year increase in the workforce’s average number of years of education can add 3–6 per cent to GDP and increase annual growth by as much as 1 per cent ...

International research has shown a close relationship between high literacy standards and economic growth, with a 1 per cent premium on average literacy scores linked to a 1.5 per cent higher level of per capita GDP. (ALP 2007, p. 11).

Econometric research from the United States by Erik Hanushek is another example of the evidence base of the effect of education on economic growth (Hanushek 2009).

The ALP's paper also documented evidence of Australia being a laggard in human capital investment from early childhood development to university education, concluding that raising this investment and promoting higher quality educational outcomes would be one of three priorities for a federal Labor Government.

The Victorian Blueprint for Education and Early Childhood Development

In parallel with its negotiation through COAG for a national human capital reform agenda, the Victorian Government proceeded to develop its own strategy. This included a skills reform policy that involved moving to a more demand-driven system for vocational education and training (DIIRD 2008). The Minister for Education, Bronwyn Pike, and the Minister for Children and Early Childhood Development, Maxine Morand, also released their strategy for young Victorians from birth to 18 in the *Blueprint for Education and Early Childhood Development* (DEECD 2008). This involved four priorities, six goals, three broad strategies and 20 areas of action. The core mission was to 'ensure a high quality and coherent birth-to-adulthood learning and development system to build the capacity of every young Victorian'. It committed to basing the strategies and actions on an international evidence base:

Directions emerging from international research and successful improvement strategies provide guidance on how we can make further improvements (DEECDa 2008, p. 13).

It also committed to an outcomes and evaluation framework for monitoring the success of the blueprint implementation that would be based on outcomes and progress measures simultaneously being developed for the COAG Productivity Agenda.

The COAG Productivity Agenda

With the election of the Rudd Labor Government, committed to its Education Revolution, momentum for a national human capital reform agenda was regained. At a COAG meeting in December 2007, a commitment was made to a National Productivity Agenda, in which human capital reform was to be central, and a Productivity Agenda Working Group was established, chaired by Deputy Prime Minister Julia Gillard, to develop this agenda.

In July 2008, COAG adopted an outcomes framework for the National Productivity Agenda, and associated performance measures (COAG 2008a). This is attached as Appendix 1 to this paper.

In November 2008, this resulted in a major multi-billion dollar investment in early childhood, school improvement and vocational education and training (COAG 2008b).

As well as a National Education Agreement being reached between the Commonwealth and the States and Territories about untied funding for state school systems, along with an agreed outcomes framework, and an agreed delineation of responsibilities between levels of government, a number of national partnership agreements were signed. In one, States and Territories committed to work with the Commonwealth to raise the quality of teaching. In another, agreement was reached to invest in low socioeconomic school communities because of the evidence about the association between low socioeconomic status of students and schools and educational outcomes.

11.3 Evidence-based policy: some important distinctions

Overall policy strategy and specific policy initiatives

In thinking about evidence-based policy, there is an important distinction between overall policy design and specific policy initiatives. To illustrate this, I give two examples of strategic policy design and two examples of specific policy initiatives.

Strategic policy design (1): COAG National Productivity Agenda

As outlined above, the COAG National Productivity Agenda was built primarily on a broad evidence base about the impact of human capital investment and human capital reform on economic growth (DTF 2006; Productivity Commission 2006).

Strategic policy design (2): Teacher quality

A major priority of the COAG productivity agenda is to raise the quality of teaching. This is based on a large number of empirical studies of the determinants of education outcomes. In September 2007, McKinsey & Co., under the leadership of Sir Michael Barber, produced a report titled *How the World's Best Performing School Systems Come Out on Top* (McKinsey 2007). It concluded that three things matter most:

1) getting the right people to become teachers, 2) developing them into effective instructors, 3) ensuring that the system is able to deliver the best possible instruction for every child. (McKinsey 2007, p. 5).

The most quoted US psychometric and econometric research on this subject is by Sanders with various other authors, based on research in Tennessee (for example, Sanders and Rivers 1996) and by Erik Hanushek with others (for example, Rivkin et al. 2005). In Australia, Andrew Leigh has undertaken similar research on the causes and effects of teacher quality (Leigh 2009).

Specific policy initiative (1): Performance and Development Culture in Victorian Schools

In 2003 the Victorian Education Minister announced the introduction of a process to be called the *Performance and Development Culture* (DE&T 2003). There was significant latitude for each school in the way it implemented the P&D culture, but five criteria were established for accreditation: effective induction and mentoring for new teachers; use of multiple sources of feedback on an individual teacher's effectiveness; customised teacher-development plans; individualised professional development; and endorsement of the presence of the P&D culture by the teaching staff. By the end of 2008, 94 per cent of schools had been accredited by a third party.

The department has evaluated the effect of the accreditation process on schools and found that during the process of accreditation a range of measures of school performance improve significantly (The Nous Group 2007). Banerjee and Kamener of Boston Consulting Group have also undertaken a review, which also found a positive impact of this initiative (Boston Consulting Group 2008).

Specific policy initiative (2): Performance pay for teachers

One policy idea that has been under discussion in Australia, to promote the quality of teaching and learning, is performance pay for teachers. This has been tried in some places, but there are a limited number of cases from which to draw evidence. Some research suggests that it can have positive effects (for example, Angrist and Lavy 2004; CTAC 2004; Figlio and Kenny 2006; Muralidharan and Sundararaman 2009; Podgursky and Springer 2006; Winters et al. 2008). In the Victorian *Blueprint for Education and Early Childhood Development* it was announced that Victoria would investigate rewards and incentives for effective teaching, and the Minister for Education, Bronwyn Pike, has recently announced that some trials will be conducted to evaluate two alternative approaches to performance pay (DEECD 2009b).

Different types of evidence

Evidence ranges from econometric studies of the contribution of education to economic growth, psychometric studies of the effect of teacher quality on student achievement, and evaluations of individual policy interventions, including (but not often) randomised trials, to reviews of the evidence from large numbers of different studies, including meta-studies. Some studies focus on identifying examples of success (such as successful school systems or successful school improvement agendas) and identifying the common factors associated with success.

The data collected, the statistical methods used, and the evaluation methods adopted vary in their degree of sophistication. The type of evidence required depends on the nature of the policy decisions to be taken. Strategic policy design, such as the human capital reform agenda, requires a range of evidence to support the thrust of the policy. Studies at a high level of aggregation, such as cross-country studies of economic growth, are highly relevant. In other circumstances detailed micro studies, involving pilot or trial programs, may be what is needed, such as in deciding whether and how to proceed with a performance pay system. Evidence from trials in other places may provide useful background research, but care has to be taken when trying to generalise from such specific experiments (Heckman and Smith 1995).

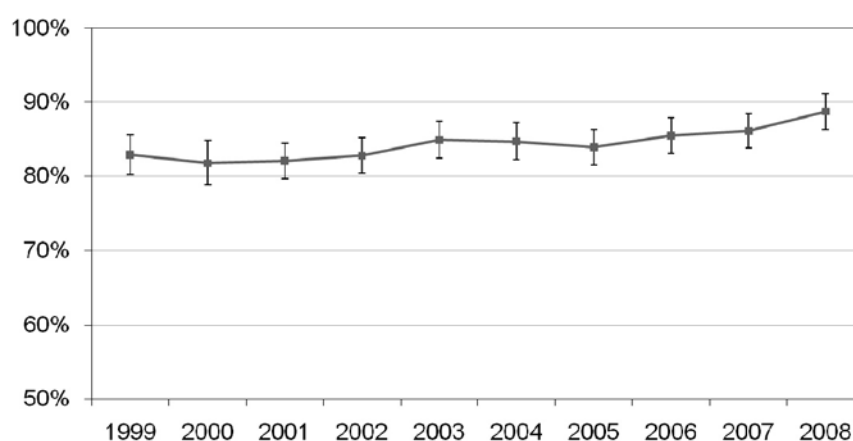
11.4 Institutionalising an evidence-based approach to policy making

Outcomes and evaluation frameworks and building reward mechanisms into policy design

A precursor to this COAG outcomes-based policy process is *Growing Victoria Together*, an outcomes framework established in 2000 by the Victorian Government, in which, for example, the literacy and numeracy of school students and Year 12 or equivalent completion were two key outcomes in education policy. A 90 per cent target was set for 2010, for Year 12 or equivalent completions for 20- to 24-year-olds. Also in 2000, a review was completed of post-compulsory education and training pathways, which led to the development and implementation of a policy agenda to improve post-compulsory pathways and amongst other things increase the Year 12 or equivalent rate to the 90 per cent target (DEET 2000 — the Kirby Report). Progress against this target appears in the Department Secretary's annual performance plan and annual performance review, and a process of constant monitoring and policy evaluation has been undertaken as Victoria's Year 12

completion rate progresses towards the 90 per cent target. Figure 11.1 demonstrates the substantial progress that has been made.

Figure 11.1 Progress towards Year 12 completion rate (Victoria)
Persons aged 20–24 years with Year 12 or equivalent (AQF 2) or above



Data source: Australian Bureau of Statistics (2008).

This idea of motivating evidence-based policy through an outcomes and evaluation framework and creating incentives and rewards to encourage an evidence-based approach to achieving the agreed outcomes is embodied in the current COAG National Productivity Agenda (see Appendix 1 to this paper for the outcomes framework) and the implementation of the human capital reform agenda at the State level.

Examples include the following.

1. In the National Education Agreement, States and Territories and the Commonwealth commit to working together to promote these outcomes and monitor the progress measures.
2. The COAG Reform Council is a federal–state body that has been established to report to COAG on the progress nationally and by jurisdictions in relation to these outcomes and progress measures.
3. In the *Melbourne Declaration on the Educational Goals for Young Australians* (MCEETYA 2008), signed by all education ministers in parallel with the National Education Agreement, all Australian governments committed to sharing evidence on best practice in the pursuit of their jointly agreed educational goals, for example through a biennial national forum. Other mechanisms have subsequently been agreed through the Education and Early Childhood Ministerial Council and Senior Officials Committee.

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4. The establishment of national literacy and numeracy tests, which commenced in 2008, and the associated Australian Curriculum, Assessment and Reporting Authority, which was also charged with developing national curricula, was also a step forward in promoting evidence-based policy. The publication of results by jurisdiction and in due course school by school, including the use of like school groups to take into account the school context (especially the socioeconomic status of a school's students), represents a further stimulus to evidence-based policy. The national database that will result will enable national research and evaluation of what works in promoting literacy and numeracy outcomes, which was only possible to do with state-level data previously.
 5. In the national partnership agreements on teacher quality, literacy and numeracy and low socioeconomic status school communities, there are facilitation and reward payments to promote the use of evidence-based policy to improve the agreed educational outcomes. Facilitation payments are to support policy initiatives that are built on pre-existing evidence about what works and reward payments are to reward the achievement of outcomes that the reforms are seeking to achieve, and will be based on the use of progress measures.
 6. In the implementation of the *Blueprint for Education and Early Childhood Development* (DEECD 2008) in Victoria, the Victorian Government committed to pursuing stretch targets in relation to the outcomes framework. Within the government school system, this in turn leads to targets for each region and each network and each school, and a process for monitoring progress against targets. There is an associated evaluation and research program to determine the factors that are driving success or failure in making progress towards these outcomes, and funding to support interventions in schools where insufficient progress is made.

The modus operandi of a government department

In this section I provide an overview of how my department, the Victorian Department of Education and Early Childhood Development, seeks to follow a systematic approach to an evidence-based approach to policy advice, implementation and evaluation.

In accordance with the outcomes framework in the *Blueprint for Education and Early Childhood Development* (DEECD 2008), the department operates an outcomes and evaluation framework and an associated research strategy (figure 11.2).

Figure 11.2 Outcomes and evaluation framework structure



Data source: DEECD Corporate Plan 2009–2011.

To oversee this strategic evidence-based approach to policy development and review, the department has a Portfolio Strategy Board as its peak governance committee. The board meets quarterly and receives a quarterly report on progress against all the measures in the outcomes framework. It also reviews the progress of the various strategies that have been adopted to affect the agreed outcomes. Its work is supported especially by two divisions of the department. These are the Data and Evaluation Division and the Policy and Research Division. The Portfolio Strategy Board approves any amendments to the evaluation strategy, the research strategy and appropriation of the research budget. It recommends any proposed changes to the progress measures or targets through the Secretary to the Portfolio Ministers and on to relevant whole-of-government and cabinet processes.

Outcomes, progress measures and targets are in turn incorporated in the department's business planning process through the relevant offices and regions and through the government school system to school networks and individual schools. Within the government school system there is an accountability and improvement framework, within which each school has an annual improvement plan and a regular review cycle.

In the area of schools policy, the Secretary also chairs a cross-sectoral committee, which oversees a process of dialogue between the government, Catholic and independent school sectors, about how we can work together in the best interest of all young Victorians.

This cross-sectoral committee has overseen the process whereby the national partnership agreements between Victoria and the Commonwealth, involving investment in schools in all sectors and a process for evaluating the success of the partnership agreements, have been negotiated.

In the area of early childhood, the department has a partnership agreement with the Municipal Association of Victoria (MAV), under which the department and the MAV encourage all local authorities to develop Municipal Early Years Plans and to share evidence about the development of children on an area basis.

A research committee of the department makes recommendations and reports to the Portfolio Strategy Board about the research agenda to support the evidence-based policy work. The Secretary also has a group of external experts from universities and research bodies, which meets quarterly as a think tank to support the department's strategic thinking about evidence-based policy. Two members of the group are also coopted onto the Portfolio Strategy Board — one an expert on education and one an expert on early childhood development. The department commissions extensive research from external university-based and other relevant experts. We have recently been developing formal advice to university researchers about how to connect with the department's research agenda.

11.5 Conclusions

This paper has focused on the human capital reform agenda as a case study of evidence-based policy in Australia. A first conclusion is that the case for a major human capital reform agenda, put forward by the Victorian Government and followed by the Australian Government's Education Revolution, was itself motivated by a strong evidence base about the impact of human capital, especially the quantity and quality of education, on participation, productivity and economic growth. This was supported by econometric modelling and CGE simulations. This is an outstanding example of an evidence base generating a reform agenda.

The second conclusion is that an outcomes framework, such as *Growing Victoria Together*, and the COAG National Productivity Agenda outcomes framework, also adopted in the Victorian Government's *Blueprint for Education and Early Childhood Development* (DEECD 2008), can be a strong stimulus for evidence-

based policy. An outcomes framework can be linked with progress measures and sometimes targets, and an associated evaluation framework, which provides strong incentives for government to adopt policies which the evidence suggest can have a desirable impact on the agreed outcomes. The development of policies in Victoria to achieve the 90 percent Year 12 or equivalent target for 20- to 24-year-olds is a good example. The current development of evidence-based policies to improve teacher quality, increase literacy and numeracy and improve outcomes for students in low socioeconomic school communities, in the COAG Productivity Agenda, are further examples.

Third, it is clear that different kinds of evidence are useful in different circumstances, and that often multiple sources of evidence are ideal. In motivating the human capital reform agenda, aggregate econometric modelling and CGE simulations were very helpful. So was psychometric and econometric evidence about the links between teacher quality, literacy and numeracy, Year 12 completions and labour force participation. When focusing on specific policy interventions within the human capital reform agenda, evidence about the effects of policies adopted in other jurisdictions in Australia and around the world is useful. It is helpful in this context to have the benefit of sometimes randomised trials, for example in the consideration of performance pay for teachers, although care has to be taken about generalising from the specific findings of a particular trial.

Fourth, the COAG National Productivity Agenda is an illustration of how an evidence-based policy framework can support a federal–state reform agenda in the context of vertical fiscal imbalance. The use of an outcomes framework, progress measures, targets and facilitation and reward payments can provide the Australian Government with confidence about getting a return on its increased investment in education, and provides a framework for State and Territory governments to pursue an evidence-based policy agenda supported by facilitation and reward payments, the latter where improvements are achieved in the progress measures.

Fifth, in this paper I have described the way that the Victorian Department of Education and Early Childhood Development has embedded an evidence-based approach to policy development and evaluation and advice to ministers. It involves a Portfolio Strategy Board overseeing an outcomes framework with progress measures and an evaluation framework for assessing the impact of strategies and policies on the desired outcomes. In the government school system, this scrutiny of evidence goes right down through an accountability framework to the classroom level. This is all supported by a Data, Outcomes and Evaluation Division, a Policy and Research Division, and a Secretary’s think tank of expert advisers, and extensive use of external researchers from universities and elsewhere.

Appendix 1 COAG outcomes for the National Productivity Agenda

	<i>Early Childhood Development</i>	<i>Schooling</i>	<i>Skills and Workforce Development</i>
<i>Aspirations</i>	<p>That children are born healthy and have access to the support, care and education throughout early childhood that equips them for life and learning, delivered in a way that actively engages parents, and meets the workforce participation needs of parents</p>	<p>That all Australian school students acquire the knowledge and skills to participate effectively in society and employment in a globalised economy</p>	<p>All working aged Australians have the opportunity to develop the skills and qualifications needed, including through a responsive training system, to enable them to be effective participants in and contributors to the modern labour market.</p> <p>Individuals are assisted to overcome barriers to education, training and employment, and are motivated to acquire and utilise new skills.</p> <p>Australian industry and business develop, harness and utilise the skills and abilities of the workforce</p>
<i>Outcomes</i>	<p>Children are born healthy</p> <p>Children acquire the basic skills for life and learning</p> <p>Children will benefit from better social inclusion and reduced disadvantage, especially Indigenous children</p> <p>All children have access to affordable, quality early childhood education in the year before formal schooling</p> <p>Quality early childhood education and care supports the workforce participation choices of parents with children in the years before formal schooling</p>	<p>All children are engaged in and benefiting from schooling</p> <p>Young people are meeting basic literacy and numeracy standards, and overall levels of literacy and numeracy achievement are improving</p> <p>Schooling promotes social inclusion and reduces the educational disadvantage of children, especially Indigenous children</p> <p>Australian students excel by international standards</p> <p>Young people make a successful transition from school to work and further study</p>	<p>The working age population have gaps in foundation skills levels reduced to enable effective educational, labour market and social participation.</p> <p>The working age population has the depth and breadth of skills and capabilities required for the 21st century labour market.</p> <p>The supply of skills provided by the national training system responds to meet changing labour market demand.</p> <p>Skills are used effectively to increase labour market efficiency, productivity and innovation, and ensure increased utilisation of human capital.</p>

Appendix 1 (continued)

	<i>Early Childhood Development</i>	<i>Schooling</i>	<i>Skills and Workforce Development</i>
<i>Indicative Progress Measures</i>	<p>Proportion of children born of low birth weight</p> <p>Proportion of children with basic skills for life and learning, and who are vulnerable, as identified by the Australian Early Development Index</p> <p>Proportion of disadvantaged 3-year-olds in early childhood education</p> <p>Further performance measures need to be identified for children aged 18 months to 3 years</p> <p>Proportion of 4-year-olds accessing quality early childhood education</p> <p>Proportion of parents who can access the quality early childhood education and care services required for their preferred labour force participation</p>	<p>Proportion of children enrolled in and attending school</p> <p>Literacy and numeracy achievement of Year 3, 5, 7 and 9 students in national testing</p> <p>Proportion of students in the bottom and top levels of performance in international testing (e.g. PISA, TIMMS)</p> <p>Proportion of the 19-year-old population having attained at least a Year 12 or equivalent or AQF Certificate II</p> <p>Proportion of young people participating in post-school education or training six months after school</p> <p>Proportion of 18–24-year-olds engaged in full-time employment, education or training at or above Certificate III</p>	<p>Literacy and numeracy achievement of working age people in national and international testing.</p> <p>Proportion of 20–64-year-olds with or working towards the post-school qualifications in:</p> <ul style="list-style-type: none"> • Cert III and Cert IV • diplomas and advanced diplomas. <p>Level and proportion of total investment in structured (including nationally recognised) training by industry, individuals, businesses and government.</p> <p>Proportion of graduates employed after completing training.</p> <p>Extent of skills shortages, recruitment difficulties and labour market vacancies.</p> <p>Proportion of people employed at or above the level of their qualification.</p>
<i>COAG Targets</i>	<p>Universal access to early learning for all 4-year-olds by 2013</p> <p>Halving the gap in mortality rates for Indigenous children under five years old within a decade</p> <p>In five years all Indigenous 4-year-olds in remote Indigenous communities will have access to a quality early childhood education program</p>	<p>Lift the Year 12 or equivalent attainment rate to 90 per cent by 2020</p> <p>Halve the gap for Indigenous students in reading, writing and numeracy within a decade</p> <p>At least halve the gap for Indigenous students in Year 12 or equivalent attainment rates by 2020</p>	<p>Halve the proportion of Australians aged 20 to 64 without qualifications at Certificate III level and above by 50% between 2009 and 2020.</p> <p>Double the number of higher qualification completions (diploma and advanced diploma) between 2009 and 2020.</p>

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