Where is Australian schooling heading? What forces will shape its future direction? How ready are students, teachers, policy makers and education institutions for the challenges being thrust on them? With chapters ranging across the landscape of school-age education, this book proposes new, evidence-based directions for change in teaching, assessment, curriculum, funding and system-wide collaboration. It provides a grounded, forward-looking guide to questions that will be central to Australia's educational debates, and our performance, in the years ahead. Drawing directly on research, innovation and policy analysis at the Melbourne Graduate School of Education, this book creates an engaging and rigorous overview of the issues confronting school-age education in Australia, and provides insights and actions to help shape our responses into the future.

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Educating Australia

Challenges for the Decade Ahead

Edited by Tom Bentley and Glenn C. Savage
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Acknowledgements

As editors, we thank the many contributors to chapters in this volume for their thoughtful, rigorous and imaginative efforts. The decision to commission the book reflected the idea that there is a rich, dynamic and collaborative spectrum of knowledge and insight that can be applied to the challenges of policy and practice we all face. That assumption has been borne out by the chapters we received, and there could have been many more had space allowed. We are lucky to be able to work and learn amidst diverse and stimulating networks of educational practitioners, thinkers and leaders, centred in Melbourne and spanning outwards in many directions. We are especially grateful for the flexible, patient and conscientious attitude of the book’s contributors, all of whom face intense and conflicting time pressures. We hope that the whole volume repays their efforts.

We are especially grateful for the support and encouragement of colleagues at the Melbourne Graduate School of Education and the University of Melbourne in undertaking this project. We have received valuable support and assistance in completing the work from Professor Field Rickards, Professor Glyn Davis, Erin Dale, Heather Gorham, Holly Bennett and Pina Failla.

Tom Bentley and Glenn C. Savage
Preface

Education has become a strand, entangled and interwoven, with the burning questions of our age, as the world struggles to come to grips with the pressures and uncertainties that confront us early in the twenty-first century.

In the decade ahead, pressures will keep growing for education systems to respond to social and economic change with relevance and understanding, to handle conflict and uncertainty with justice and wisdom, and to adapt to risks and crises with evidence and clarity of purpose. The stakes could hardly be higher.

In Australia, as in many other countries, education reform has played a central role in the political struggles and policy reforms of the last decade. Issues of educational achievement and distribution are never far from public discussion. Global media, academic, civil society and business networks mean that international comparison, exchange and learning also play a growing role in our educational discourse.

Yet despite the pressure, despite the activity, and despite ambitious and significant policy reforms being achieved, some aspects of our education systems remain stubbornly consistent. Meaningful improvement in student outcomes in Australia has not occurred. Educational outcomes and opportunities remain inequitably distributed. Educational policy debates too often follow short cycles of political intervention, policy initiative, raised community expectation, interest-group competition and then general disappointment. These cycles exacerbate problems of professional trust and fatigue, which impede progress towards better educational outcomes for students.

Amidst this welter of noise and divergence of perspectives and interests, there are, nonetheless, some important patterns of learning and innovation which could give rise to meaningful progress, even in education systems constrained by fragmentation, uncertainty and inequality.

Central to the prospects for sustained progress is the possibility of a more creative and productive interchange between scholarship, practice and policy in education. The Melbourne Graduate School of
Education provides a fertile ground for such interchange, an institutional base for diverse and excellent research, for evidence-based clinical innovations, and for community-minded partnerships to prepare new generations of educational practitioners and design better policies.

This volume offers perspectives drawn from that intellectual community, which seek to draw lessons from research, policy and practice, and apply them proactively to the uncertain times ahead.

These perspectives are diverse and overlapping: they do not aim to be comprehensive or uniform. Through 22 chapters, however, a systemic perspective does emerge: on the nature of educational change; the knowledge and evidence that could underpin it; and the roles of different institutions, professionals and communities in shaping it.

The conclusions are tempered by realism about the difficulty of achieving meaningful improvement in student outcomes, especially for those who most need it. Yet they are clearly fired by the knowledge that such improvement is possible, can be demonstrated in practice and is desired by most members of the Australian community. In gathering and editing the work, we are driven by a shared determination to see education shaped by evidence, understanding of human potential and the principle of shared responsibility, rather than by dogma, brute force, or narrow-self interest, in the years ahead.

Tom Bentley and Glenn C. Savage
Glossary

ACARA  Australian Curriculum, Assessment and Reporting Authority
ACE  Adult and Continuing Education
ACER  Australian Council for Educational Research
AITSL  Australian Institute for Teaching and School Leadership
asTTle  Assessment Tool for Teaching and Learning
ATAR  Australian Tertiary Admission Rank
COAG  Council of Australian Governments
CGEA  Certificate in General Education for Adults
ECEC  Early Childhood Education and Care
FLO  Flexible Learning Options
GDP  Gross Domestic Product
HLM  Hierarchical Linear Modeling
HSC  Higher School Certificate
ICT  Information and Communications Technology
MGSE  Melbourne Graduate School of Education
NAPLAN  National Assessment Program—Literacy and Numeracy
OECD  Organisation for Economic Cooperation and Development
PIRLS  Progress in International Reading Literacy Study
PISA  Program for International Student Assessment
PLC  Professional Learning Communities
PLT  Professional Learning Teams
REAP  Realising the Potential of High Capacity Students
STEM  Science, technology, engineering and mathematics
TAFE  Technical and Further Education
TIMSS  Trends in International Mathematics and Science Study
TIPE  Trauma Informed Positive Education
UNESCO  United Nations Educational, Scientific and Cultural Organization
UNICEF  United Nations Children's Fund
VCAL  Victorian Certificate of Applied Learning
ZPD  Zone of Proximal Development
Introduction

Tom Bentley and Glenn C. Savage

Since the mid-2000s, school-age education has experienced significant and unprecedented changes, principally through national reforms.¹ In some cases, these changes were debated for decades in Australia but, for various reasons, never materialised. Major reforms include the National Assessment Programme to assess young people’s literacy and numeracy attainment (NAPLAN); a national Australian Curriculum; the My School website, reporting in a consistent and accessible format on the profile, resourcing and achievements of every Australian school; national professional standards for teachers and principals; the legislation and partial implementation of a new federal funding model (the Student Resource Standard), based on the recommendations of the Gonski Review of School Funding; and Australia-wide implementation of a universally accessible year of preschool, together with the Australian Early Development Index (now Census) and national quality standards for early years education and care.

These reforms have been primarily institutional, brought about through public policy reform. They were made possible by unprecedented levels of intergovernmental cooperation, bolstered by
increased federal government commitment to investing in education and working with states and territories to pursue national policy goals, particularly during the Labor governments of Kevin Rudd and Julia Gillard (2007–13). The scope and depth of these changes leave an indelible imprint on the landscape of education, forming a new national architecture for policy-making, coordination and reporting between governments in our federal system. New organisations have also been established for driving national reform, including the Australian Curriculum, Assessment and Reporting Authority (ACARA), which developed the Australian Curriculum, National Assessment Program and My School website; and the Australian Institute for Teaching and School Leadership (AITSL), which developed the Australian Professional Standards for Teachers and Principals.

These major reform shifts also reflect broader changes in Australian society and politics, which have seen education receive steadily greater public attention, discussion and policy priority. This is a global phenomenon, fuelled by arguments and evidence regarding the pivotal contribution of education to economic productivity, social cohesion and life chances. This reframing of education is a response to complex social, demographic and economic changes taking place in Australia and globally, which directly influence the work of educators and simultaneously are reshaping the conditions of possibility for school-age education.

For example, Australia continues to become more ethnically and culturally diverse, having significantly lifted its net rate of migration. At the same time, more Australians than ever before are living and working in Asia, a trend that is reframing Australia’s geopolitical relationships and education systems (see chapter 4 of this volume by Fazal Rizvi). Social and technological change has also been pronounced, with Australians now being among the most active users of mobile technology and digital consumer services. Australian cities are evolving rapidly, in often uneven ways, concentrating economic activity and innovation, and redistributing life chances, around certain new industries and locations. Most new migrants reside, and most new jobs are created, in Australian cities. Affordable housing and transport are growing challenges (Australian Government 2015).
The structure of jobs and work is also changing significantly in Australia, with employment in professional and technical jobs increasing while the number of people working in manual jobs has declined. This has serious implications for education. For example, as the structure of employment shifts further towards financial services, health, education and care, clear declines are evident in traditionally strong areas such as manufacturing and farming. Added to this is the fact that Australia has one of the highest rates of casual employment in among member countries of the Organisation for Economic Cooperation and Development (OECD), with rates of casualisation being especially pronounced among certain population groups, such as young women.

Australia weathered the immediate global financial crisis of 2008–09 relatively well, preventing recession and sustaining growth in jobs and GDP. Nonetheless, the global crisis has subdued economic and wages growth, reduced interest rates and put pressure on public spending. Governments face conflicting pressures to ensure effective investment and demand in the face of waning private sector activity while also struggling to reduce spending deficits.

For now, Australian living standards remain high and unemployment low, by global standards. But international trends are evident here and threaten to expand, including growing inequality of wealth and stratification of the population by socioeconomic class, ethnic identity and cultural geography (a process reinforced and accelerated by growing sectoral divisions between government and non-government schools in Australia), accompanied by the growth of political conflict and social anxiety over migration, religion and race.

The polarisation of educational opportunities and outcomes according to socioeconomic status and cultural geography continues apace, even as national politics stalls and education systems maintain the status quo. This polarisation is leading students from highly educated, well-resourced and highly motivated families and cultural groups into ever tighter clusters, stratifying the student population across different schools and neighbourhoods, and reinforcing the inequality of access to higher education and work opportunities. In turn, this restructuring of education is contributing to similar patterns of growing inequality in our cities and communities.
These social and economic shifts create a prism through which many of the familiar challenges and dilemmas of education policy and practice can be viewed, ranging from how best to design curricula to how schools can best protect young people from future social and economic precarity. Education increasingly seems to be in a vice, facing mounting pressure to achieve better outcomes for more people, while simultaneously being expected to innovate and solve wider problems of society in a context of fiscal austerity. Again, this is a global concern. As the OECD recently put it: ‘Given shrinking public budgets, shifting demographics and the growing importance of education in knowledge-based societies, countries also need to consider how to provide the best learning opportunities to achieve the best learning outcomes equitably and efficiently’ (OECD n.d.).

At the same time, while such dramatic shifts have taken place since the mid-2000s, we can also see that by some important measures, not very much has changed at all. The percentage of Australian students successfully completing year 12, for example, is not improving. After a decade of reform effort, funding policies continue to reproduce a status quo that entrenches sectoral division and elitism. New models of professional learning and evidence-based pedagogical innovations are being taken up very slowly. There has been little meaningful change in improving the status or efficacy of vocational and applied learning throughout school systems. Moreover, since the introduction of NAPLAN in 2008, there has been little significant uplift in literacy and numeracy outcomes, which remain strongly correlated with students’ socioeconomic status. The performance of young Australians on the OECD’s Programme for International Student Assessment (PISA) has also declined.

Somehow, therefore, despite hard-fought political battles and reforms, the daily efforts of millions of people, and the constant work required to keep education systems afloat, these collective efforts combine to maintain and reproduce a status quo, rather than driving a shared learning trajectory leading to better outcomes. The question remains therefore: what are we doing wrong?

In order to address this question, it is essential to examine and rethink the dynamic, mutually constitutive interactions between (a) the open-ended, partly uncontrollable and interconnected processes
of economic, social and technological change, and (b) the formal, institutionally determined, policy-driven processes (and informal governance structures) that are designed to respond to broader change processes and meet a growing public need for education. This long-term interactive, or evolutionary, process is analogous to what has been described by Goldin and Katz as a ‘race between education and technology’ (2012). But it also goes far beyond the interactions between technological innovation and the economy’s productive capacity, to encompass issues of identity, democracy, professionalism, civic institutions and social equality. The pivotal role played by education in the wider processes of change helps to explain why education policy has become so central to politics, and so contested, in recent years.

Indeed, the raft of national reforms achieved since the mid-2000s were designed to address many of the persistent issues of economic restructuring and dislocation, educational underachievement, social and demographic marginalisation to which we are pointing. Yet, as we have argued, Australian education remains paradoxically locked, for the moment, in a status quo where, despite frenetic political activity, significant policy reforms and a constant process of adaptation and adjustment by educational practitioners, key indicators of impact and quality are standing still or going backwards.

In addressing these dynamics, we must ask what can school-age education reasonably be expected to achieve on behalf of wider society. Schools are frequently positioned as sites through which all of society’s problems might be solved, but there are clear limits to what today’s education systems can do. Amid this conflicting set of pressures and responses, education systems—and practitioners—risk getting caught in the middle, forced by a changing reality to adjust to the pressures and practices of a society going through deep change, while also pressured to respond to policy-driven reforms that are attempting to respond to the same trends.

These pressures are deeply problematic. One possible analysis of the sense of overall paralysis is that education systems and all their participants—teachers, policy-makers, parents and students—are caught in a cycle of ‘call and response’, whereby excessive time and energy is taken up reacting to the demands and pressures of the system; meanwhile the overall result does no more than reproducing
itself to fight another day. No substantive progress in learning outcomes is achieved, while at the same time the different groups of participants are nonetheless forced to absorb ever-mounting levels of pressure and stress.

The short-term, cyclical churn of today’s politics and media are clearly exacerbating these problems. While governments prevaricate over their long-term policy commitments, they succumb to headline-chasing and are forced to react to media reporting that is often dangerously cynical and superficial. Yet not all political change is superficial. As we have outlined, there have been important and substantive reforms, but they have not yet produced their intended effects. Perhaps one lesson to be learned from the last decade is that single policy interventions, implemented in isolation from each other are unlikely to achieve their objectives when they meet the complex everyday reality of educational institutions.

We cannot expect education to solve all society’s problems, especially via quick-fix plans. Yet it is inescapable that education plays a vital role in influencing the direction of social, economic, technological and cultural change and that politics will seek a legitimate role in improving educational outcomes. So, if we know that education matters, and that it is not a ‘magic bullet’, then we must turn to questions about ‘the what’ and ‘the how’ of schooling, and to questions about how to construct and share the knowledge and capabilities that can translate evidence about what produces positive outcomes into widespread practice. These are the questions that this book aims to address.

Challenges for the decade ahead: diverse perspectives on a complex system
In this collection, authors explore and explain changes in crucial areas of education and research, and consider core challenges for the next decade. In doing so, authors also signal areas where productive changes might be made to public policy, institutional approaches and everyday educational practices. As editors of this collection, we have emphasised the critical importance of seeking to recommend productive ways forward, informed by evidence and expert knowledge. The collection therefore puts forward a pragmatic orientation
towards improving and potentially replacing current approaches in diverse parts of our education system.

While the volume spans many areas relevant to school-age education, no collection of this nature can be comprehensive. There are some vital issues in Australian education that are not explicitly addressed in this book, including gender relations in education, school leadership, and the applications of information and communication technologies.

The collection reflects the work of diverse authors, all of whom have a working connection with the Melbourne Graduate School of Education (MGSE) at the University of Melbourne. Together, the chapters reflect the wide range of perspectives informing research, innovation and policy work at MGSE. This diversity can make for challenging reading, as it is clear not all of the authors agree with each other on the big issues and challenges in education, but uniformity of view is not our objective. Instead it is our intention to provoke a diverse range ideas and debates about ways to take education forward over the next decade.

With this diversity of scope in mind, we nevertheless see some common threads of argument emerging across the different chapters and perspectives.

First, the direction and impact of educational change are heavily mediated by the interaction between ideas, problems, practices and outcomes. These elements and processes of mediation take place through a wide variety of social institutions and settings: from formal institutions like schools, workplaces, and education bureaucracies, to the array of informal sites of learning and knowledge creation, including family structures and the popular media. Together, these sites influence the meanings and practices of education and the conditions for policy and reform.

As several chapters in this collection argue, ignoring the powerful, interconnected relationships between these different sites leads to a host of problems. For example, focussing too heavily on individual schools as the primary site through which learning takes place can lead governments to over-estimate the control and impact they can achieve through direct interventions. Conversely, if citizens and interest groups place too many expectations on governments to solve
all educational problems, then the responsibilities of other actors within civil society are obscured from debate and consideration.

At the same time, this collection makes clear that individuals play a crucial role in determining educational outcomes and in changing what social institutions and settings are capable of achieving. The chapters provide rich examples of the power and agency that individual teachers, policy-makers, school leaders, students, policy entrepreneurs and others can exert over their futures, and the contributions these individuals can make to the nourishment of collective social goods.

Second, many of the chapters emphasise the vital role played by public policy in steering and mediating what happens in education. Policy therefore creates ‘conditions of possibility’ for the ideas and practices of education, influenced as they are by both institutions and individuals. However, several chapters make clear that while public policy is critical to achieving positive educational change, it can rarely achieve direct control over what happens in schools, or act to produce better outcomes in linear or predictable ways. There is a crucial difference, therefore, between the ideas and aspirations of policy and its enactment. We argue that far greater attention and skill must be devoted in the decade ahead to how to shape and legitimise the goals of education, how to craft and build the institutional capabilities that render those goals achievable, how to ensure fairness and equity among competing users and providers of education, and how to improve innovation and systemic learning in the public interest.

Third, the collection demonstrates that this process of shaping educational ideas, practices and policies is increasingly complex. Social, economic, cultural and political changes over the past few decades have not only posed new problems for schooling, but have also radically altered the potential ways in which individuals and organisations can act. For example, globalisation and related changes in governance have disrupted previously more stable concepts and assumptions associated with ‘the public’, ‘the nation’ and ‘government’. New priorities have rapidly emerged in education, which would have been inconceivable just decades earlier. Imagine, for example, trying to explain to a teacher in the 1980s what the implications are of a ‘BYO tablet policy’ in primary schools.
While complex new challenges abound, however, the knowledge, tools and capabilities with which to tackle them have also proliferated. There are now many opportunities for innovation, institution-building and system learning, ranging from new channels through which governments and policy-makers can share and collaborate across jurisdictions, to online technologies enabling young people in Australian classrooms to engage in synchronous online lessons with partner classrooms in Shanghai or Copenhagen.

To harness these various new potentials, reform of our existing systems is required. For example, one striking conclusion to emerge from these chapters is that Australia’s ability to enact and realise educational progress is often limited by the very institutional parameters put in place by past generations of reformers, pursuing visions of progress in their own time. The current school funding policy impasse is exemplary of this problem. The policy area is continuously bedevilled by the difficulties of achieving effective Commonwealth–State collaboration in our federal system, and hamstrung by existing and highly inequitable funding settlements, established over many decades, which continue to entrench privilege in elite schools, while at the same time consistently failing to provide ‘needs based’ funding to schools and young people who need the most support. Other chapters show how the institutional design of our senior school curriculum, assessments, and university entrance ranking, now constrain our ability to achieve meaningful progress for large numbers of Australian students whose successful participation is, in fact, critical to Australia’s future.

If all young Australians are going to have the best chance of living healthy, meaningful and productive lives in the complex global era that is unfolding, then we need to fundamentally rethink these established traditions and reframe the core objectives that guide decision-making and practice, by focusing on new objectives and goals grounded firmly in the future needs of the whole Australian community.

However, these discussions about purpose and goals will not thrive if they are separated and abstracted from the practices and politics of education, and the places and spaces where policies are implemented, where students experience schooling, where professional identities are formed and challenged. As editors, this is
perhaps our central contention: that the key ideas, problems, policies and practices in education gain shape and traction through interaction with each other—an ongoing process of imperfect exploration, iteration, interpretation and learning.

**Shaping core ideas: structure and key themes of the collection**

The book is structured into four overarching sections. While the chapters within each section remain diverse in subject matter and arguments, we have chosen to group chapters together in a way that reflects underpinning themes inherent to each.

The first section, ‘Evolving the purposes of schooling’, includes five diverse chapters, which together emphasise the importance of reframing and interrogating afresh the purposes of key educational ideas and assumptions through robust public discussion. John Hattie calls for a ‘reboot’ of the narratives shaping Australian schooling reform, by shifting focus away from ‘distractions’ like school choice and competition, to focus instead on high level goals and interventions proven to make a difference, like teachers working together to deepen their expertise, investing more in early childhood education and making schooling an engaging experience for senior secondary students. Patrick Griffin, Lorraine Graham, Susan Marie Harding, Nives Nibali, Narelle English and Monjurul Alam outline the radical shift towards collaboration, communication and critical thinking required for ‘knowledge-economy skills’. Fazal Rizvi shows how ‘Asia Literacy’ has become a central reference point in Australian education policies, but suffers from distinct limits in how it is defined and practised, and requires radical rethinking. Jessica Gerrard shows how the meanings of ‘public schooling’ are highly contested and argues that there is a need to rethink core meanings and assumptions in response to emerging ‘transnational publics’. Lyn Yates considers the purposes of the Australian Curriculum, concluding that while there are strong arguments in favour of a national approach, more focus is needed over the next decade on the roles of teachers and students in relation to the curriculum. Geoff Masters argues for a fundamental shift in how educators understand the dominant purpose of assessment, shifting the focus of assessment practices from ‘judging and grading’ to ‘monitoring learning’.
The second section, ‘New pathways to student achievement’, features chapters that argue, from very different vantage points, that the knowledge, skills and capabilities needed by students (and therefore by educators) has become far broader and richer than the framework of Australian schooling currently allows. Frank Niklas, Collette Tayler and Caroline Cohrssen examine the meaning of ‘school readiness’ and the evidence for different approaches to achieving it. They conclude that children’s likelihood of thriving at school and through their lives is influenced by the interaction between a number of supporting systems, and that educators can do far more to improve children’s learning capabilities by focusing specifically on these capabilities and working more directly with families and community partners. Patricia Eadie, Hannah Stark and Pamela Snow show that oral literacy plays a far more powerful role in the development of educational achievement than formal schooling frameworks have thus far allowed, and argue for a different approach to preparing teachers to develop oral literacy. Jane Orton argues that if Australia is to act on the strategic imperative to develop Chinese language skills then a radically different approach to pedagogy and assessment is needed. Pip Robinson and Jane MacMillan show how music education could make a vital contribution to the development of creative, critical and innovative abilities among Australian students, but that making this change relies on a deep shift in the prevailing approach to teaching music in schools. Helen Stokes and Malcolm Turnbull examine the growth and importance of alternative educational settings for young people who become detached and marginalised from secondary schooling, examining recent practical innovations in this area, and discussing how secondary education should work together with alternative providers to improve student outcomes. John Polesel, Mary Leahy, Suzanne Rice and Kira Clarke demonstrate how pathways and options for the hundreds of thousands of Australian students who will not follow an academic pathway into university remain fragmented and poorly supported, and examine the reforms of curriculum, partnership and pedagogy needed to achieve better post-secondary outcomes for these students. Liz McKinley advocates for a comprehensive, evidence approach to Indigenous education, moving from continuous marginalisation to an insistence on the highest quality teaching. In all these
specific areas of student learning, huge value would be created in Australia if the dominant ways of framing and delivering teaching and learning were adjusted to reflect new methods and perspectives arising from innovative practice and research.

The third section, ‘The role and impact of teachers’, focuses on changing pedagogical innovations and imperatives, as well as advances and challenges in teacher education. Larissa McLean Davies, Teresa Angelico, Barbara Hadlow, Jeana Kriewaldt, Field Rickards, Jane Thornton, Brendan Tuckerman and Peter Wright focus on the lessons from and impact of MGSE’s development of a clinical model of teacher education since the mid-2000s. A deep shift has begun in understanding the role of teachers in a knowledge-based society, and this involves major shifts in our approach to preparing teachers and structuring their professional learning. Using new techniques, rigorously supported by evidence must be a core part of the repertoire of teacher education, and therefore a core part of the skillset of teachers. Helen Cahill examines the notion of a ‘third space’ in teacher education, in which school students themselves become contributors to the learning and development of teachers through feedback and shared problem-solving. Natasha Ziebell, Aloysius Ong and David Clarke show how the practices of teachers determine the influence of the formal curriculum on student learning outcomes, and how we could better understand and utilise curriculum ‘alignment’ as a dynamic, ongoing process of implementation and learning.

The final section, ‘Challenges of system reform’, examines the influence of institutional and system design on the possibilities and outcomes of education. Emmaline Bexley shows how the assessment and sorting of senior secondary school students contributes to a situation in which only a minority of high-achieving academic candidates are well served by the information generated by the Australian Tertiary Admission Rank (ATAR) system, and in which the intent of past reforms to expand participation in secondary education remains frustrated by the lack of curriculum and assessment reform to make sure that all students can access engaged, meaningful, educational pathways. Suzanne Rice, Paul Richardson and Helen Watt show how the recruitment and distribution of teachers to different schools across Australia poses major challenges for equity, as schools serving
disadvantaged students persistently face the greatest problems in recruiting and retaining the most effective and ambitious teachers. They examine a range of options for addressing this situation that are not properly discussed in Australian reform debates. Tom Bentley and Sean Butler analyse the growth of collaboration as a central element in educational strategies at every level from student to system. In a separate chapter, Tom Bentley provides an account of the political and policy dynamics of school funding reform in Australia. Glenn Savage shows how the dominant debates about intergovernmental relations in Australia’s federal system actually miss some of the key factors shaping contemporary Australian policymaking in schooling, because they continue to focus on the vertical division of roles and responsibilities between different levels of government, when in fact policy outcomes are achieved through highly intertwined and interdependent decision-making and implementation processes.

Reviewing all of these arguments, it is impossible to avoid the conclusion that growing inequity and inequality are the greatest threats to educational progress over the coming decade. These dynamics disfigure the practice of education and create long-term social and economic harm. The dynamic interactions between theory, evidence and practice surveyed in this collection suggest that the forms of governance needed to support more effective education must also be increasingly networked and collaborative. The greatest failures of the last decade—failures to advance in the face of overwhelming evidence—are arguably failures of collaboration in governance, politics and community. That fact must be explicitly acknowledged in order to be overcome.

**Seizing the moment ...**

Given what we have outlined above, and the rich terrain explored in the chapters to follow, it seems clear that there are many opportunities to pursue educational progress, and the imperatives to do so are compelling, even in the face of apparently overwhelming odds. Major policy reforms achieved since the mid-2000s were, in many cases, designed to tackle perennial, system-wide problems in Australian education. The chapters in this collection show that key reforms in such areas as curriculum, assessment and teaching represent just the
beginning of a much longer journey towards improving education for all young Australians.

If we want to achieve future reforms of policy and practice to be effective, the design of new innovations and interventions must be grounded in wide-ranging discussion and dialogue about the nature of the problems we need solve, and our priorities.

Taken together, the chapters in this volume present a detailed, long-range map of the educational landscape, and the various challenges and opportunities that lie ahead of us. Cumulatively, they help to show how the possibilities of the future are realised through interaction between the formation of key ideas and their realisation in practice, across tens of thousands of classrooms and communities. We hope that this volume will contribute to supporting efforts towards improving education for all young Australians.

Tom Bentley and Glenn C. Savage

Note
1 The term ‘school-age education’ encompasses schooling and the organisation of schools, as well as the increasingly important range of educational activities, partnerships and relationships which take place in non-school settings and outside of school hours, ranging from early childhood education and care to family learning, work and community-based learning.
Part 1
Evolving the purposes of schooling
This chapter argues that we must intentionally change the narrative that frames our definition of ‘success’ in education and our priorities for reform. The narrative of choice and autonomy has impeded and undermined our focus on enhancing achievement for every student. Keating et al. (2013, 276–7) addressed this issue:

There is evidence to suggest that marketization produces the opposite effect, amplifying and normalising ‘brand value’ associated with academic excellence. Instead of promoting greater diversity, secondary schools ... find themselves chasing the same academic pot of gold in a market in which ‘being academic’ is the prime indicator of market value ... There is limited incentive in this environment for schools to develop vocational or alternative (or personalised) learning models, as doing so optimises their market position. Then the government school sector is also forced to privilege an academic curriculum in order to
compete with the private sector for middle-class and high-achieving students.

This current narrative of ‘success’ leads to a relentless focus on the differences between schools and on arguments about school choice. We risk a major residualisation of our public school system (and parts of our Catholic and independent systems) while at the same time increases in education funding are funnelled towards uses that do not improve educational quality or outcomes. Over the past ten years we have had more than double the funding to schools relative to increased student numbers, but our overall performance is stagnating or declining. Spending more to continue the current system is not wise behaviour and is unlikely to affect student achievement.

Social stratification is sharper in Australia, and we now have a lower proportion of students attending socially mixed schools than in most countries to which we most typically wish to compare. Paradoxically, this leads not only to more low-income students facing greater obstacles to educational achievement because they are segregated into residualised schools but also to more ‘cruising’ schools that may serve better off students but do not add significant value to their educational achievement. In this chapter I argue that this latter trend is a major contributor to Australia’s declining educational performance.

We need a reboot that focuses effort and resources on supporting teachers to work together, collaboratively, to improve student achievement over time. This requires that we build a narrative based on identifying and valuing expertise, working together and opening classrooms to collaboration, targeting resources at need, and teachers and leaders accepting evidence and evaluating progress transparently over time.

1 The need for a reboot in our education system
When your computer system has major problems, it might be time for a reboot. A reboot causes the system to reconfigure itself, preserving the essential things you have on your computer, but makes it run more smoothly, gets rid of corruption and ensures that the desired pathways are restored. Like a computer, it is time for this
reboot of Australian schooling—provided we keep the excellence we have but rid ourselves of the creeping, perverse parts of our system that are clogging up this excellence, leading us down wrong paths, and leading to introducing absurd corrections to solve the wrong problems.

There are at least four major indicators that the Australian Education system is moving in the wrong direction and ready for a reboot. The major argument is that the narrative driving our education system is wrong and that we are wasting so much money on driving the wrong narrative.

(i) We are among the world’s biggest losers in literacy and numeracy
Literacy and numeracy remain the critical bases of any educated person, and while many would (correctly) argue that these are attributes of narrow excellence, they are the building blocks of the wider excellence to which many of us aspire. Our PISA results in reading, mathematics and science have slipped in every testing cycle since the turn of this century, and this decline occurs in every Australian state. A deeper analysis of the PISA decline shows that Australia has more cruising schools and students than other countries. The major source of variance in the decline is among the top 40 per cent of our students (Ainley and Gebhardt 2015). This decline has occurred during a time when funding to schools has increased by 30 per cent (while student numbers have increased by only 13 per cent). Our major reboot needs to reverse this trend.

(ii) We are overly focused on school differences
Australia has embarked on major debates about school choice. We have invited parents to debate the merits of schools (and they do incessantly), but the variance between schools in Australia is much smaller than the variance within schools. What matters most is the teacher your child has. Despite this we do not (for many good reasons) allow parents to choose teachers but default to give them the almost meaningless decision about the choice of school—which ratchets up the competition. School choice has led to a clogging of the motorways. In Melbourne, the majority of students bypass their local schools en route to a chosen alternative—and nearly all this choice is based on hearsay, the nature of the students, and rarely on
whether the school is or is not adding value to the students’ learning. We need a reboot in our debates about the value of the local school.

(iii) We do not have as a driver that schools must be inviting places to learn
Levin, et al. (2007) showed that the best predictor of adult health, wealth and happiness was not achievement at school but the number of years of schooling. So how do we make our schools inviting places for students to want to come to learn? One in five Australian students do not complete high school—this should be a national disgrace. Yes, some students leave to take apprenticeships or further training, and this is positive. But the retention rate has barely changed for twenty years. The major exception are Aboriginal students, who have almost doubled their retention rate over the same time. Across all students, 26 per cent do not attain Year 12 or equivalent by age 19. The SES gap is as much as 28 per cent between highest and lowest SES sectors (Lamb et al. 2015).

(iv) The growing pains of inequality
Kenway (2013) noted that the ‘Gonski report provided stark evidence and a nationally humiliating reminder that Australia does not have a high-performing education system as it does not combine quality with equity’ (p. 288). She noted the branding of the high-status schools (mostly independent) via the introduction of the International Baccalaureate (IB), country ‘adventure’ campuses, benchmarking against other national education ‘product differentiation’ systems, and inclusion of well-being programs—all playing a critical role in their marketing of their product. The OECD has long recognised Australia’s dismal showing among highly developed nations—it has a high-quality but low-equity education system.

Social stratification is sharper in Australia and a lower proportion of students go to socially mixed schools than in most countries with which we wish to compare. Students from wealthy, privileged backgrounds tend to go to high-fee, independent high schools; whereas students from low-income, disadvantaged backgrounds tend to go to government high schools. Attending a low SES school amounts to more than a year’s difference in academic performance.
We have created a system in which schools compete for students and funds, we privilege autonomy that increases the spread, and we entice principals to steal students from other schools to make them look good.

2 The steps to reboot our education system

(i) Changing the narrative: identifying and valuing expertise
Among the most important things we need to retain as we reboot relates to the expertise of the teachers and school leaders—especially those who can show that their students are making at least a year's progress for a year's input (Hattie 2009). The magnitude of the effects of expertise towers above the structural influences (class size, ability grouping, private vs public school and so on). It is teachers working together as evaluators of their impact, their skill in knowing what students now know and providing them with explicit success criteria near the beginning of a series of lessons, ensuring high trust in the classroom so that errors and misunderstanding are welcomed as opportunities to learn, maximising feedback to teachers about their impact (especially from assessments; ensuring a balance of surface and deep learning, and focusing on the Goldilocks principles of challenge for students (not too hard, not too boring) while providing maximum opportunities for students to deliberately practise and attain these challenges. The mantra of visible learning relates to teachers seeing learning through the eyes of students and students seeing themselves as their own teachers.

Expertise is critical, but dependably recognising this expertise is also critical. Attestations, test scores alone and portfolios of exemplar lessons do not cut it for dependability. There needs to be rigorous emphasis on teachers demonstrating their conceptions of challenge and impact, through exemplars of students' progress (in their work, their test scores, their commitment to wanting to reinvest in learning, as well as student voice about learning in this class). This is what the AITSL process involves based on the Australian Professional Standards for Teachers: to move into Graduate, then to Proficient, Highly Accomplished, and Lead Teachers. The states make these decisions, moderated by AITSL at a national level. The solution is already with us.
(ii) Changing the narrative: what do we mean by ‘impact’?
There needs to be a robust discussion about what ‘impact’ means in
teaching within and across schools; the sufficiency of the magnitude
of this impact; and the equity question about how many students are
attaining this impact. The aim is to ensure that teachers have a
common conception of progress. It should not be random that every
time a student meets a new teacher they go up or down in their
learning, depending on that teacher's particular notion of challenge
and progress. It is necessary to work collectively to understand what
sufficient progress means, what it means to be good at X, and what it
means to gain a year's growth for a year's input.

(iii) Changing the narrative: appease the students and stop
appeasing the parents (or at least re-educate the parents)
When the various influences are considered, it becomes obvious that
so many of the most debated issues in schools across Australia
concern those that sit nearer the bottom of the list of impact. These
include autonomy, teacher aides, money, class size—and the list goes
on. We love to debate the things that matter least. As part of the
Revolution School, the ABC undertook a survey of 1004 Australian
adults about what they considered to be the major influences on
student achievement and well-being in our schools. These adults
considered the highest rated influence on student achievement to be
smaller class sizes (91 per cent), followed by providing extra-curric-
ular activities aimed at improving academic results (76 per cent),
enforcing homework (71 per cent of which has a negative effect on
the basis of research), whether the school is religious or non-religious
(70 per cent, but there are no demonstrable differences), and wearing
school uniforms (66 per cent, a zero effect from the research). In the
middle, and therefore about half and half saying yes or no, are reten-
tion (repeating a year; 59 per cent, one of the most systematically
negative influences), private or government school (56 per cent,
when prior achievement before they enter a school is considered, the
differences between government and non-government schools is
very small), poorer or richer social zones (50 per cent), single sex or
col-ed (49 per cent, no differences), lengthening time in schooling (38
per cent, no differences), and distance versus face-to-face teaching
(38 per cent, no differences). If we listen to the voters, we will invest
in the very things that have the least effect on the learning lives of students!

![Progress to Proficiency Diagram]

**Figure 1.1: Progress and Proficiency**

In the United Kingdom, a similar survey was undertaken with 4300 teachers. More than half (56 per cent) argued that reducing class sizes was the best way to improve learning, nearly three times as many as the second most popular option: better teacher pay (at 19 per cent). Cranston, Mulford, Keating and Reid (2010) surveyed Australian principals, and 80 per cent of the responses saw barriers ‘external’ to the school as the problems (inadequate resourcing, unsympathetic politicians and bureaucracies, broader societal problems laid at the school door, and negative media). As Andreas Schleicher (2010) commented: ‘Successful countries such as Finland, Japan, and Korea emphasize more classroom time and higher teacher salaries, whereas the United States invests more heavily in reducing class size and limiting salaries.’ High-performing systems tend to prioritise the quality of teaching over the size of classes. If they have to make a choice over a better teacher and a smaller class, they go for the better teacher. ... Reductions in class size is ‘a very expensive move and you can’t reverse it. Once you’ve gone down that road, nobody is going to accept going back.’ ‘It’s very expensive and it
drives out other possibilities. You can spend your money only once. If you spend it on a smaller class, you can no longer spend it on more professional development, on better working conditions, or on more pay and so on.’

(iv) Changing the narrative: moving from achievement to progress
We have a current perverse notion of what success looks like in our system. We prize high achievement, we prize schools that have high ATARs, and we consider that successful students are the brightest. This is corrupting our system, leading parents to seek the wrong schools, with too many students not being esteemed for being the best learners because they do not start as the brightest. We continually demand that students meet high achievement standards, we go on (particularly each year when NAPLAN results are released) about the woeful performance of schools who have below average scores in Reading, Writing and Numeracy. We point to the private sector as a beacon because private schools are more likely to have above average students, and we criticise parents for not investing more resources in their children’s schooling to share this dream of being ‘above average’.

Instead, consider the chart in figure 1.1. Imagine achievement up on the left axis and progress along the bottom axis. Surely the fundamental purpose of schooling is to ensure that every student gains at least a year’s achievement growth for a year’s input. This applies no matter where they start, and even those who start above average deserve a year’s growth. There are four quadrants: (1) Cruising schools and students are those who start above average but do not gain a year’s growth; (2) Unsatisfactory schools start below average and do not gain a year’s growth; (3) Growth schools start below average but gain more than a year’s progress; and (3) Optimal schools start above average and gain a year’s growth. A major claim is that Australia needs to change its concept of excellent schools from high (or above average) achievement to high progress (regardless of where they start). My estimate, based on NAPLAN, is that about 60 per cent of Australian schools are in the excellent school’s quadrants (high progress). Too often we disparage those in the Growth zone where teachers and school leaders are achieving stunning growth; and we esteem those in the Cruising zone where little is added. Indeed, a close analysis of the PISA decline shows that the major
issue for Australia is that it has more cruising schools and students than expected—the major source of variance in the decline is among our top 40 per cent of students (Ainley and Gebhardt 2015). Too many private schools compared to state schools are in the Cruising quadrant, and we falsely esteem them. We must change our narrative about successful schools.

**Figure 1.2: Plot of all schools in Australia for Year 3–5 and Year 7–9 Reading**

With this new concept of excellence, let us consider Australian schools—in NAPLAN Reading at Years 3–5 and Years 7–9. Figure 1.2 represents the mean score for each school in Australia from Years 3 and 5 in Reading and calculated the growth over Years 3–5 and over Years 7–9. It is clear that Australian schools are enacting more progress with students below average, and that there are too many cruising schools for those above average! Our schools perform better with adding value to below average than above average students, although you would never know this from the current narrative.

**(v) Resourcing teachers to do their progress work**

It seems remarkable that teachers have tens of thousands of assessments of achievement but virtually no measures of progress or impact over time. We need to ask how we can resource schools with measures of growth—measures that allow them to evaluate their impact. Such measures need to be tied to the Australian National Curriculum, built on other initiatives around the country, and be powerful in their reporting and in their psychometric qualities.
Second best is not good enough when it comes to addressing the all-important questions of student diagnosis, progress and where they need to move next. Critically, we need to help teachers do their work—to add value to students, to maximise their impact on this progress, and to know when to stop and when to continue with their methods of teaching.

The aim is to build a reporting engine, into which many assessments could be placed; with the common denominator of a series of valid and interpretable reports. The key is to start with the reports as we did in the New Zealand asTTle program (Hattie and Brown, 2008). We developed a resource that enabled teachers to create a test based on what they are actually teaching. They could choose the difficulty of the items for their students, administer the test on paper, online or in an adaptive format that altered the level of difficulty of the questions on the basis of how students answered each item. It also included a mix of open and closed items (from a database of 20 000 items). This takes a minute or so to create. The students complete the items, and instantly the teacher and students get the (above) reports about the impact of their teaching and learning. It is a voluntary system, and the majority of New Zealand teachers and schools are still using this asTTle tool sixteen years later. Teachers are hungry for feedback information, and they see progress and impact as core to their profession. It is time for a quiet revolution in Australia to provide teachers with this kind of information to help them with their work.

(vi) Scaling up evidence
‘Evidence’ should be the most contested word in our business. Unfortunately, evidence in teaching often means either my past experience as a teacher or articles from learned journals. We have few translations, we have few debates about the quality of implementing new ideas, we have no literature on scaling up excellence, and we default to letting teachers and school leaders choose that which they like to implement. Where is the evidence of evidence? This is despite there being libraries of evidence—it is the use of evidence that is the issue.
(vii) Starting early and the scandal of early childhood

We need success early in the lives of students for them to gain sufficient reading and numeracy skills to succeed in this place called school. There is a widely known phenomenon called the Matthew effect: the rich becoming richer and the poor remaining poorer. Translated into Reading, the claim is that, if students do not attain at least Level 2 in NAPLAN by age 8, then they are unlikely to ever catch up (Pfost et al. 2012). This Matthew effect begins early. An average child in a professional family (to use their designations) would have accumulated experience with almost 45 million words, in a working-class family 26 million and in a lower-class family 13 million—a 30-million-word gap exposure by age 5 (Hart and Risley 2003). Moreover, the nature of the language is different—by age 5, the average child in a lower-class family has 144 000 fewer encouragements and 84 000 more discouragements of his or her behaviour than the average child in a working-class family.

There is about 10 per cent for Band 2 or 20 per cent for Band 3 who do not attain the benchmark in NAPLAN Reading, and 10 per cent and 30 per cent in Numeracy. Herein lies a major problem: life opportunities for these students are being extinguished at such an early age. This means that Australia must mount a major campaign to improve the teaching of learning skills from Years 0 to 8, if the life opportunities of its students are to improve. This is not teaching 0–5 children reading and writing, but teaching concepts about print, seriation, language, language and language. It is requesting that early childhood educators be more skilled about evaluating and promoting learning from infancy through to school. There is much evidence that such teaching too rarely occurs in preschool settings (of any type) on a regular basis (Taylor et al. 2016).

This is despite Australia tripling its investment in early childhood education and care (ECEC) services during the last decade to $7.7 billion in 2015–16 and despite the good work of many to develop policy to improve service quality. This help has assured parents that sending young children to ECEC services is safe, and it does help resolve workplace engagement problems, but it does not assure them that teaching and learning strategies to support child development are in place. The National Quality Standard monitoring system may generally underscore child development; however, it is not pitched
towards identifying children's learning status or needs (OECD 2015), nor impelling them to have high impact on the learning lives of very young children. Further, for around 20 per cent of children who most need early learning support to change their education pathway, there are limited or no quality services ECEC programs available, even if they can get in.

Conclusion
The imperative is to change the narrative of schooling away from the structural concerns to the concerns about expertise. We have so much expertise in our schools, but we are at risk of losing this while we (the public, parents, politicians and teachers) deny it—preferring structural solutions.

We need excellent diagnoses identifying strengths and opportunities to improve, then a focus on understanding what has led us to the situation, and being clear on where we therefore need to move. We need gentle pressure, relentlessly pursued towards transparent and defensible targets, esteeming the expertise of educators to make these differences, while building a profession based on this expertise. We can have, in Australia, the world’s best laboratory of What Works Best, the most scalable story of success, an education implementation model that is shared between schools and not resident in only a few, dependable recognition of excellence, and a celebration of success of teachers and school leaders. Our enemy is complacency, blaming the postcodes, deplored the parents, fixing the students, not the system, and arguing for more resources to continue what is not working.

Of course all this reboot is resource hungry—and it will almost certainly cost all if not more than the Gonski tranche of gold we seem to be seeking. The message should not be Oliver Twist (‘Please, sir, I want more’), but more focused on the major reasons we want the money. This is where there is a need to agree on a focused set of initiatives and principles that would undermine a major reboot to the learning lives of Australian students—and thence the resources are needed to enact these initiatives. This is less a ‘show me the money’ strategy and more a ‘we can work collaboratively to make the difference’ proposal. We have, as I have shown previously, a long history of getting major increases in funding but with little to show for it—and
ultimately the voters (particular as more are not parents) will say ‘Hey, enough is enough’ as they have done in many other parts of the Western world. We then invent ways of divesting this increase through spreading it to private ventures (note the disaster of Sweden, the move to this in England, and the private and public partnerships emerging in our South Seas). We then invent mimics of private schools to lull the parents that government schools are like them (such as Independent Public Schools in Western Australia, charter schools in the United States, academies and trusts in the United Kingdom), which again led to little change within the ‘new schools’—a name change, a sense of freedom, a pride in the ‘independence’ and all at high cost (although most of the cost actually means there is divestment from the centre with a greater demand on the time spent by school leaders without extra resourcing or salary).

We need an accountability model based on ‘trust but verify’ (as Ronald Reagan proclaimed). Systems already have more than sufficient evidence to classify schools into the four quadrants (high and low progress and achievement). There are many reputational benefits for teachers in the high progress schools. There are many changes needed for those in the low progress schools, and it is most likely that the answers do not come from within those schools (otherwise they would not be low progress schools). Deeper diagnosis, greater collaboration with success schools, finer moderation of progress and more focus on explicit teaching is the success recipe for these schools. We are most likely going to move to more use of international tests (like the new PISA for Schools), but unless we base accountability on both progress and achievement, we risk moving towards distorted outcomes (as we do now). Maybe education needs a concept like ‘quality of life years’ rather than ‘number of life years’ as in health, of GDP as in economics to help ensure we maximise the right outcomes. My notion is ‘at least a year’s’ growth for a year’s input’, although much deeper analyses of what this year’s growth means is critical, as is ensuring that it is based on much more than the usual literacy and numeracy.

We need to be smarter in our accountability systems of having fewer high-level goals and not providing so many objectives that schools can pick and choose the ones they are already good at achieving and leaving the rest. I would suggest the following Big Five:
1. building confidence in the public school system
2. increasing the percentage of students at L2 Maths and Reading by age 8
3. schools demonstrating that they are inviting places to come and learn, as reflected in retention rates to the end of high school
4. having multiple ways to be excellent in upper high school
5. every school having at least one Highly Accomplished or Lead Teacher.

We need excellent diagnoses identifying strengths and opportunities to improve, then a focus on understanding what has led us to the situation, and being clear on where we therefore need to go. We need gentle pressure, relentlessly pursued towards transparent and defensible targets, esteeming the expertise of educators to make these differences, while building a profession based on this expertise.

Australia could have one of the world’s best school systems, the most scalable success story of success, an education implementation model that is shared between schools and not resident in only a few, dependable recognition of excellence, and a celebration of success of our teachers and school leaders. Our enemy is complacency, blaming the postcodes, deploring the parents, fixing the students not the system, and arguing for more resources to continue what is not working.

Other countries have rebooted their systems. It is fascinating that in a recent survey of countries’ reactions to PISA, only Australia and France of all countries surveyed said the PISA results led to no change—unlike reboots relating to the PISA shock for Germany, the major changes in abolishing selective high schools in Poland, increased benchmarking in Korea, greater higher-order thinking in Singapore, changing reading curriculum in Chile, moving from surface to deeper curricula in Japan—but we remain blind to this evidence (Breakspear 2016).

Complacency is our enemy; more of the same our crime. Giving our students more of what we had when we went to school might prepare them better for our world but not for their world. Every reader of this chapter can be part of the narrative about this reboot—what to keep, what to modify, what to throw out, what to prioritise,
what to aim for—with a clear aim of making schools inviting places to come and learn.

It is time for a reboot.

Biography

John Hattie is Director of the Melbourne Educational Research Institute at the University of Melbourne, Chair of the Australian Institute of Teaching and School Leaders, co-director of the Science of Learning Research Centre. His areas of interest are measurement models and their applications to educational problems, and models of teaching and learning. He has published and presented over 950 papers, and supervised 190 theses students, and 23 books—including eight on Visible Learning.

Note

This chapter is based on the Jack Keating Memorial Lecture, and presentation to the ACEL 2016 annual conference.

1 A better estimate, but not available to me, would be the HLM growth figures that NAPLAN use in their reporting to schools and using the same cohort of students at both times. In my experience, the results are not too dissimilar.
Knowledge is power. Information is liberating. Education is the premise of progress, in every society …

Kofi Annan

An increasingly globalised and network-based economic life underscores the urgent need for education to prepare people better for work and working environments that are changing dramatically. The expectation that individuals adapt and reinvent themselves more frequently has led to students staying in formal education for much longer than in past generations (Aleandri and Girotti 2012). The connection between education and the development of human capital is an increasingly powerful predictor of society’s progress (Shomos and Forbes 2014). Further deep changes to curriculum, pedagogy and assessment are needed in order to prepare people effectively for life and work.

In this chapter we argue that the challenge is to develop education that is responsive to the societal changes accompanying the transition to a knowledge economy. Recent experience shows that progress cannot be achieved through familiar reform levers like the
putative use of high-stakes assessments. Instead, we need a broader and deeper shift in the process, use and nature of education from being mainly summative and content-based to being formative and geared to the development of collaborative strategies and lifelong learning (Baas et al. 2014).

School-age education must change dramatically to help navigate the transition from a largely resource and manufacturing-based economy to information-based commerce characterised by networked societies and a global view of living. New definitions of skills and capabilities can help to achieve this transition, but only if the teacher’s role in a knowledge economy is transformed from its current state (Fitzallen, Reaburn and Fan 2014). This chapter concludes by considering the nature of that transformation.

**Changing educational landscape**

Education systems currently prepare students for forms of work that are disappearing, and to solve existing problems rather than those that are now emerging around us. How can education address problems that we ‘do not yet know about, and prepare students for jobs that ‘do not yet exist, using learning approaches that are not yet fully identified?

![Figure 2.1: The labour market increasingly demands higher-order skills](image)

*Tasks by percentile for the US economy, 1960–2009*

*Source: Levy and Murnane 2013*
As figures 2.1 and 2.2 illustrate an education system that continues to prepare graduates for employment in routine tasks that depend on the accumulation of knowledge is doing a serious disservice to its students. Since 1960, employment opportunities requiring non-routine interpersonal and analytical skills have increased whereas those utilising routine cognitive and manual occupations continue to decline (Levy and Murnane 2012, 2013; Andrews 2013).

In 2015 a report by Price Waterhouse predicted that 5.1 million jobs would disappear in Australia from agriculture and manufacturing industry-related occupations. They estimated that these jobs would be replaced by knowledge-based or networking-based occupations aligned to a digital economy. It is clear that Australian education needs to be more focused on preparing students to engage with the changing realities of a knowledge- and service-intensive workforce.

![Figure 2.2: Industry and Services Share of GDP in Australia.](image)

Defining C21 skills
In 2008 Microsoft, Intel and Cisco jointly commissioned a ‘call to action’ (Kozma 2009). In response, an international project supported by these technology companies and chaired by Professor Barry McGaw engaged more than 250 education researchers and industry
representatives in developing a framework to identify the skills needed for the knowledge economy and digital workplaces of the twenty-first century. Four broad areas of essential skills were identified:

1. new ways of working: including greater ability to communicate and collaborate through workplace teams
2. new tools for working: becoming more adept with information and more literate in communication technologies
3. new ways of thinking: developing creativity and innovation, critical thinking, problem-solving and decision-making
4. new ways of living in a digital world: increased awareness of local and global citizenship, flexibility in living and in career choices, willingness to take personal and social responsibility, cultural awareness and cultural competence.

This project inspired further research and publications on how twenty-first-century skills might be assessed, linked into school programs, influence policy and address the technology needs of society and the workplace (Griffin and Care 2015, Griffin, McGaw and Care 2012).

During the same years the Australian Curriculum Assessment and Reporting Authority (ACARA; 2014) also addressed the ‘general capabilities’ required of citizens in an information age. These include literacy, numeracy, ICT literacy, intercultural understanding, ethical understanding, critical and creative thinking and personal and social capabilities. They are interwoven throughout the rest of the curriculum with the expectation that teachers teach and assess them to the extent that they are incorporated within subject content. The general capabilities are typical of a curriculum reformation emerging globally. Singapore and Hong Kong have already revised their national curriculum to include skills that, until now, have been referred to as C21 skills. However, since that title will become dated, in this chapter we refer to knowledge economy skills.

**Knowledge economy skills and capabilities**

Building on the initial work and responding to growing international interest, the Assessment and Teaching of 21st-century Skills (ATC21S, 2009–12) project formed partnerships between the University of
Melbourne and the governments of Australia, the United States, Costa Rica, Finland, the Netherlands and Singapore. Since 2012, similar partnerships have been established with another seven countries.

A Massive Open Online Course (MOOC) — Assessment for Teaching of 21st-Century Skills — has been developed to share information and learning more widely. It focuses on two areas: collaborative problem-solving, which combines problem-solving, collaboration, critical thinking and communication; and learning through social networks, which addresses ICT literacy and social and personal responsibility. Both areas involve individuals collaborating, contributing and communicating to develop a combination of social and cognitive skills in a non-traditional educational environment.

Learners are identified first as active and intentional consumers of education, then as producers of information. To become producers of information, students are required to work together through social Internet networks and to develop a focus on social capital, such that development of intellectual capital occurs as a result of group collaboration. In such an environment, individual acquisition of knowledge is aligned with the contribution of knowledge to a group in which the purpose and use of knowledge is of ultimate and communal importance.

This collaborative and process-based approach requires a significant mind shift away from traditional classroom and content-based education, using technology and the role of the teacher quite differently, in ways that we explore further below (see Gillies, Ashman and Terwel 2007).

The Assessment Research Centre at the University of Melbourne has subsequently explored additional aspects of knowledge economy skills (Griffin, Wilson and Care 2015). The most recent is a linkage project (2015–18) with the Department of Education and Training Victoria dubbed ‘Realising the Potential of High Capacity Students’ (REAP). This project explores collaborative professional practices among teachers, levels of teacher knowledge, and self-regulated learning.

At the same time, work by employer and business groups focused on knowledge economy skills continues to proliferate,
including through projects by the World Economic Forum, Boston Consulting Group, Google Education, Economist Intelligence Unit and the New York Academy of Sciences, whose 2016 report focused on the changes to school curriculum needed to reflect the science, technology engineering and mathematics (STEM) knowledge required in an information society. It focuses four broad areas:

1 essential skills: critical thinking, problem-solving, creativity, communication, collaboration, digital literacy and computer science

2 supporting attributes: an STEM mindset, agency and persistence, social and cultural awareness, leadership and ethics

3 instructional design requirements: research-based pedagogy, STEM content integration, real-world application, project or problem-based learning, scaffolding, developmental or growth assessment, cultural sensitivity and relevance, and technology integration

4 implementation: accessibility, alignment to local context, professional development and learning supports, evidence of effectiveness, access to materials and practitioners support, and scalability.

In May 2016, the Organisation for Economic Cooperation and Development (OECD) announced that it will continue its exploration of essential skills in a project called Education 2030. The cohort of students that begins schooling in 2017 as five-year-olds will exit at year 12 in 2030. By the time these students finish their professional preparation, perhaps in teacher education, it will be at least 2034. By 2034, members of the cohort entering the school system in the foundation year of 2017 will enter the school system again, but this time some of them will enter as teachers. Those who aim to become teachers cannot expect that they will teach in the same way as today’s teachers do.

If education is charged with providing the necessary tools for learners and organisations to negotiate the critical transition to a knowledge economy, then teachers are cast as primary agents of change, working at the chalk face of the knowledge economy revolution.
The changing role of the teacher

Knowledge economy skills need to be embedded in the curriculum, but the acquisition of these skills by students will be optimised only by teachers. This requires a shift in the scope of the teacher’s skill set and in the role of the classroom teacher. The implications for what is expected of teachers are profound. The role of the teacher will become broader than the traditional model, of an expert employed and rewarded for their specialised disciplinary knowledge and mastery of teaching practice and pedagogy.

In fact, the economy is demanding knowledge economy-based competencies and character qualities, in addition to foundational literacies. The most common attribute listed in reviews of skills required for people working in a knowledge economy as teachers, students or graduates is the ability to collaborate when learning and as part of their decision-making. Such competent collaborators also need to be creative and digitally literate. As already outlined in this chapter, pressures are building from influential organisations, corporations and governments to move school systems to focus on collaboration among students. Collaboration is currently part of the rhetoric of social constructivist approaches to schooling, but collaboration, like curiosity, creativity, critical thinking and problem-solving, needs to be modelled by teachers and understood by them as a process before these skills can be successfully modelled, facilitated, explicitly taught or assessed.

There is growing evidence that teachers participating in a collaborative teaching cycle (Griffin 2014) are more successful than teachers working alone. The literature on the benefits of collaboration among Professional Learning Teams (PLT) and Professional Learning Communities (PLC) is also growing (Timperley 2010). PLTs and PLCs are organisational units in which teachers collaborate in teams, making decisions about targeted teaching and instructional intervention practices that focus on scaffolding learning for individual students or groups of students. This collaborative process can be represented in a five-step iterative cycle, including an evidence-based verification step, illustrated by the University of Melbourne’s Clinical Teaching Cycle (see figure 2.3). This process requires assessment and learning and teaching actions to be interpreted within developmental progressions. The role of teachers is to assess where
their students are on the progression, so they can then plan a learning intervention to maximise student growth.

Interactive teaching is dependent on understanding the developmental progression being used to interpret the evidence of student growth and success. In general, a growth model, such as that underpinning the Clinical Teaching Cycle, has evolved to be independent of year level at school or age of the student. This ensures that measurement of student growth or learning has had direction and was not a result of a random collection of goals and tasks, which is too often the case when teachers and schools rely on year-level specifications of those goals and tasks.

Second, a collaborative growth model ensures that there is an order to the conceptualisation of students’ growth, decided upon by the teacher in collaboration with at least one other colleague and, where appropriate, with the student.

Figure 2.3: Clinical Teaching Cycle
Source: adapted from Griffin and Robertson 2014

Interactive teaching is dependent on understanding the developmental progression being used to interpret the evidence of student growth and success. In general, a growth model, such as that underpinning the Clinical Teaching Cycle, has evolved to be independent of year level at school or age of the student. This ensures that measurement of student growth or learning has had direction and was not a result of a random collection of goals and tasks, which is too often the case when teachers and schools rely on year-level specifications of those goals and tasks.

Second, a collaborative growth model ensures that there is an order to the conceptualisation of students’ growth, decided upon by the teacher in collaboration with at least one other colleague and, where appropriate, with the student.
Assessment conceptualised within a growth model has several important properties, such that it:

- involves a collaborative process between classroom stakeholders (teacher, peers and students, where appropriate)
- demands that the assessment and learning depict direction, order and magnitude (three of four properties of fundamental measurement) and the expected learning is articulated as a progression
- requires evidence-based decisions regarding instruction/scaffolding and outcomes, and
- relies on an iterative process involving the Clinical Teaching Cycle questions.

Third, such a model requires that an ‘amount of learning’ can be expressed in terms of levels on the progression, but almost never in terms of a score increase. A score is almost meaningless as a measure of student achievement, in the context of a developmental or growth model where the teachers and students monitor the skills being acquired. Using this model, the teacher is central as a facilitator but the student is the focus; scaffolding is the primary strategy and student learning is the goal.

The teacher as a facilitator

Given the explosion of knowledge available through the Internet and the impossible task that teachers face in maintaining the role of ‘expert knowledge keepers’, important changes are needed in the responsibilities of teachers and the conceptualisation of their roles.

Until recently, competencies such as critical thinking/problem-solving, collaboration, creativity and communication have not been seen as central to teachers’ knowledge and expertise. This is a new form of curriculum that very few teachers have the pedagogical content knowledge to teach.

Through no fault of their own, teachers are caught in a spiral of changing demands. If teachers and students are to embrace a higher-order level of thinking and evaluation, a new approach to teaching and learning needs to be established. Teacher knowledge and the transmission of that knowledge is now less important than teaching
students to be discerning consumers and creative users of the vast array of information available to them.

Teachers cannot be expected to be experts in the full range of skills that are essential for thriving in a knowledge economy. But if teachers ‘do not possess these competencies to a level where they can scaffold students’ development, then their role as interactive agents of student development will fail.

Accordingly, the role of the teachers is undergoing a transition: a shift from how much someone has learned to how well they can learn and how critically they can think and evaluate information acquired within, and independently of, the classroom context. Students, who are increasingly learning by themselves (Economist Intelligence Unit 2015), will need additional self-regulated learning skills to help them become more efficient and effective learners. The teacher’s role of helping the student to become more efficient must also operate from a basis of these same self-regulated skills. It is imperative that teachers have explicit pedagogical content knowledge in these areas.

The teacher as a knowledge-transmission agent expert has not been completely lost, however. In an interactive social constructivist era, teacher expertise was supplemented by the pedagogical skill of scaffolding. In a post-industrial era, the interactive role of scaffolding turns in a new direction and needs to be reinforced by new knowledge economy skills. The function of scaffolding is retained, but the source is not necessarily always the teacher. Instead, the teacher becomes an expert in identifying and sourcing interventions, and the idea that the teacher is the ‘more knowledgeable other’ in all learning situations is more difficult to sustain in practice.

The skills of collaboration, decision-making, problem-solving and creativity now become core skills of expert facilitator teachers. They are imperative in a system where the teaching is interactive and scaffolded and less transmissive and explicit. This shift is likely to re-form the teacher’s role as that of a facilitator.

Table 2.4 shows a progression of the demands of a teacher’s role over time. Advances in educational research, in concert with demands from the education and knowledge economy industry sectors, converge to fashion a new vision for the role of the teacher.
Table 2.4: A model of the progression of demands on teachers' roles over time

<table>
<thead>
<tr>
<th>Role of the teacher</th>
<th>Expert transmission (indoctrinator)</th>
<th>Interactive (moderator)</th>
<th>Autonomous self-regulated (collaborator)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher as expert providing knowledge; explicit teaching; textbook dominated; teacher as expert</td>
<td>Scaffolding; teaching and learning as social activity; Vygotsky ZPD; developmental</td>
<td>Teacher as expert helping learners to learn; student and teacher emphasise the process of learning making use of multiple sources of information; teacher as a facilitator</td>
<td></td>
</tr>
<tr>
<td>Skills needed by the teacher</td>
<td>Organisation and delivery of content</td>
<td>Developmental assessment and interpretation of student development using the ZPD</td>
<td>Collaborator and facilitator</td>
</tr>
<tr>
<td>Recording, remembering</td>
<td>Investigating, problem-based learning</td>
<td>Self-regulated learning skills</td>
<td>Collaboration skills</td>
</tr>
<tr>
<td>Nature of instruction</td>
<td>Transmission of knowledge</td>
<td>Building on developing skill set</td>
<td>Facilitator of knowledge</td>
</tr>
<tr>
<td>Expectations from principals</td>
<td>Extensive fixed content knowledge and pedagogy</td>
<td>Extensive fixed content knowledge and pedagogy</td>
<td>Expert assessment and development scaffolding skills</td>
</tr>
<tr>
<td>Education systems</td>
<td>Basic skills literacy and numeracy, science literacy</td>
<td>Basic skills literacy and numeracy, science literacy, teacher expertise in data-based decision-making</td>
<td>Basic literacies, personal development attribute development and competences, critical thinking, collaboration, self-directed learning, creativity (STEM) skills development</td>
</tr>
</tbody>
</table>

Note: ZPD = Zone of Proximal Development
Changing demands and new learning theories have brought about the need to differentiate classroom strategies to meet the needs of every student. Social constructivist theory foregrounds a model of teaching that caters for students with diverse ‘starting points’ for learning in a heterogeneous classroom.

If the current ‘educating in batches’ approach to class formation is sustained, then classrooms will continue to contain heterogeneous students and the need for strategies to cater for every student’s needs will only grow. What every student needs is, however, changing at the same time—every student will need the skills outlined for success in the knowledge economy.

Not all aspects of the teacher’s role will change. Teachers will still be responsible for determining the direction of learning and teaching, the order and sequence of learning materials, and the rate and amount of learning that each individual student can be expected to demonstrate. The teacher’s responsibility will always be to guide and support students’ cognitive and affective growth. This is essential for equitable education.

The shifting landscape of the classroom and the scope of what can be learned, however, will change the context for these constants. The role of the teacher in developing the direction, order and amount of what should be learned will change fundamentally.

The main focus of these changes will be on developing collaboration and self-regulated learning skills for both teachers and students. For teachers, this is likely to occur through their participation in teaching teams. For students, it is likely to proceed through project-based learning and the resolution of problem-based scenarios with real-world implications (NYAS 2016). To keep up with increasingly complex demands, working in isolation is not practical or sensible and, in fact, not even permitted in most educational settings. Teachers will need to be able to scaffold and be scaffolded by their peers in professional learning communities.

**Teachers as collaborators in a knowledge economy**

In situations where changes in knowledge expectations, skill acquisition, social and cultural awareness are ubiquitous, teachers will need a great deal of help and support. The most valuable resource that all teachers will have is access to their peers and colleagues in schools.
and in the profession. More specifically, the most accessible resource to which they have access is schools’ professional learning teams or professional learning communities. The PLT/PLCs will need to function as a collaborative teaching team and acquire skills not only of collaboration but also to scaffold the learning of its members to help develop those skills. Teachers need additional skills in self-regulated learning to build their capacity to be autonomous in building collaboration skills. This creates a challenge: how to resolve the paradox of the collaborative–autonomous self-regulated learner.

The teams of teachers need to develop collaborative procedures that enable them to handle the changes in knowledge, pedagogy and skills demanded by the knowledge economy. Similarly, schools need to develop structures for facilitating this collaborative approach.

What is collaboration?
Collaboration can be understood as a process that involves two or more people who each contribute their own resources and procedures to realise a shared goal that an individual cannot realise on their own. As a group, each individual depends on, benefits from and contributes to the realisation of the shared goal.

People attempting to resolve collaborative tasks, typically, carry out a preliminary process of selecting and agreeing on roles with their partner. They explore and analyse the problem space, cooperate to identify resources that each manages, cooperate with partners in exploring and testing procedures leading to hypothesis formation and strategies to solve the problem. Some problem solvers (especially those operating at higher levels) then check whether any other solutions or strategies are possible.

When this is applied to PLC/PLTs in a school, the focus of the team has to be on addressing sustained growth for each student. For example, suppose a student group project required evidence of critical thinking and creativity to be embedded in a report. The report is evaluated and the need for teacher intervention arises in order to ensure that each participating student’s growth has direction, sequence and specific skills that need to be acquired. The teacher could take this issue to the PLC and acknowledge that he or she has only part of the skill set to take it further. Members of the PLC might have to acknowledge that they lack some skills and need help in
others. In a context of teachers as experts or interactive scaffolding, this might be a difficult admission, and schools will need to provide supportive environments for this to occur.

For students to develop skills that are relevant in the knowledge economy, they need access to a team of teachers that can support them. Members of the team need to use their own collaborative problem-solving skills in order to help students grow, so these skills need to be developed for teachers alongside the development of students.

Collaborative problem-solving consists of social and cognitive components (Hesse et al. 2012). As shown in figure 2.5, the social component consists of skills requiring participation, the ability to see an issue or problem from the perspective of another person, and an ability to assign and organise roles to individuals within the group. The cognitive component involves the ability to perform a detailed
analysis of the problem and an ability to organise the acquisition of knowledge through identifying patterns of data, formulating rules to organise those patterns, taking the rules to a generalised level, formulating hypotheses testing those generalisations, and finally, organising perhaps a creative and systematic approach to solving a particular problem.

Social regulation or group organisation involves the individual’s capacity to negotiate, to evaluate their own skills, strengths and weaknesses and make adjustments accordingly, to understand and take into account the strengths and weaknesses of their partners and the reasons for their partners interactions and contributions; it also requires negotiation of personal motivation, purpose and attributes. Participants need to be able to make adjustments to their own contributions accordingly. Social regulation requires that the individual would be able to take responsibility initiatives where needed and procedure responsibility and leadership to others where necessary. It requires accurate and transparent communication where roles and role purposes are clearly understood and valued. Task regulation involves the capacity to monitor and evaluate the contribution of their own unique resources. The resources may be skills, materials, experience, time and other expertise that they are uniquely able to contribute.

Teachers might need practice and support in being able to identify their own resources and where they require contributions from others who might have more skills, experience, time or other expertise they lack. The capacity to collect information and the systematic way in which it is collected, categorised and organised in ways that makes it available and useful to others is important. For problems involving human beings, the problem situation can be unclear and ambiguous and require tolerance from members of the group. The capacity to analyse problems and set goals towards resolution also matters.

Discussion among teams and communities of professionals, focused on individual students and collaborative groups, must be able to access methods to identify the amount of growth, the nature of the skills acquired, the rate of growth and the various intervention points for different students within collaborative problem-solving groups. Inevitably, individual exercises in collaboration will mean
that teachers need support in organising the classroom to cater for
differentiation among students in terms of their readiness to begin,
ability to contribute, to participate and take perspectives, to analyse
problem space and to develop knowledge solutions. In essence
teachers need the skills to support and scaffold individual students
or collaborative groups to achieve group work goals.

This raises implications for how teachers themselves are
assessed, held accountable and supported through professional
advancement. Education departments and organisations such as the
Australian Institute for Teaching and School Leadership (AITSL,
2014) have developed policies and frameworks identifying, moni-
toring and holding teachers accountable for their professional
standards. Currently there is insufficient scope in the AITSL docu-
mentation to guide and reward collaboration; in fact collaboration is
mentioned only once in relation to teacher practice (twice in relation
to students, and once for parents). A paradigm shift is necessary, not
only in what is expected of teachers but also in how it is monitored—
essentially, do teachers possess, and are they developing, the very
skills we are expecting them to model and instruct? For a description
of the collaboration skills for teachers, see Appendix 1 of this chapter.

**Teacher and student self-regulated learning**
Self-regulated learning skills also need to be identified and defined,
much as any other learning capability that we expect students to
develop. Self-regulated learning is an academic process by which
learners systematically and intentionally monitor aspects of their
thinking, motivation and behaviour in response to internal and
external environments.

Self-regulated learning is supported by: task analysis, self-motiva-
tional beliefs, self-control, self-observation, self-judgement and
self-reflection. In analysing tasks for the purpose of self-regulated
learning, goal-setting is important. Teachers and students must
decide on and create outcome and process standards against which
performance and outcomes can be evaluated. Each participant
needs to understand that goal-setting has a direct influence on
achievement; each participant needs to make a distinction between
outcome and process goals, an ability to prioritise goals and to use
goals to motivate their performance.
Strategic planning is used to optimise learning processes and outcomes and encourages problem-solvers to plan steps before starting. Sometimes it helps to connect the current task to previous exercises so we learn from experience and use a range of strategies. This means that targets can be set and adapted accordingly.

Motivation—using known strategies to achieve success—is also important. Students and teachers need to be able to set and achieve goals and subgoals; to be confident in using personal resources and seeking assistance. At times, teachers need to support students in developing strategies to increase engagement so that independent and autonomous learning is enhanced through self-instruction, use of imagery, think-aloud strategies and attention-focusing strategies. These might include finding a suitable workspace, acting purposefully and focusing on the task at hand.

Teachers and students who keep records of progress, reflect on successes and failures and seek feedback from peers become more effective learners. Efficient autonomous learners also develop skills in evaluation as applied to their own work and progress, understanding cause and effect relationships and modifying goals and strategies to be commensurate with this understanding are important skills. Finally, self-regulated, autonomous learners gain satisfaction from achieving their goals using an efficient process and developing the ability defend their approaches. Like collaborative problem-solvers, these self-regulated autonomous learners check solutions and see alternative explanations.

**Conclusion**

This chapter has outlined the substantial shifts that are shaping the future of education in Australia. Far-reaching changes are already taking place in a knowledge economy. Teachers need to be supported to develop skills of collaboration and self-regulated learning, embracing a role as expert facilitators of learning and working through teams and communities.

Teachers will be called on to blend subject content and knowledge economy skills/capabilities through their own practice. Teachers have a responsibility to prepare themselves and their students to thrive in an information-based society. They will be responsible for encouraging students to think beyond discipline
content and develop their own capabilities for collaborative, self-regulated learning. The PLC and school leaders, along with community and industry lobby groups, need to pressure teacher education to shift towards embedding central emphasis on knowledge economy skills.

Teachers can lead this reformation through adjusting their classroom practices as facilitators, and pursuing changes to school organisation and structures that enable their students to benefit from tailored and performance-based assessments. Assessment and reporting practices that are aligned to both formative and summative frameworks will enable a shift from the pseudo-precision of test scores to interactive growth models and scaffolded intervention strategies.

Education systems will need to invest in, rather than assume, teacher readiness for this change. Changes in teaching practices will have to be aligned with changes in student learning. There will be a need to monitor teacher practices as well as student learning outcomes. The old ways of testing numeracy and literacy need to be supplemented with measures of collaboration, critical thinking, creativity, communication and problem-solving, so that the social, cognitive and physical skills of students are monitored and aligned to teaching intervention strategies.

Given these measures, our future teachers and those who enter the profession in 2034 will face a less daunting task than their predecessors. The reality is that children of the future will be taught in different contexts by different kinds of teachers to acquire different kinds of skills to enter different kinds of professions and employment opportunities. They will face problems that we have ‘not yet encountered or even imagined. They will be employed in occupations that do not yet exist. They will possess skills that we do ‘not know about, and they will become teachers who are very different from those of us currently in the profession.

The changing role of the teacher in a knowledge economy
## Appendix 1: Progression of collaboration skills focused on a shared goal

<table>
<thead>
<tr>
<th>Level title</th>
<th>Collaboration goal attainment level description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic approach to problem via a collaborative process</td>
<td>The teacher works collaboratively to resolve the shared goal and contributes to group responsibility for the success of tasks. The teacher contributes to the resolution strategy efficiently and systematically contributing their resources, skills and experience to reach the common goal. Communication and feedback are incorporated from their peers and conflicts are resolved as they arise.</td>
</tr>
<tr>
<td>Efficient working partnership</td>
<td>Actions are well thought-out, planned and purposeful. Consequences of each group members’ actions and their use of prior knowledge contribute to the group plan, strategies and goals. Original thought and proposed procedures are adapted in light of new information that emerges in the process of goal attainment. Interactions are initiated and responses to partners’ contributions are considered but might not resolve differences.</td>
</tr>
<tr>
<td>Cooperative planning</td>
<td>Activity at this level is characterised by perseverance in attempting to realise the shared goal and group members are committed to realising the goal together. They share resources and explore patterns in the data across pieces of the process. The task is explored systematically and plans emerge to focus on shared subgoals. There is an awareness of their partners’ contribution to the realisation of the shared goal and a willingness to comment on and adjust their own contribution. At this simpler level, subgoals can be realised independently.</td>
</tr>
<tr>
<td>Awareness of partner and directed effort</td>
<td>The partners’ roles are recognised and understood as part of the importance of working together to resolve the shared goal. Individuals realise they do not have all the necessary information or resources and begin to share resources and information with their partners. They communicate their own activities and considerations and assist partners to do likewise in order to assist all group members to understand the task.</td>
</tr>
<tr>
<td>Investigating the problem</td>
<td>The teacher actively participates in familiar procedures and tends to act independently. Interaction with partners is limited only to when it is necessary for reaching simple subgoals. Possible personal approaches to realising subgoals are tested using only their own available information as they relate to broad subgoals.</td>
</tr>
<tr>
<td>Independent inefficient exploration</td>
<td>The student explores the problem independently, communicating with partners only at the beginning of a task, if at all. Their approach is unsystematic and focuses only on isolated pieces of information resulting in a lack of progress towards realising the goal. There is no appreciation of the shared goals or focus and an independent and individual perspective is dominant.</td>
</tr>
</tbody>
</table>
## Appendix 2: Progression of a teacher as a self-regulated learner

<table>
<thead>
<tr>
<th>Level</th>
<th>Developmental level of a teacher as a self-regulated teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-regulated learners</td>
<td>Seeks opportunities with the intention to enhance professional learning; persists with professional learning opportunities to acquire new and improved professional skills. Engages on the basis of self-improvement and professional growth.</td>
</tr>
<tr>
<td>5 competent and self-directed</td>
<td>Systematic, focused and flexible approach to the use of professional learning opportunities in order to acquire new pedagogical skills. Persistent and determined in completing programs and professional learning tasks. Reflective in terms of learning style and approach. Treats new programs as an opportunity for personal and professional growth.</td>
</tr>
<tr>
<td>4 efficient learner</td>
<td>Engages with professional learning programs and tries to do well on learning tasks using a range of strategies and self-discipline to focus on the task at hand. Has a futures perspective on the usefulness of professional learning and is capable of modifying pedagogy and learning strategies to suit the current learning opportunity. Persists with the program to improve professionally and establish a learning base for future development.</td>
</tr>
<tr>
<td>3 strategic learner</td>
<td>Participation is affected mostly by external and personal reasons for acquiring new ideas and skills. Emphasis is placed on those programs that have clear personal benefits and are likely to raise status among peers. Fellows program leaders instructions and links to past successes in similar fields when the program links to personal interests and goals.</td>
</tr>
<tr>
<td>2 reflective earner</td>
<td>Participates in professional learning programs if required. Judges value of program relative to support of existing knowledge and experience base, and needs additional support and motivation to engage in and to derive benefit from professional learning opportunities outside current experience and ability level.</td>
</tr>
<tr>
<td>Static learner</td>
<td>Relies on previous professional learning experiences to identify ways of dealing with new materials ideas and appendages and engages in familiar and personally experienced and trusted procedures and issues.</td>
</tr>
</tbody>
</table>

The changing role of the teacher in a knowledge economy
Biography

Patrick Griffin held the Chair of Education (Assessment) in the Melbourne Graduate School of Education from 1996 to 2015. He was the founding director of the Assessment Research Centre from 1988 to 2015 at RMIT and Melbourne University. At the University of Melbourne he spent periods of time as head of department, deputy dean and director of the research centre. His work focused on links between assessment and teaching in the fields of problem solving and higher order competency assessment and performance as well as studies of literacy and numeracy development. He has been the assessment consultant for UNESCO in Southern and Eastern Africa and for the World Bank in Vietnam. He has led national and international studies of problem solving, literacy and numeracy and has been the Executive Director of the Assessment and Teaching of 21st Century Skills project since 2010 with an impact on national and international assessments including the PISA study of 2015 and the national assessment of education progress in the USA scheduled for 2017. His work has also included developmental frameworks for teachers and school leaders in Australia through the Australian Institute of Teaching and School Leadership (AITSL).

He is currently Emeritus Professor at the Melbourne Graduate School of Education, where he continues to lead local, national and international projects and contribute to the teaching and research higher degree programs. He is currently working with UNESCO on the transition of curriculum from content to competency and the identification of future competencies.

Lorraine Graham is Professor of Learning Intervention at the University of Melbourne. Lorraine's career is focused on school inclusion, literacy strategies, basic academic skill interventions in numeracy and literacy and, ultimately, the effective teaching of all students. Her PhD is in Instructional Psychology and Master of Arts (Education) along with teaching and special education degrees. Past positions include Professor of Inclusion and Educational Psychology at the University of New England, Associate Director (student diversity) of the SiMERR National Research Centre and co-developer of the QuickSmart Numeracy and Literacy Programs. Lorraine has contributed over 90 published academic works, including five books,
and extensive educational resource materials, and collaborated in a wide range of funded research including ARC Discovery and Linkage Grants. She is a Fellow of the International Academy of Research into Learning Disabilities and has held service roles at the national, state, university and school levels.

**Susan-Marie Harding** is a Research Fellow at the Assessment Research Centre in the Melbourne Graduate School of Education at the University of Melbourne. She is the Research Manager of the ‘Realising the potential of Australia’s high capacity students’ Linkage Project supported by the Australian Research Council in partnership with the Victorian Department of Education and Training. Susan’s focus is addressing key assessment policy and research questions using Rasch psychometric analysis and other quantitative methods including correlation, ANOVA, multivariate analysis, regression and non-parametric tests. She is passionate about learning and creating reliable and valid assessments for best practice.

**Nives Nibali** is a PhD student working and tutoring in the Assessment Research Centre at the University of Melbourne. Nives has experience and expertise in secondary education, specialising in Gifted Education, English, English Literature and Literacy for which she held coordinator roles while working in education in Victoria. Nives completed a BA with Honours at La Trobe University where she also completed her GradDipEd (Secondary) and Masters of Education. The focus of her current study is the impact of self-regulated learning on reading comprehension achievement in high achieving students in grades 5 and 6.

**Narelle English** is a research fellow, lecturer in assessment and doctoral candidate at the Assessment Research Centre, University of Melbourne. Her research projects are assessment related and she works on projects relating to developmental learning and the design and development of data collection tools and assessments. She has designed and implemented assessment for teaching programs in the Master of Teaching, Master of Education, the Network of Schools project within the Melbourne Graduate School of Education, and the Department of Education’s Bastow Institute. Narelle has also taught
and held leadership positions in department schools in Victoria, and overseas in the US state system and Japan.

**Dr Monjurul Alom** is a Programmer and Research Manager at the Assessment Research Centre, University of Melbourne, Australia. He completed a PhD (Computer Science) in 2011 at the University of Newcastle, Australia, where he worked as a research fellow from 2011–12. He was an Assistant Professor at Dhaka University of Engineering & Technology from 2000–2007. His work includes the development of collaborative web applications as a basis for research in the area of educational assessment. He has developed a registration portal system and scoring engine to assess the ability of students which is being used in schools in Australia and Internationally. His research also includes meta-data generation and management for large scale databases.
Chapter 3
The state of public schooling
Jessica Gerrard

It is widely claimed that there is a crisis in public schooling, or at the very least that there is something profoundly broken with it. This is, of course, a common reform and lobbying tactic. Real and perceived crises can provide important ‘reform windows’ whereby governments further their agenda, or whereby advocates, unions or lobby groups seek popular and political traction for theirs. Hence, although there might be broad agreement that there is a crisis of sorts, the constitution of this crisis is hotly contested. For some, the crisis lies in the perceived inability of public schooling to keep pace with the changing economic needs of Australian society. For others, such as Kevin Donnelly, co-author of the recent Review of the Australian Curriculum (Australian Government 2014), the need to reinstate Australia’s ‘Judeo-Christian heritage’ in schooling knowledge underpins the problem with public schools (Donnelly 2015). For others still, the crisis lies in the many inequalities in education, including intense disparities for Indigenous students (see Fogarty 2012), while for yet others, the belly of the crisis is in increasingly privatised schooling markets and concerns about levels of government funding.¹ Amid this medley of crises are fundamental, but oft-times
implicit, assumptions surrounding the purpose and value of public schools: what the ‘public’ is ‘in’ and ‘of’ public education.

Australian schooling is subject to significant and continuing policy reform, much of which has provoked substantial debate. In recent years this has included a major review of school funding: the Gonski Review (Gonski et al. 2011); school autonomy and independence governance initiatives (see Keddie 2016); Australia’s first ever national curriculum; national teaching standards; and nation-wide literacy and numeracy testing, the results of which are public and make possible school-by-school comparisons through the My School website. Contemporary education debates circle in particular around the presumed ascendant power of teachers to transform student outcomes (see Goss and Hunter 2015), the roll-out of mechanisms to support parent school choice (such as My School), and the predominance of testing in schooling practice and culture (see Lingard and Sellar 2013, Dulfer, Polessel and Rice 2012). These reforms and debates gesture towards significant questions surrounding the practice and purpose of public schooling—from how schools should be funded and governed, to what the ‘common’ knowledge within schools should be, what the roles and responsibilities of teachers are, and what the appropriate ways to assess students and articulate school accountability to parents and the broader community are.

However, the fast-paced and often segmented approach to policy development, in which particular reforms are positioned as independent of one another and as urgent and necessary, offers little space in which to consider the wider dimensions of public schooling. In response, rather than propose resolute solutions or remedies, this chapter aims to open up current debates to reflect on the premises contained within public schooling. I suggest that this task is essentially contested, and ultimately never settled. Nevertheless, against the apparent imperatives of fast-paced policy reform, this chapter advocates for in-depth, expansive and deliberate considerations of public education, considerations that extend beyond—and are not confined by—what is administratively possible or desirable by the government of the day (see Gerrard 2015).

In what follows I explore two essentially contested, and unstable, ‘problematics’ that underpin the practice and meaning of ‘public schooling’: first, the relation of the state to the ‘public’; and
second, the distinction between private and public. These problematics are, I contend, two major underpinning concerns that underlie any consideration and practice of public schooling. I conclude by reflecting on public schooling in relation to the emergence of global and transnational publics and Australia’s settler colonial context, and on the productive possibility of a conception of ‘public’ that acknowledges contingency and incompleteness.

I The state and the public
In popular accounts of Australian schooling, ‘public’ is often used as a stand-in for state- or government-funded. Yet what is ‘public’ about public schooling is much more than schools’ funding relationships to the state. This is not to deny the import of the state in maintaining and funding public schooling, but to understand this role first as contentious, and second as representative of a much wider instantiation of what is valued to be common. What is ‘public’ about ‘public schooling’ is inherently linked to the state’s roles and responsibilities towards education, but it is also about the practices and meanings of what is common and collectively valued in ways that ultimately transcend the state. Consequently what is ‘public’ is essentially contested, mutable and unbounded, connected to shifting claims of what is common. It is slippery in its uses and meanings: for instance, it can be used to describe processes of communication, as in public consultation and deliberation; and as a concept to underpin critical theories of democracy. In this latter form it can be deployed as a theoretical tool to consider the best ways to deliberate and decide upon shared and common concerns, and ultimately to provide critical mechanisms for struggles for justice (see Fraser 2014).

Yet delinating what is common or public is fraught with difficulty. Newman and Clarke (2009) use the word ‘publicness’ ‘as a way of talking about the combination of things, ideas, issues, people, relationships, practices and sites that have been made public’ (p. 2). What is made ‘public’ therefore is ‘historically and socially variable’ (ibid.); it depends on the conditions of possibility of what can be said and done within a given context and time. Although it might be taken for granted that schooling and education is in one way or another a ‘public’ concern, the constitution of this public concern is highly changeable. Contemporary debates, for instance, surrounding the
‘what’ of schooling knowledge highlight that decisions about what is common or shared are far from settled.

These contemporary debates are invariably framed by recent histories of public schooling. Current discussions surrounding the purpose and role of public services, such as schools, are framed most particularly by the policy settlements following World War II. These were characterised by an unprecedented involvement of the state in the public sphere and a significant widening of the roles and responsibilities of the state (Newman and Clarke 2009). Today, the state is still centrally concerned with the provision and governance of education. However, the underpinning ideas and presumptions of contemporary policy has shifted considerably. Education policies are broadly underpinned by a presumption that market-based approaches provide a worthy model for practice (see Connell 2013). This is in part bolstered by the existence of, and continued government support for, different sectors of education (government, independent, Catholic) and mechanisms that encourage a competitive education market (such as My School).

Moreover, there is an increasing notion that private funds, expertise and influence are a welcome influence within public education. The contested Gonski Review, for instance, recommended government support for schools to develop private investment pathways, such as philanthropy (Gonski et al. 2011, xxviii). Partnerships of this sort are already in place, such as the ‘historic partnership’ between the Victorian government and the Colman Foundation to establish Doveton College in Doveton Heights (Victorian Department of Education and Training 2009). This raises questions surrounding the sort of association made of ‘public schools’ (see Keddie 2016). As Emma Rowe (2014, 125) points out in her examination of campaign defences of public schools,

By referring to the school as ‘public’ or ‘community’, governmental provisions are implied and expected. There is historical and metonymic slippage contained within this usage; the public school is associated with its ‘free, secular and compulsory’ roots, despite the increasing privatisation and decentralisation of the public school and further,
the imagined-school symbolically stands for and is associated with a particular value and political system. In this way, the ‘public’ school essentially embodies far more than it technically delineates.

Developments of this sort are inextricably linked to the broader emergence of neoliberal politics since the late 1970s. Neoliberalism—as a proliferating and increasingly taken-for-granted political settlement—is built upon the diverse ideas and practices that presume the ascendency of privatisation, marketisation, corporatisation and competition. As Raewyn Connell puts it, ‘Neoliberalism seeks to make existing markets wider, and to create new markets where they did not exist before. Needs formerly met by public agencies on a principle of citizen rights, or through personal relationships in communities and families, are now to be met by companies selling services in a market’ (Connell 2013, 100).

I want to outline two important cautions here: first, neoliberalism represents diverse practices and ideas; it is less a monolithic ‘thing’ and more a broad umbrella term that captures a general trend away from the relatively short-lived policy settlements of the post–World War II welfare state (see Gerrard 2015, Du Gay and Morgan 2013). This trend was made possible by successive economic crises in the 1970s, 1980s and 1990s, and by complex processes of adaption and co-option of progressive ideas of empowerment, creativity and flexibility into a renewed capitalist political settlement we now describe as neoliberalism (Fraser 2013, Boltanski and Chiapello 2005). Neoliberalism (and capitalism) is a diverse complex of constantly adapting and changing practices. The global financial crisis of 2007–08, for instance, prompted extensive criticism and renewed debate surrounding the role of the state in the market and social services (see Deeming 2014, Hall, Massey and Rustin 2013). Yet it also provided avenues for further expansion of private interests that are viewed as having a ‘social conscious’, such as in the impressive growth of ‘philanthrocapitalism’ and social enterprise (see e.g. Jenkins 2011). In education, this also includes continued, and increasing, commercialisation, such as in the growth of transnational businesses—‘edu-businesses’—profiting by developing resources in
response to major global and national education policy trends (see e.g. Hogan, Sellar and Lingard 2016, Ball 2012).

Second, and relatedly, there has never been a previous ideal existence of public schooling that can be mobilised as a saviour to our contemporary challenges. As I have stated elsewhere, ‘Previous policy settlements, funding arrangements, curricula, authority practices and knowledge assumptions of state education cannot be retrieved as the pearls of public’ (Gerrard 2015, 12). Indeed, the history of the nation state’s involvement in education is one riddled with inequalities and exclusions, and concessions in relation to the market. Musing on the possibility for a renewed project of reform ‘after neoliberalism’, Stuart Hall, Doreen Massey and Michael Rustin (2013, 21) put it this way:

For us, this is not a question of restoring the tried remedies of the post-war welfare-state settlement. Of course, that would not be an altogether bad place to start. But that compromise, for all its attempt to achieve a different balance of values and power from that dictated by markets, nevertheless accepted that the market sectors should still be left essentially free to generate profits, while a public system managed by elected governments would merely be allowed to redistribute some of the ensuing resources, and provide for some social needs which markets would otherwise neglect.

In other words, state funding does not simply equate to better or more equitable practice: the history of state-funded colonial practices of assimilation and removing Indigenous children through schools or the structural denial of girls’ and working-class children’s capacities, for instance, indicate that the ‘common good’ as articulated by the state is by no means unproblematic (see Smith 1999, Purvis 1989). There is a need to understand the role of the state in education as an inherently political and invested one (see Gerrard 2016). Nevertheless, unlike corporate or market models of governance, it is one that is at the very least formally accountable to the people—the body politic ‘public’.
Certainly what is ‘public’ in public schools is connected to its relationship to the state—the institution and instrument of the parliament, formally elected by and accountable to the people. Public schools are not valuable simply because they are connected to the state, but because of what this connection represents with regards to the state’s responsibilities to the public sphere and to the body politic. I suggest that this consideration, a consideration of the sort of public we are aspiring to produce, is the central question that underpins contemporary reform, but is a question that is often eclipsed amid the ferocious reform agenda. State funding is one instantiation of what is a ‘common’ or ‘public’ good, but it cannot represent this consideration entirely. To consider what is ‘public’ about public education, in other words, is to consider the ‘who’ and the ‘what’ of the public, and the common interests of this ‘who’.

II Private and public

Part of this consideration involves understanding the ways in which the ‘public’ is constructed as an idea and a practice. As I have outlined, what the ‘public’ actually is is inherently unstable: what is considered to be a common concern is continually changing and essentially contested. Indeed, determining what is a ‘common’, and therefore public, concern is often addressed by determining what is not public: what is private. Newman and Clarke suggest that the public is often delineated by its ‘shadow opposites’: ‘it is not the private, not the family, not the market, not the personal, not the individual’ (2009, 11). This definitional distinction between public and private is both messy and unstable. The various waves of the feminist movement, for instance, challenge the boundaries between what is public and private. Here, efforts to make visible seemingly ‘private’ women’s work and domestic relationships as a political and public concern fundamentally alter the definitions of the public (see Fraser 2013).

For some theorists, such as Jurgen Habermas (1984), the difficulty of making judgements about what is a ‘common’ concern has led to extensive theorising surrounding the process by which something is made public: the deliberations that render an issue public. Yet feminist scholars have raised critique of these models. Nancy Fraser (2013, 2014), for instance, calls attention to the ways in which
process-driven conceptualisations of the ‘public’ rests upon potential exclusions; excluding, for instance, those whose interests are deemed as unimportant by the broader public, or those whose interests are dismissed based on a critique of their practices of advocacy and activism. As she writes, ‘it matters who participates and on what terms’ (Fraser 2014, 9).

Moreover, a whole range of policy interventions—past and present—disrupts boundaries between the public and private. Policies surrounding responsible parenthood, civil behaviour, healthy diets and even homework can be seen as attempts of the state (and schools) to reach into what are often understood as private domains. Even leisure time is increasingly viewed as potential time for ‘informal learning’ to increase productivity (e.g. PMSEIC 2009). There is a long history to this disruption. State-led interventions into Indigenous lives and the lives of the working class, for instance, point to the ways in which education has been used to intervene into the everyday lives of those deemed to be ‘failed’ or ‘inferior’ (see e.g. Murray 1999, McGregor 2004).

Additionally, the extension of the market into public services, such as schools, further muddies the distinction between the private and the public. Many neoliberal reforms are positioned as having public goals and as being integral for the public good. As Wilkins notes, ‘neoliberalism is articulated both as a private and public political project’ (2012, 23). If philanthropy, corporations and other private investors are encouraged and expected to play a role in public schools, the question arises as to how we might understand the meaning and practice of the public. If we accept that the public rests in some way on the ‘who’ of the public, how does the involvement of these actors affect the capacity of those without financial investment power to participate in decisions surrounding what is a common good? The problematic is twofold. On the one hand, market models actively exclude those who do not have the means, opportunities or networks. On the other hand, such models promote a particular type of civic behaviour that rests upon individual gain. Markets effectively redefine what is a ‘public’ and ‘common’ good to an individual one. Schooling, in this sense, is couched in terms of individual social mobility, and as a personal market-based investment by parents and young people (see Gilles 2005).
However, it is necessary to note an important distinction here. Markets are by no means the only mechanism by which individual concerns and interests can be engaged. Contemporary policy debates pitch choice within a marketised education field, and investment in children’s human capital, as the main (if only) forms of educational agency (see Campbell, Proctor and Sherington 2009, Posey-Maddox 2016). Yet parental agency can be practised and conceptualised in many ways beyond individual ‘choice’ and value accural. Binaries based on public = common and private = individual can present unhelpful divisions. For instance, what is personally significant for parents is not necessarily individual or familial gain. Various Indigenous and immigrant claims to education, for example, have long focused on the cultivation of culture, history, identity and shared knowledge construction, in ways that challenge mainstream notions of individual competitive achievement (see McCarthy et al. 2005, Gerrard 2014, Mirza and Reay 2000). There are diverse ways of understanding the relationships and distinctions between what is personal and common, and what is private and public.

There is a need therefore to resist the taken-for-granted boundaries created by contemporary reform and to create opportunities for thinking differently about education. This involves moving beyond ‘lazily counter-posing’ an unclarified and fuzzy notion of ‘public good’ to neoliberal imperatives (Singh 2015, 69), to a deep consideration of the multiple forms of publics and claims to what is common. Unpicking and critically approaching the private/public distinction currently mobilised in policy is about opening avenues to interrogating what exactly is ‘public’ about public schooling in the ways in which policies and practices are discussed, debated, funded and cultivated.

**Schools and the public: transnational publics in a settler colonial context**

We are, we are often told, living in a time of intensive globalisation. New global conditions necessitate considering what is public not as something that is bounded by the nation state, but as characterised by transnational mobility of people, ideas, policies, capital, solidarities and identities (see Fraser 2014). Ball (2012), for instance, suggests the need to understand the growing predominance of global policy...
networks and transnational policy imperatives in education. Undoubtedly there are a mass of global and transnational players in education, from the United Nations, European Union and World Bank to the Bill and Melinda Gates Foundation, McKinsey & Company and major publishing houses such as Pearson (see e.g. Hogan, Sellar and Lingard 2016). Central to the expanding global education field is a concurrent growth of national and international mechanisms of numeric measurement, accountability and transnational comparison (Lingard, Martino and Rezai-Rashti 2013). In the Australian context, for instance, testing results of the Organisation for Economic Cooperation and Development’s (OECD) Program for International Student Assessment (PISA) loom large in any discussion surrounding educational achievement, standards and (in)equity (Savage, Sellar and Gorur 2013).

Nevertheless, the influence of transnational networks extends well beyond the politics and practices of policy. Australian society is defined by migration and diversity. In many ways, this diversity and migratory mobility underpins the constant flux that is at the heart of any meaning of the Australian ‘public’ (both in terms of the ‘who’ of the public and what is considered ‘common’ or ‘shared’). As a consequence, what exactly is the Australian public is constantly shifting and never entirely collectively agreed upon.

Transnationalism and globalisation is not just something that occurs ‘out there’ in policy networks and edu-businesses but is something that is core to Australia, past and present. It is impossible to understand ‘Australia’ without a consideration of migration and its effects. Most obviously, the history of colonial invasion, the declaration of ‘terra nullius’ and denial of the rights of Australia’s traditional owners—and its continued reverberated effects—immediately troubles any neat expression or articulation of the Australian ‘public’. Moreover contemporary global movements of people, indicate the solidarities, connectivities and identities that transcend the boundaries of the nation state. The current refugee crisis highlights the tension in considering the ‘who’ of the Australian public: how, for instance, might detainees in Australia’s detention centres relate to ‘our’ ‘public’ when the nation state refuses to recognise their rights?

This contention (and inherent multiplicity) at the heart of the ‘public’ is both unavoidable and generative for considering the future
possibilities for public schooling in Australia. Schools have long been understood as harbingers of future publics: as sites for the generation of the ideas, culture and experiences of the new generation. They are also public sites in and of themselves, bringing together parents, students and teachers in a particular time and space. Contemporary trends, for instance, may exacerbate existing social and cultural divisions in Australian society through siloed marketised publics created within schools (see Ho 2011). Moreover, recent contestation surrounding young people’s capacity to be open in their sexuality and gender identity suggests the need to examine how the ‘publics’ of public schools are created in and through the politics of the day. The question arises: what sort of publics are we creating within schools, and how this might reflect our wider vision of the public? Integral to this is a critical examination of ‘who’ is presumed to be within this public: who can participate, who is empowered, who is recognised and understood, who is resourced and who is deemed to have knowledge and capacity (see Fraser 2014).

I conclude therefore with deliberately open-ended considerations of what the public actually is when it comes to public schooling. These are not straightforward considerations, which involve recognising the exclusions and inequalities of contemporary society, and to face the thorny question of what might be common or shared. Yet to push aside this consideration means settling for ambiguous notions of the ‘pubic good’ and the ‘common’, which can easily exclude and disregard by presuming a shared vision of the ‘Australian public’ based on dominant and exclusionary histories and identities. Alternatively, it means settling for a practice and vision of the ‘public’ underpinned by increasingly taken-for-granted notions of public-action-as-consumer-choice and public-equity-as-better-PISA-scores. I suggest that acknowledging the transnational character of the public, in the context of a settler colonial state in which the ‘common’ and ‘public’ was and is undeniably contested, provides a productive way to address to inevitable complexity of the ‘public’ in public schools. What emerges is not a ‘public’ as an object to be fought over but public as a critical political conception and practice.

Understood in this way, what is ‘public’ about public schooling can be approached as an urgent and necessary but inevitably contentious deliberation. This involves understanding the state as not a
‘stand-in’ for the public but as one vehicle through which public claims are made. It also involves understanding the multiple ways in which private and public concerns can be expressed and intertwined: neoliberalism cannot capture the full breadth of human expression and inter-relationality, but neither did the social democratic settlement of the welfare state. The challenge, then, for the future of Australian schooling and education is to address the questions of what constitutes a public practice of schools in light of our contemporary relations.

At a time in which the very constitution of global and national social relations is undergoing significant change, there is a need to view the ‘publicness’ of public schooling not as a foregone conclusion, or as a settled debate, but one requiring continual renewal, which critically examines ‘who’ is included in the ‘public’ debate itself. This involves examining the claims and presumptions made in the name of ‘public schools’ and the ways in which particular practices create inclusions and exclusions in the ‘public’ discussions that surround schooling. This gets to the heart of the hopeful meanings of equality and justice often associated with public schooling. In the contemporary context of deep inequities, profound injustices experienced by Indigenous people and heightened global politics of fear surrounding migration and refugees, there is urgent need to renew discussions surrounding the form, function and possibility for public schooling. In response to the proliferating power of performance measurement as the measure of worth of education, the imperative is to explore alternative engagements with the collective value of public schools. The challenge is to acknowledge the troublesome past of public schooling, to seek genuine recognition of the exclusions of the ‘public’ past and present, but to refuse the assumptions that rest behind a marketised and corporatised ‘public’.

Biography
Jessica Gerrard is Senior Lecturer in Education, Equity and Politics at the Melbourne Graduate School of Education. Working across sociology, history and policy studies, her research centres on the relationship of education to social change and has a strong theoretical focus including critical, feminist and post-colonial traditions. She is widely published, including papers in *The Sociological Review*,

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Note
1 See, for example, www.saveourschools.com.au.
The current Australian Curriculum is structured around three dimensions: learning areas, general capabilities and cross-curriculum priorities. The learning areas, and the disciplines upon which they are based, are assumed to be the foundation of learning in schools, to provide students knowledge that is considered important for them to be able to participate in a complex, information-rich and globalising world. The Australian Curriculum, Assessment and Reporting Authority (ACARA 2014) notes, however, that ‘21st-century learning does not fit neatly into a curriculum solely organised by learning areas or subjects that reflect the disciplines’. Students need also to ‘develop a set of knowledge, skills and behaviours and dispositions, or general capabilities that apply across subject-based content’—the second dimension of the Australian curriculum. Equally important is the third dimension: cross-curriculum priorities. These priorities—which include ‘Aboriginal and Torres Strait Islander Histories and Cultures’, ‘Asia and Australia’s Engagement with Asia’ and ‘Sustainability’—have been selected for their contemporary relevance to both individuals and Australian society as a whole. They are expected to enrich the curriculum by encouraging ‘conversations between learning areas and between students,
teachers and the wider community’. With regard to ‘Asia and Australia’s Engagement with Asia’, the curriculum is designed to promote Asia Literacy literacy by providing ‘students with the skills to communicate and engage with the peoples of Asia so they can effectively live, work and learn in the region’ (ACARA 2014).

The idea that all Australian students should develop a deeper understanding of Asian languages and cultures is not new. Since at least the mid-1980s, Australian governments have promoted the importance of learning about Asia and Asia–Australia relations. The Melbourne Declaration on Educational Goals for Young Australians (MCETYA 2008), upon which the three cross-curricular priorities are based, notes that the growing influence of India, China and other Asian nations represents a major change in the world that affects all young Australians and therefore that they need to become ‘Asia literate’. This literacy is considered essential not only for generating an understanding of the diversity of Asian cultures that exists within Australia but is also vital for Australia’s strategic and economic interests abroad. It is thought to be necessary for all Australian students to become active and informed citizens, and to build Australia’s social, intellectual and creative capital.

This line of thinking appears now to have become dominant within the Australian political imaginary. All major political parties in Australia now subscribe to its veracity. Indeed, in light of certain fundamental facts about Australia’s geography, its shifting demographic composition and its economic future, it is hard to deny the importance of a curricular focus on Asia. For to do so would involve rejecting recent attempts to align Australia’s future more closely to the profound economic and political shifts that are taking place in Asia. The question therefore is no longer whether students should learn about Asia and Australia–Asia relations but how. How should the changes that are occurring in Asia and within Australia itself drive changes to the Australian Curriculum across all learning areas?

This chapter has three objectives: (1) to describe some of the ways in which the idea of Asia literacy has been approached in Australian schools; (2) to show how current understandings of Asia Literacy remain trapped within a range of conceptual binaries that do not adequately account for the changing relationship between Asia and Australia; and (3) to provide an alternative account of Asia
literacy that is relational and better captures the ways in which Australian national identity might now be imagined through its complex and changing relationship with the dynamic forces that now characterise ‘post-colonial’ and ‘post-development’ Asia (ACOLA 2015).

The main argument of this chapter is that, as welcome as the focus on Asia Literacy within the Australian Curriculum has been, this focus remains trapped within an instrumental understanding of Asia and Australia–Asia relations. Such an understanding views studies of Asia as a means to Australia’s political and strategic ends. It treats Asia as Australia’s ‘other’ and therefore not a part of Australia’s changing demographic and cultural make-up. It recognises the dynamic changes taking place in Asia, but does not adequately acknowledge how these changes are also reshaping Australia. It invites the inclusion of content relating to Asia into the Australian Curriculum but does not sufficiently encourage an analysis of how this content is to be selected and represented. The curriculum focus on Asia Literacy therefore needs to broaden the conversations about Asia–Australia relations and to develop capabilities that enable students to become historically aware and politically reflexive about the changing nature of these relations.

**Approaches to Asia Literacy**

Well before the development of the Australian Curriculum in 2010, the notion of Asia Literacy had already become familiar in many schools throughout Australia. This familiarity was partly due to the changing demography of Australian classrooms, following the abolition of the White Australia Policy and the arrival of Vietnamese refugees, as well as the emergence of the discourse of multiculturalism in the late 1970s (Rizvi 2015). The growing trade links with Asia and the realisation that key aspects of Australia’s economic future depended on Asia also contributed to a focus on learning about Australia’s regional realities. At the same time, such organisations as the Asian Studies Association of Australia promoted the importance of teaching about Asia in Australian schools. At the governmental level, a number of reports such as the Auchmuty Report (1970), Fitzgerald Report (1988), Garnaut Report (1989) and Rudd Report (1993) highlighted the role that the knowledge of Asian languages
and cultures could play in enhancing Australia’s strategic and commercial interests. In 1990, the Australian Government’s Commission for the Future, together with the Myer Foundation, funded the creation of Asialink, with the specific aim of initiating and strengthening Australia’s engagement with Asia. To do this, Asialink viewed education as central to its mission, establishing an Asia Education Foundation (AEF).

The AEF was inaugurated in 1991 to promote an understanding of Asia, together with an appreciation of Australia’s geopolitical location within Asia (AEF 2016). For more than two decades, it has worked tirelessly with educational systems throughout Australia, as well as with teachers, education leaders and school communities, to promote the idea of Asia Literacy and what it now also calls ‘Asia capability’. For the AEF (2016), ‘Asia capability means that every student will exit schooling in Australia with knowledge and understanding of the histories, geographies, arts and literature of the diverse countries of Asia’. Asia capability, the AEF suggests, is further strengthened if students also learn an Asian language. It has developed an enormous range of innovative programs, curriculum resources and networks to support its belief that every young Australian needs to achieve Asia Literacy and capability. The curriculum resources that can be found on its website (AEF 2016) have been drawn not only from the work of academics but also from teachers, businesses and organisations, including Education Alliance for Asia Literacy, Business Alliance for Asia Literacy and National Asia Literacy Network. Through its collaborative work and with the support of federal and state departments of education, AEF has played a major role in defining the various approaches to Asia Literacy, which the Australian Curriculum has now largely embraced.

Both the AEF and ACARA insist that achieving Asia Literacy requires a broad approach. This suggests whole school reform, so that Asia Literacy is not parked in one corner of the school, with dedicated teachers left to work on their own. Central to their shared approach to reform is a focus on student learning, best achieved by investing in new pedagogies and curriculum design. The role of leadership is central to this endeavour: it requires that leaders ‘with a strong sense of moral purpose for building Asia Literacy effect deep and sustainable change in their school’ (AEF What Works, Series #2
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(2013). AEF’s ‘National Statement on Asia Literacy in Australian Schools 2011–2012’ identifies the broad knowledge, skills and understandings required by all students to achieve Asia Literacy in the context of existing policies and practices in teaching and learning. It suggests that the key elements of this literacy include:

- incorporating studies of Asia within all learning areas and at all year levels
- developing Asia-literate school leaders and teachers
- developing Asia-focused classroom resources
- delivering successful Asian language education
- engaging parents, business leaders, government and the community
- consider study tours and educational exchange.

Of these approaches to Asia Literacy, perhaps the idea of incorporating studies of Asia within all learning areas has been given the greatest prominence. All teachers, no matter what their disciplinary focus, have been encouraged to explore ways in which Asia-related content can be included in learning activities. In some learning areas, this is relatively straightforward. In studies of societies, for example, reference to the history of Asian societies can be readily incorporated into the curriculum, as indeed can the discussion of major social changes taking place throughout Asia. Similarly, literary works produced by Asian writers can be incorporated in English and Literature classrooms. The rivers, mountains and cities of Asia, and issues relating to their changing demography, can also be explored in Geography. In STEM subjects, incorporation of Asian themes might be a little more challenging but is not impossible. For example, in Biology, students can be provided opportunities to examine the diversity of flora and fauna in various Asian countries; in Mathematics, the role of Asian scholars and academies in the historical development of number systems and algebra can be examined; and, in Physics, Asian scholarship in astronomy can be described, as well as the more recent scientific discoveries now emanating from leading Asian universities.

Teachers have an important role to play in developing Asia Literacy. The Australian curriculum demands that teachers working at all levels of education embed an Asian focus in all learning areas,
with ‘varying presence depending on their relevance to the learning areas’, in order to do whatever they can to highlight the importance of ‘Australia’s extensive engagement with Asia in social, cultural, political, and economic spheres’ (ACARA 2014). Since the mid-2000s, a large number of initiatives has supported teachers to develop their capacity through such programs as ‘Becoming Asia Literate: Grants to School’ (BALGS; AEF What Works, Series #5). Between 2009 and 2012, BALGS sponsored 335 projects and 521 schools throughout Australia, helping teachers develop their knowledge and understanding of the Asian region, assisting schools in creating demand for, and sustainability of, programs that combine the learning of Asian languages with studies associated with other curriculum areas. These projects also focused on the development of leading teachers who can drive and support curriculum innovation and can establish effective partnerships within and among schools and communities. They have enabled the development of a whole range of classroom resources that can be found on the AEF website. The AEF has also produced a series of short booklets in its ‘What Works’ series, which provide case studies from teachers, schools and educational systems of how they approached the task of innovation, the challenges they faced and how they sought to overcome them. Many of these are inspirational stories that indicate the growing interest and commitment to Asia Literacy that now exists in many Australian schools.

The teaching of Asian languages is fundamental to Asia Literacy, not least because a systemic understanding of Asian societies is best achieved through an appreciation of the ways in which cultural practices are expressed through language. Studies of Asia stimulate interest in Asian languages and vice versa. Yet a range of complex factors have historically impeded the delivery of sustainable language education programs in Australian schools (Lo Bianco and Aliani 2013). Despite major government investment in the teaching of Asian languages dating back to the Rudd Report (1993), interest in learning Asian languages has not increased to any great extent, beyond those students who already speak an Asian language at home. The number of students taking Mandarin, for example, beyond this group has remained low, and there has been a major decline in student enrolments in Indonesian. A large number of explanations have been suggested for this, but none has been entirely...
convincing (Anderson and Lo Bianco 2009). Creative solutions are clearly needed to turn the numbers around. The use of new Information and Communications Technology (ITC) could help. Until recently, the use of ICT has mainly involved accessing and collecting information relating to Asia from a range of online sources. However, there is little evidence to show that this improves student learning, and a more interactive approach has been shown to be more productive. Schools clearly need to experiment with the use of emerging technology to ensure students are not only more motivated but can also develop higher-order thinking and communication skills.

The AEF’s BRIDGE Schools Partnership Project is based on this realisation. It seeks to facilitate school-to-school partnerships between Australian and Asian schools in order to build teachers’ cultural knowledge and awareness and intercultural understanding while also helping students become more interested in learning or improving Asian language skills. With the use of synchronous online platforms, such as Skype, Zoom and Adobe Connect, BRIDGE enables Australian students to communicate with students in Asia and work together with them on transnationally connected learning tasks. It is designed to build ‘sustainable partnerships involving curriculum and pedagogy redesign and structural transformation within the school communities’ (AEF What Works Series #6). Since the mid-2000s, the BRIDGE project has supported the development of strong relationships between Australian schools and schools in Indonesia, Korea, China and Thailand, and is now working to develop relationships with Indian and Japanese schools. These relationships have been particularly effective in professional learning and teacher development, enabling them to appreciate how transnational exchange can help their students to appreciate the various ways in which the world is becoming interconnected and interdependent, and how many of our contemporary challenges require global solutions. BRIDGE has thus helped to enhance students’ Asia capabilities as ‘global citizens, possessing both the ability and readiness to act and interact positively, respectfully and open-mindedly with others in a globalizing world’ (AEF What Works Series #6).

The schools participating in the BRIDGE project have realised, however, that online communication is helpful but not sufficient.
This realisation has led many schools to forge study abroad programs that include visits to their BRIDGE partner schools. The key assumption underlying the study abroad programs is that they can not only catalyse formal learning about Asia but also contribute to personal transformations. They can deepen intercultural understanding and awareness of cultural difference and exchange (AEF What Works Series #7). For teachers, their experiences abroad can assist in developing the confidence and authority to teach about Asia and lead to enhancing their school’s Asia engagement strategies, including the development of transnational professional learning networks. For students, cultural immersion in another country can have lifelong effects, especially if the study abroad program includes homestay and other forms of direct contact with local populations, beyond the normal tourist-like visits. Although such study abroad programs are difficult to organise and fund, the role that they play in promoting Asia Literacy among teachers and students alike is immeasurable—which is often not evident in the short term but profound in the longer term.

**Representations of Asia**

Many of these initiatives have now become commonplace in Australian schools, as a number of recent reviews into attempts to introduce Asia Literacy in Australian schools have shown. In a recent report, for example, Christine Halse and her colleagues (2014) examined the ways in which Australian teachers and principals have understood and enacted the idea of Asia Literacy in the Australian curriculum, relative to the Australian Professional Standards for Teachers and the Australian Professional Standard for Principals. Halse and her colleagues (2014) have also sought to identify the key ‘enablers’ of and ‘barriers’ to reform in this area, and have identified additional initiatives that need to be taken. Most helpfully, they have argued that the connections that the many schools already have with Asian countries—both professional and personal—represent pedagogic resources that can be better utilised. They have identified the availability of an Asian language as a key factor in determining the extent to which schools take learning about Asia Literacy seriously. They have also underlined the importance of the role of the principal, as well as the opportunities available to teachers for their
professional learning in this area. The report also demonstrates the enormous progress that has been made by Australian schools in expanding the content of their curriculum by including references to Asia, its geography and history, as well as recent developments in Asia that are transforming the global economic and political order.

To develop Asia Literacy, the inclusion of such Asia-related content into the Australian curriculum is clearly necessary, but is it sufficient? In what follows I want to argue that, while acquiring knowledge about Asia is helpful, it is perhaps more important for students to consider how such knowledge is constructed and represented; that is, the ways in which content is selected and pedagogically organised to develop particular attitudes towards Asian people, cultures and societies. Nothing much can be achieved, I argue, if students are not informed of the complex and ambivalent history of Australia–Asia relations. Such knowledge and reflection is crucial in order for young people to appreciate how this history has shaped our current thinking and representations of the diverse and dynamic cultures of Asia.

Australian representations of Asia have never been static: they have changed along with historical shifts in the nature of Australia’s existential anxiety about its location within the Asian region. From the very beginning of British colonisation, Australia has struggled to establish a coherent and consistent cultural and political narrative with respect to Asia. The idea that Australia might have an ‘Asian future’ has always had its supporters, who have insisted that a closer relationship with Asia is not only inevitable but also should be welcomed for the opportunities it provides. Equally, however, in certain sections of the Australian community, Asia has always aroused deep fears in Australian minds about Australia being overrun by the ‘yellow hordes’ (Walker 2011). In the late nineteenth century, this anti-Asian sentiment was particularly strong. So much so that one of the first legislative acts of the newly created Commonwealth of Australia in 1901 was the infamous Immigration Restriction Act, often referred to as the White Australia Policy (Tavan 2005).

The founders of the Australian Federation viewed Western culture as inherently superior and Asians as dangerous economic competitors. Immigration to Australia was therefore largely from European countries, particularly Great Britain. The White Australia
Policy had profound implications for Australia’s cultural landscape. Not only did it stop most immigration from Asia but also it institutionalised xenophobic attitudes towards Asia. It legitimised a certain triumphalist discourse about the inherent superiority of British cultural traditions. In schools, this involved representations of Asians as essentially inferior, with Asian histories and cultural traditions necessarily filtered through the conceptual prism of British colonialism. There was little provision for the teaching of Asian languages, while Latin and Greek were assumed to be necessary prerequisites for an understanding of Australia’s civilisational origins in the West. In this sense, Australia became a proxy for the West within its region, even as the nation’s geography provided the political backdrop against which such policies as White Australia were forged.

Even after the White Australia Policy was finally abandoned in the 1970s, the curriculum continued to present an abstract idea of Asia, tied largely to a set of assumptions that viewed Asian countries as either poor but exotic, on the one hand, or hostile to Australia’s strategic interests on the other. Accordingly, Asian histories were taught largely in ‘civilisational’ terms, either pointing to their ‘romantic’ pasts and pre-modern achievements, or in terms of the growing significance of Asia in relation to the broader geopolitical developments surrounding Cold War politics. From one perspective, scholars described the great civilisations of Asia in a generally admiring language—portraying them as exotic and romantic—but suggesting that they had now fallen into decline. From another perspective, the teaching of Asian Studies was tied to the key objectives of what is often referred to as ‘Area Studies’ (Morris-Suzuki 2000), developed in the United States within the context of the Cold War, and imported into Australia in line with its support for US foreign policies, especially in Korea and Vietnam.

It was assumed that the cultural knowledge that Area Studies produced was of both intellectual and strategic value. Information about the languages, histories and traditions of geographically distant allies and enemies was considered vital to the conduct of war and to power struggles of the Cold War, as Tessa Morris-Suzuki (2000) has noted. Studies of Asia were therefore linked to Australia’s strategic interests, in developing and supplying knowledge that was of major benefit to Australia and its allies; and in interpreting the role...
Asian societies might play in forging a new world order. Studies of Asia were often also tied to the broader moral and political objectives of Australian programs of overseas aid, providing Australians a language in terms of which they could justify them.

In 1979, the publication of Edward Said’s highly controversial book, *Orientalism*, suggested a related set of motivations for Australia’s interest in learning about Asian societies. Said argued that in order to understand how the West had constructed its knowledge of other cultures, we must attend to the questions of representation—of how the representations of the East were forged for the exercise of colonial power (Said 1979). The Orientalist discourse corresponded, Said argued, to a system of Western ideas that structured power designed to dominate and appropriate the Orient as its ‘other’. In this sense, Orientalism was a colonial project that totalised its object, representing it as the West’s passive adjunct, subject to its universalising grand narrative. The extent to which Australian studies of Asia were then and perhaps continue to be consistent with this line of thinking has of course been widely debated. However, what is indubitably the case is that until at least the late 1970s, broader Australian representations of Asia were largely located within the Orientalist traditions of knowledge about Asia.

In the late 1970s, however, the conditions of Asia–Australia relations changed markedly. As the White Australia Policy was finally buried, and the Vietnam War became a distant memory, there was a growing recognition in Australia of its complicity with the Orientalist project. As more and more Australians travelled to Asia, they could see for themselves how the decolonised nations of Asia viewed themselves differently and how, in cultural terms, Australia faced a new set of ‘regional realities’, which demanded both a new understanding of Asia–Australia relations and a new sense of Australian national identity, as Donald Horne had indeed speculated in his book, *The Lucky Country* (1964). This demand became ever more urgent when, in the 1970s, the Fraser government permitted a substantial number of Vietnamese refugees to become Australians, changing the nation’s demography in ways that would have been unimaginable a decade earlier. All of this suggested that a new narrative of learning and teaching about Asia was overdue.
This view was further reinforced in the mid-1980s with the recognition of the profound economic and political shifts that were beginning to take place within the broader Asian region. The search for a new narrative of learning about Asia coincided with the nation’s decision to open its economy to the forces of the global economy. In the mid-1980s, the Hawke Labor government initiated a wide-ranging set of reforms to the ways in which the Australian economy was organised, partly in order to benefit from the new economic opportunities that were emerging in Asia. In this changing context, a focus on learning about Asia acquired greater significance. If Australia’s economic, political and strategic interests were increasingly located within the region, then Australians needed to develop a better understanding of Asian cultures and languages. The idea of ‘Asia Literacy’ arguably emerged within the context of this instrumentalist logic, which viewed learning about Asia as essential for realising Australia’s strategic goals.

A succession of reports in the late 1980s and early 1990s—including Fitzgerald (1988), Garnaut (1989) and Rudd (1993)—used the idea of Asia Literacy to highlight how knowledge of Asia was not only necessary to help our performance at the margins but also central to our ability to trade within the region. In this sense, the idea of Asia Literacy involved a particular orientation to learning about and relating to Asia, highlighting the need both to acquire knowledge and linguistic competence and to develop a normative sensibility towards Asia. In bringing this approach to learning to serve the demands of Australia’s economic and strategic objectives, the idea of Asia Literacy has now become embedded within an instrumentalist logic, as part of Australia’s efforts to internationalise its economy, by developing a system of education that enhances the nation’s economic competitiveness.

The current interest in learning about Asia in Australia has therefore clearly been influenced by a whole range of interests (Walker and Sobocinska 2012). However, it is clear nonetheless that the dominant policy narrative of Asia Literacy continues to revolve around a discursive construction tied to the emerging opportunities in Asia, defined in terms of an instrumentalism that interprets learning about Asia largely in terms of its economic returns. In recent
years, this construction has been further reinforced by the widely used idea of the ‘Asian Century’, which first emerged in the late 1980s to describe the fast-growing economies of the region, as well as a growing postcolonial confidence in the region. Indeed, fundamental to the White Paper, *Australia in the Asian Century* (Australian Government 2012), is the conviction that Australia’s integration into Asia is essential for its national prosperity, as well as for its social and economic vibrancy and its security.

The White Paper (Australian Government 2012) insists that Asia Literacy is much more than fluency in an Asian language, and should involve initiatives that “‘encourage effective engagement with Asia, deepen interpersonal relationships, augment Australia’s security strategy and capitalise on the economic potential of the Asian Century’” (Australian Government 2012, 23). Indeed, it is largely written in terms of a business orientation, considered necessary for expanding trade links and taking advantage of the commercial opportunities that the growing middle class in Asia represents. Lest it be thought that I am against business and trade within the region, I want to say right away that I do not deny that Australia’s economic future lies in Asia. Nor do I belittle Australia’s security interests. Nevertheless, I want to point to the risks associated with an instrumentalist logic that appears implicit in the dominant economic and security narratives of Asia Literacy.

This is so because this logic often overlooks equally plausible and compelling narratives of Asia Literacy, grounded in, for example, a view that pays more attention to marginalised communities within Asia, and to growing social inequalities throughout Asia that are resulting from the globalisation of economy and trade. Repeatedly, the White Paper suggests that the growing middle class in Asia has created enormous commercial opportunities for Australia and that, for Australia to take advantage of these opportunities, it needs to develop appropriate policy settings, with respect not only to trade and taxation but also education, skills formation and migration.

The main problem with this instrumentalism is that it is based on a dualism between Australians and their Asian others. It separates ‘us’ from ‘them’, encouraging Asia to be viewed instrumentally—as means to our ends. It invokes conceptions of the Asian ‘others’ whose cultures must be understood, whose languages must be learnt, and
with whom closer relationships must be developed—in order for us to realise our economic and strategic ends. In social terms, such a dualism is easily exploited by those uncomfortable with recent demographic and policy shifts in Australia, giving rise to a particular politics of difference, which of course has had a long history. In its popular form, this dualism is historically continuous with a binary between the East and the West. Although its current expressions are now a great deal more complex and subtle, it is essentially the same binary as the constructions described by Said. It is not hard to find instances of this binary throughout the White Paper, where Asian societies are implicitly represented as our others, portrayed as inextricably tied to our economic and political interests—whose differences from us must be understood, managed and exploited.

**Beyond instrumentalism**

In recent decades, attempts by Australian schools to expand their curriculum to encourage learning about the diverse cultural traditions and languages of Asia have clearly transformed the ways in which many Australians now think about Asia and Australia–Asia relations. However, as I have argued above, these attempts have remained trapped with an instrumentalist logic, which is predicated on an East/West binary. Asia continues to be seen as the East—different and exotic—whereas Australia is assumed to be the West. Asia and Asians are still regarded as Australia’s other. In my view, this assumption is increasingly becoming hard to sustain, because at least four new factors have potentially transformed the nature and scope of Asia–Australia relations. The first of these factors relates to Australia’s changing demography. As the Diversity Council of Australia has noted, almost 17 per cent of the Australian population is now of various Asian backgrounds, many with dual or multiple citizenships. They relate to both Australia and their countries of origin in ways that are significantly different from those of Asian backgrounds in the late 1980s. When Australia is defined as apart from Asia, then such Asian Australians are positioned in highly ambiguous ways, which are not very helpful to good community relations. Second, new media and communication technology has enabled many Australians who are born in Asia to enjoy ongoing connections with their home countries. This has recast the
distinction between ‘here’ and ‘there’, as people’s sense of identity and belonging has undergone major shifts. Third, the level of mobility for work, education, business and leisure among Australians has never been greater. Almost 200 000 Australians are now employed in Asia, and many more visit Asian countries on a regular basis. This has transformed the nature of Asia–Australia relations, both spatially and culturally. Fourth, and finally, the economic rise of Asia has engendered a new sense of postcolonial confidence in many Asian countries that has redefined the ways in which many Asians view Australia and its attempts to develop closer relationships with them. The nature of this confidence is analysed by Chen (2010) in his book, *Asia as Method*, and is evident in popular representations of Australia in the Asian media.

These factors, and, more broadly, the contemporary realities of global mobility, exchange and networks, have potentially ‘transnationalized the spaces’ (Vertovec 2009) in which an increasing proportion of us now live and work. Global flows of ideas, capital and people have created conditions in which cultural fluidity and hybridity have become ubiquitous. If the new Asia is culturally dynamic and changing rapidly, then so must we develop a more dynamic understanding of Asia–Australia relations (Rizvi 2015). Given the growing conditions of interconnectivity between Asia and Australia, the instrumentalism underpinning dominant narratives of Asia Literacy is now hard to justify, because it rests on a dated conception of how global economic, political and cultural relations work, especially through the various requirements of transnational cooperation and collaboration.

What is needed therefore is a new narrative of Asia Literacy, which views Australian engagement with Asia in terms of the shifting historical and political conditions: historical because cultural interconnections are always a product of various historically contingent factors; and political because naming evolving differences involves negotiating the constantly shifting relations of power. In a politically confident Asia, ‘new’ or ‘emergent’ forms of cultural practices are simultaneously a product of cherished local traditions, colonial relations of power and transnational cultural exchange (Chen 2010). If this is so, then the study of Asia should consist in an open-ended imagination and dialogue, both local and trans-border.
This suggests the need to locate Asia Literacy within a broader commitment to intercultural understanding, both within Australia and throughout the region, expressive of both traditions and new cultural possibilities, forged and enacted in spaces that are sometimes tied to the nation-states but are increasingly embedded in wider transnational spaces. In an era of globalisation, the production and circulation of cultural practices is now to be found in a huge variety of spaces, both within and across national borders. Our cultural condition is increasingly a complex and ‘hybrid’ one—and cannot be neatly packaged as a collection of ethnicities, for the purposes of either economic exchange or hegemonic control.

Asia Literacy should therefore not simply be about learning cultures and languages but also be about teaching the skills of understanding the processes of social change, and interpreting and negotiating the possibilities of intercultural relations. Such relations should now best be explored as a complex and inherently unstable product of a range of historical narratives and the contemporary experiences of the cultural economies of globalisation. Educators have always been at the forefront of reimagining our futures, developing new narratives of social and cultural possibilities. In my view, we again have a responsibility for creating spaces of learning in which a critical examination of the contours of global interconnectivity and interdependence becomes possible.

If our future is tied to Asia, then we need to develop in our students forms of self-reflexivity about how their identities are historically constituted but are also socially dynamic, how their practices of the representations of the ‘other’ reflect particular relations of power, and how this understanding is necessary to develop cultural relations that transcend instrumentalism and are informed instead by a moral discourse that views Asian cultures in our collective and interrelated terms, and not simply as a means to our economic and strategic ends.

Biography
Fazal Rizvi is a Professor of Global Studies in Education at the University of Melbourne Australia, as well as an Emeritus Professor at the University of Illinois at Urbana-Champaign in the United States. He has written extensively on issues of identity and
culture in transnational contexts, globalization and education policy and Australia-Asia relations. A collection of his essays is published in: Encountering Education in the Global: Selected Writings of Fazal Rizvi (Routledge 2014). Professor Rizvi is a Fellow of the Australian Academy of the Social Sciences and a past Editor of the journal, Discourse: Studies in Cultural Politics of Education, and past President of the Australian Association of Research in Education.
Does the wealth of information now on tap via the Internet mean that schools are becoming redundant, or are schools more important than ever as the source of life chances for individual students? Should schools be offering a highly individualised curriculum, or are they there to teach common social values and inoculate students against drugs and terrorism? Is it a problem that senior students are not choosing hard subjects like physics, or is the problem that schools are not concerned enough with employable skills? Are ‘the basics’/the arts/sport/STEM (science, technology, mathematics)/‘twenty-first-century skills’ being given too much/too little attention? Should we have a national curriculum and a national curriculum authority, or leave curriculum to states, parents and individual schools? Does the curriculum even matter?

Since the mid-2000s, questions like these have received a new burst of attention around the world (see Yates 2012, Reid 2009, Hattie 2012). Many countries have undertaken major reviews and reforms (Yates and Grumet 2011), and Australia has established a new national body, the Australian Curriculum Assessment and Reporting Authority (ACARA), to produce an Australian curriculum and a
A constant stream of input and debate from state ministers and premiers, employers, Catholic and independent sectors, professional associations, academic experts and the general public has accompanied these reforms. At issue is both what the content of curriculum today should be and what form the oversight of that curriculum should take; that is what kinds of policies and governance are appropriate.

In this chapter I am going to leave aside the familiar debates about items of content in the curriculum—which version of history should be taught, or the role of popular culture and new media in the English curriculum and the like. Rather I want to look at some fundamentals: the overall purposes of curriculum and the ways the framework for curriculum has been developed in Australia. I argue that there are good grounds for having some common framework such as the Australian Curriculum, and that some good work has been done on this subject, although there are also tendencies in the management of curriculum nationally towards overbureaucratization that need to be kept in check. Debates about specific content are normal and appropriate in a democracy, but the next phase of the work in Australia should be directed to schools and teachers, and how to achieve for all students the kinds of purposes of schooling that the Australian Curriculum activity rightly recognised.

This requires us to face up to issues of overload and overspecification of curriculum, and seek better ways to recognise and assess the need for knowledge, skills and understanding beyond the numerical measurement of literacy and numeracy. It also requires that we address issues of equity in the access of different school students to curriculum entitlement, and the role played by socioeconomic resources, school sector, geography and culture in determining this access.

Four elements of the purposes and influence of schools are relevant to thinking about curriculum:
- Schools are places for developing knowledge and capabilities in students.
- Schools have a role in forming people (the citizens of the future).
• Schools serve individual purposes—they mediate opportunities and produce winners and losers.
• Schools serve social or national purposes.

Making decisions about curriculum is never simply about ‘what works’ or ‘effective learning’; it always entails values and commitments about what students should learn, reflecting choices and purposes about the kinds of outcomes we want to produce for young people. How do we manage that in a democracy? The debates and reforms of the past decade have drawn from two opposite positions in relation to this, both of which are problematic in their extreme forms. One is to leave the content of schooling, the curriculum, wholly to ‘choice’, for individual families to decide. The other is to make curriculum the domain of politicians. There has been too much of both, but Australia has now achieved a curriculum framework that has possibilities of some better balance provided the limitations of these two directions are better acknowledged.

Curriculum is a difficult public policy issue both in principle and in the practical mechanics and details. In principle, curriculum gives deliberate direction and purpose to the development of young people via their education. It brings students into contact with the public world and its productions such as mathematics, music, science or literature; developing new forms of knowledge or capability or cognitive capacity and forming the person. ‘Education is, after all, not just a “machine” for the transmission of knowledge and skills [...] but is involved in wider ambitions, such as the introduction of children into existing traditions and practices [...] and questions concerning the formation of the person.’ (Biesta 2014, 31)

In Australia two conflicting perspectives on curriculum are in play, especially at the political level. One, embraced in recent times by Labor as well as Liberal governments, although with some variation between states, emphasises individuals and the rights of families to choose the educational development of their child in accordance with their own values and the child’s own capacities, and to support diversity of schools (and in Australia, school systems) to allow that to happen. The other is concerned with regulating and providing mandated frameworks for this activity, both of content and of standards. This mandated framework approach is concerned about the
impact for the whole community and for the nation of the output of schools as a whole: what kinds of skills, citizenship values (or alienation), and longer-term foundations for economic and social benefit result from schooling.

The balance between the two principles has shifted over time, and for different strata of the population, but the decision in the past decade to have a new national curriculum (and to include all schools, not just ‘state’ schools, in the regulation and activities relating to assessment, reporting and the My School website) and the debates over the Gonski funding reforms, have given new life to these tensions. The tensions are real, and not well addressed by the recent political debates over which content should be in the Australian curriculum, or what level of funding is ‘fair’.

Schooling is different from health, the big public sector to which it is often compared, and where there are similar debates about private and public entitlements. The treatment given to someone with private health care does not directly affect the treatment outcomes of a public patient (although indirectly it may affect finances available to the latter). Schooling is different because it is interactive: each child’s learning is impacted by who their classmates are; and what your child learns, and the results they get, also affects the future of my child. As many parents know, the race for good results in the final year of school via an ATAR score is a zero-sum contest, despite the fact that the extent to which this one score determines people’s future lives is exaggerated (Yates 2013, Duggan 2015). Curriculum content itself also contributes some interactive effects in the form of the values and understandings young people develop about others, and whether they learn to see others as equals or inferiors. We have seen this in the past in concerns about sexism and racism—how the content and priorities of curriculum and assessment treat girls versus boys’ or Indigenous students, or children with disabilities; and more recently in relation to homosexual students and the health curriculum.

Curriculum is also more difficult today because of the explosion of knowledge and the challenges in defining educational foundations of a future life given new technology, globalisation and rapid changes in the nature of work. How best to develop curriculum in the light of such changes is one of the biggest drivers of discussion in the curriculum research literature and curriculum reform. Different
approaches have included reviewing, updating and emphasising existing school subjects, especially science and technology, or attempting to introduce new ‘core standards’ (as in the USA). Other systems have introduced competency frameworks as an overlay or replacement for traditional subjects. Others still are experimenting with so-called twenty-first-century skills: working in groups, problem-solving and so on.

Since the mid-2000s I have conducted two research projects that bear on these issues. One investigated the changing forms of curriculum policy and curriculum thinking in Australian states from the 1970s to 2005, before the establishment of a new national curriculum authority (Yates, Collins and O’Connor 2011). This showed how curriculum authorities in different states have developed different cultures and taken different starting points for curriculum. For example, some states prioritised ideas about standards and uniformity whereas others prioritised equity and diversity of students and preventing students from dropping out of education. Some have started with existing school subjects and looked at what needs to be added or changed, whereas others have tried to start as if from a blank slate and think quite differently about capabilities or ‘essential learnings’.

The second project studied changes in Australia during the period when the Australian Curriculum was developed. It focused on history and physics, two of the more longstanding ‘general’ subjects. This project asked what value these traditional subjects or disciplines have during a time when ‘future’ skills and knowledge are increasingly emphasised, and focused on the influence of new curriculum agendas and reforms. (Yates et al., 2016).

So curriculum is about both what matters for Australian students today—what range of skills and knowledge they should have access to—and about how this should be regulated. In the rest of this chapter, I examine how these issues have played out over the last decade in practice, and what challenges we therefore face in the decade ahead.

**What should be emphasised? Knowledge versus capabilities versus skills versus standards**

Knowledge, skills and standards are, of course, not necessarily at odds or even entirely distinct from each other. But there is often
more tension between different ways of prioritising and integrating them than we realise. The broader term ‘capabilities’ potentially includes elements of all three, as well as attention to the development of the student.

One big development of the past decade is the increasing prominence of standardised testing through the National Assessment Program—Literacy and Numeracy (NAPLAN) and its use in measuring the quality of Australian schooling through the My School website and in the OECD’s PISA program. Although the testing is opposed by some parent and teacher groups, it seems to be popular with both main political parties, and is a prominent element of how the Australian Curriculum, Assessment and Reporting Authority (ACARA) reports on how different schools and the system are working.

It is reasonable for both government and parents to be concerned with standards, and the quality of education students are getting in poorer schools compared with richer ones, or in Australia compared with the rest of the world. So what might be at issue here in relation to a quality curriculum?

NAPLAN particularly affects primary schools, and the key debate is about how well these tests measure what they claim to measure and about the potential influence on students and curriculum in some schools (disadvantaged schools in particular) where preparation for these tests begins to dominate the school’s activities, crowding out other subjects.

PISA results always prompt a wave of attention in the press, and government statements about the quality of Australian schooling compared with other countries. It might seem obvious that regular reporting from a ‘disinterested’ body such as the OECD provides an important benchmark for schooling in Australia (and it does provide one form of useful check), but a letter signed by a large number of education signatories from different countries expressed concern that, among other things,

- the prominence and three-year assessment cycle of PISA generates too much attention by politicians to short-term fixes to climb the rankings, rather than longer-term improvements in the underpinnings of teaching, and
- unlike UNESCO and UNICEF, OECD is not an organisation set up with a brief to improve education, and ‘is naturally biased in
favour of the economic role of public schools', but that is not the only role of public education.

*Open Letter to Dr Andreas Schleicher, Director of the OECD PISA program* (Meyer and Zahedi 2014); also see Biesta 2013, Lingard 2011.

Both NAPLAN and PISA reinforce the problem that, although individual parents and governments would like some check that the education children receive is of a good standard, there is a concern that too much faith is being placed in a small number of measures. In practice this narrows the educational role of school: only what is measured counts. In my most recent project quite a number of teachers commented that new teachers and students themselves had begun to see education only in terms of ‘the number’ at the end. They were rightly concerned that education might be reduced to seeking only short-term results, demonstrating ‘effectiveness’ on every little thing, rather than playing the essential role of inspiring, opening up and engaging students.

A drive towards greater testing and comparison has been one response to massive changes in the twenty-first-century world of work, technology and global movement of people. A second response has been to try to ‘backward-map’ the curriculum from thinking about the skills and capabilities that the people will need in the twenty-first century. This approach is evident in the Melbourne Declaration on Educational Goals for Young Australians, signed by all state ministers of education (MCETYA 2008) and cited by ACARA in its approach to developing the Australian Curriculum. Such vision statements produce a kind of ‘feel-good’ rhetoric: an aspiration to ‘equity and excellence’, which ‘enables all students to explore and build on their gifts and talents’ with ‘personalised learning that aims to fulfil the diverse capabilities of each young Australian’. This rhetoric is virtually meaningless in a context where schools have grossly different funding available to them, where students have to compete in and be ranked on the same tests, and where no conceivable social institution could develop every kind of possible capability, since their foundations conflict with each other.

In so far as such declarations do represent an attempt to talk about real goals for curriculum today (‘successful learners’, ‘confident
and creative individuals’, ‘active and informed citizens’) there is a large gap between identifying the goals and making clear how they translate into a curriculum for schools. For example, in the 1990s Tasmania carried out a community consultation on the values and purposes that should drive its schools, and translated the results into a framework of ‘essential learnings’, which it defined as ‘communicating’, ‘personal futures’, ‘social responsibility’ and ‘world futures’. However, when schools and teachers tried to translate this thinking into what they would actually teach students at different stages, whether school subjects were to stay or go, and what they would assess, it became clear that the substance of what teachers and students would actually do is left unanswered by such wish lists, and this curriculum framework was soon abandoned (see Andersen and Oerlemans 2011, Connor 2011).

Curriculum design efforts that try to begin with a focus on future skills and capabilities run the risk of producing a fairly shallow curriculum that repeats the same aspirations (problem-solving, communication) over and over again, but fails to connect deeply with underpinning knowledge and learning.

A different approach to building a curriculum framework is seen in the Australian Curriculum developed through ACARA (see ACARA 2016). This framework has three components: school subjects or ‘learning areas’ (bodies of knowledge and how students should be developing in them over time); ‘general capabilities’ (the skills, for example in ICT, that they should end up with as a result of their study) and ‘cross-curriculum priorities’ (some particular directions for the selection of content in the learning areas, which are explicitly about how Australian students should be formed as future citizens). ACARA also has responsibility for overseeing testing and assessment and public reporting of NAPLAN results and is therefore also driven by concern for standards.

In the Australian Curriculum framework, ‘Learning areas’ represent different kinds of disciplinary knowledge (science, history, the arts and the like). ‘General capabilities’ (Literacy; Numeracy; Information and Communication Technology Capability; Critical and Creative Thinking; Personal and Social Capability; Ethical Understanding; and Intercultural Understanding) are described as ‘an integrated and interconnected set of knowledge, skills,
behaviours and dispositions that apply across subject-based content and equip students to be lifelong learners and be able to operate with confidence in a complex, information-rich, globalised world.

‘Cross-curriculum priorities’ (Aboriginal and Torres Strait Islander Histories and Cultures; Asia and Australia’s Engagement with Asia; and Sustainability), are not subjects in themselves but are there to represent emphases for teaching within subjects that are seen as important for Australian students.

ACARA’s structure and responsibilities reflect an attempt to incorporate as much as possible of the different ways of thinking about curriculum discussed above: standards, capabilities, purposes of schools in the twenty-first century—along with school subjects, or ‘learning areas’ representing different bodies and forms of knowledge. Since the mid-2000s renewed attention has been given in the wider curriculum literature to the issue of ‘knowledge’, or ‘bringing knowledge back in’ (Young 2008). While knowledge might seem to be the bread and butter of curriculum this recent literature argues that knowledge has been swamped by other priorities and ad hoc approaches, including the preoccupation with measuring the results of standardised tests.

The ‘bringing knowledge back in’ discussion in the curriculum literature is also a response to the hard-headed utilitarian perspective of some of today’s debates about education, especially in Australia. If you simply think about what should be in curriculum by trying to put your finger on which bit of knowledge or which skill you draw on in your life now, it can be hard to see the effects of developing knowledge and capacities over time that have allowed you to work in a more powerful or flexible way (as compared with grasping for bits and pieces of content that you still use, or talking about ‘employability skills’ like turning up on time and being obedient).

School subjects like physics and history are not just designed to transmit particular bits and pieces of content knowledge that might be useful today or scattered, one-off skills. They build ‘problem-portable’ knowledge (Abbott 2002) or ‘powerful knowledge’ (Young 2014) or ‘deep knowledge’ (Bernstein 1975). Bodies of knowledge that have been developed over time, such as science and history, give students something important that they do not get simply by being exposed to the everyday world (Young 2008, Yates et al., 2016). They
introduce students to some important knowledge and understanding of the world they enter, and to ways of knowing and creating, developed and refined over time by cultures, scientists, historians, musicians and others. These are different from each other (compare a scientific experiment to the way a historian must assess and integrate a range of sources and evidence), and they give students abstract and conceptual foundations that build their intellectual capacity.

The ACARA framework structure was a target of some criticism in a review commissioned by the Abbott government (Donnelly and Wiltshire 2014). Criticism focused not just on the particulars that dominated the media debate but also on an over-heavy grid of micro-management or detail that teachers were expected to implement across the board. There is something in that criticism. A too-detailed specification (if it is enforced) means in practice that teachers focus on ticking off boxes to show they have covered everything or, alternatively, focus primarily on what is going to be assessed (such as NAPLAN and HSC).

But ACARA is not alone in coming up with a grid-like matrix of knowledge, skills and capabilities as its framework (for example the Victorian VELS framework did the same). This matrix tends to happen because of a concern that if curriculum is specified in terms of ‘knowledge’, it sounds like memorising facts or the curriculum of the past, but if it talks only skills and capabilities it does not contain enough substance about what students will actually be doing and developing during their twelve years in school. Skills, capabilities and priorities are relevant as directions for thinking about curriculum for young people because they address purposes and the world we are in now. But if they are all treated equally as individual learning objects, to be tightly accounted for, like ‘key performance indicators’, they can suck the life out of curriculum.

From these different approaches and experiences, I would point to three major risks for curriculum discussion in the decade ahead, and two further conclusions that clarify which challenges we should prioritise.

First, we should beware of focusing too much on test scores and the measurable comparisons they enable. Literacy and numeracy are important, but they are only a small part of what schools should do. (I am thinking particularly here of over-reactions by both politicians...
and press to small and possibly insignificant falls in Australia’s position in various PISA reports.)

Second, we must equally beware of substituting utopian rhetoric about what will be achieved by the end of the next political term for informed and genuine discussion about what curriculum should do and what schools can and cannot do. Schools cannot transform Australia’s economy in the next three years or make all jobs equally rewarding. By definition, half the scores in HSC will be ‘below average’. So there needs to be a more sensible discussion of what all students can and should gain from the curriculum.

Third, we need to beware of over-utilitarianism in curriculum thinking. Of course literacy and numeracy are important, but the power of education to open up new ways of seeing, to inspire and to initiate longer-term development in students, is as important as the short-term outcomes discourse.

In this context, the tendency to overload the curriculum, over-specify and and micro-manage accountabilities can actually work against curriculum being enacted by teachers in ways that create educational value for their students.

Nonetheless, a case for some common curriculum framework for Australian students is also there. Curriculum introduces students to the wider social world and gives them access to future learning opportunities. Since education is agreed to be a basic right of young people and legally compulsory in Australia, it is reasonable to have an Australian curriculum framework that sets some shape on what should be taught about this world and defines the range of knowledge and learning to which all young people should have access. The process of doing so needs to include professional voices and expertise, and not be simply determined by what a new minister happened to like about their own education experience.

**Curriculum policy: which authorities? Who should have a voice? How much regulation?**

A curriculum whose content looks good on paper but is impossible to teach or which will alienate large groups of students is not much good in practice. Neither is it much good for even good teachers simply to go on practising whatever they have done in the past with no attention to whether the content of their subjects (or the world)
has changed in important ways; or with no regard to inequalities in what their students can access.

If education is important enough to be compulsory for all, it seems contradictory to leave its content as a free choice ‘black box’. The scope and substance of curriculum does matter, and it is important periodically to review and refresh it. However, the problems of politicisation and overspecification discussed above point to some implications for the management of curriculum frameworks and policy in the future.

In a democracy, active debate from a range of political perspectives about the purpose and influence of the curriculum is to be expected and is welcomed. In Australia the issue of what the nation is about, what it stands for and who can be part of it, has seen many iterations over the past century, both in curriculum and in wider public debates. This stands in some contrast to the USA, where too many decisions about what children should learn are devolved to textbook publishers and their commercial interests, or to local communities who can decide to cut students off from important areas of scientific knowledge; and also to Europe where in many nations there is a more settled understanding of the kinds of French or Norwegian or German citizens that curriculum is intended to form.

Given this recent Australian history, what is perhaps surprising in the submissions to the recent Curriculum Review is the extent to which teachers, professional bodies and many others affirmed the broad shape of the framework produced by ACARA and its various subject committees, despite the fact that they might disagree with the amount of material or with one or two specific content choices.

These submissions confirmed, as did our research interviews with teachers of history and science, that political and public debates concentrate far too much on isolated ‘messages’ or bits of content, and ignore broader and deeper structures of which they are a part.

Teachers understand that they are developing a longer-term foundation and capacity in students that includes introducing them to the kinds of knowledge and questions developed by different subjects and disciplines, having them learn to ‘stand on the shoulders of giants’, to weigh evidence, use different methods and questions and be introduced to creative and practical disciplines.
So while there is need for a periodic renewal of curriculum using contributions from a range of voices, once the framework is there, it is unhelpful to keep constantly debating the document detail. Instead we should put much greater emphasis on the support and space needed for teachers to make the framework useful and engaging in practice. It is particularly unhelpful to treat the curriculum in straight party political terms and require a change each time there is a change of government (which in any case is less likely to affect what is taught in schools, which has a longer lead time than this).

In some ways ACARA has been exemplary in the amount of detail available online about each element of the curriculum, although the number of versions can itself become confusing. But this transparency and detail can itself contribute to the perceived problems of overload. Much of the published material is in fact explaining background or options and providing curriculum resources, not a mandated list of everything teachers must do. But when the broad shape and form is combined with all the details, it creates a different impression.

The problem is that the website is now fulfilling many different purposes: accountability to government, promoting government and/or ACARA (hence the current pop-up announcing ‘the Australian Curriculum has been improved’ explaining why there is now a version 8.1 to replace version 7.5), wider communication to the public, as well as providing guidance and resources for teachers and education authorities.

In other words, the form of the policy management affects what is set up for curriculum. ACARA is jointly owned and funded by the federal government and the six state and two territory governments, with board representation from the non-government school sectors. Given the different histories of these systems, the compromises of decision-making might work against the clarity of curriculum (Savage and O’Connor 2015). The shared governance framework might also encourage risk-averse bureaucratic decision-making that overlays the educational considerations thrashed out by experts and professionals (Fensham 2012).

Although it is good that governments and voters generally now see education as important, and a relatively high-ranking part of
their program, this has some downside. One is a tendency to focus too narrowly on a few quantitative measures (what can be readily measured) as the significant indicators of what is or is not being achieved, and leave aside how well such measures do actually represent the kinds of curriculum concerns with which I began this chapter. A second is the electoral cycle and its short-termism and tendency to debate substantive issues either in terms of quick party political differentiation or in terms of utopian promises that cannot be achieved and for which teachers will be blamed. Glossy brochures, websites, rhetoric and bureaucratic templates can work against the positive moves we have seen since the mid-2000s to think seriously about the role of curriculum, about which knowledge matters and what commonalities are reasonable across a national system that remains deeply divided in its sectoral resourcing and strongly tied to different historical experiences and political interests in different parts of Australia.

Specifying the curriculum is a challenging task in these times. Since the mid-2000s a lot of good and serious effort has gone into renewing a framework for Australian students. The broad shape of this framework supports a range of school subjects alongside some attention to the kinds of young people and capabilities for the future that schooling should help to develop. There are good grounds for seeking a common framework for all young people in Australia that goes beyond a short-term focus on skills and the short-term results. Curriculum has an important role to play in giving young people access to forms of knowledge beyond what they can pick up in their everyday life or via the Internet.

The Australian Curriculum framework has already been subject to a major review, and this should happen again in the future. But the task for the next period should not be to revisit that central framework but to provide the support and space for schools and teachers to bring the curriculum to life with particular students in particular places. If anything, what is needed is some stepping back from the constant addition and revision of curriculum material, in favour of a simpler, clearer outline combined with a stronger focus on the practices needed to achieve a common entitlement for all students.
Biography


Note

The website for this project is http://education.unimelb.edu.au/news_and_activities/projects/knowledge_building_project?_ga=1.67210457.916408965.1454296803. A new research project, this time on Literary Knowledge and the Making of English Teachers, is also now in its early stages: see <website to come>.
Assessment is commonly understood as the process of judging how well students have learnt what they have been taught. It comes at the end of a sequence that begins with a curriculum or course syllabus. Teachers are expected to deliver this body of specified content, students are expected to learn it, and assessment is the process of judging and grading students on how well they have learnt what teachers have taught. This is a common view of assessment among students, parents and many teachers.

This chapter argues that this traditional way of defining and operationalising what it means to learn successfully is no longer serving us well. It results in many less advanced students falling further behind in their learning, being written off as poor learners and eventually disengaging from school. It also fails to challenge and extend some of our most advanced students, resulting in less progress than they are capable of making.

The alternative proposed in this chapter is to use assessment to monitor learning—that is, to establish and understand where learners are in their long-term learning progress at the time of assessment; to evaluate growth over time; and to provide teachers, students, parents, school leaders, system managers and governments
with quality information to promote further learning. Shifting the focus of assessment practices and systems from judging and grading to monitoring learning is a major challenge and opportunity for Australian education over the next decade.

The chapter first defines ‘monitoring’ and then contrasts it with other ways of conceptualising the role of assessment in school education. The chapter finishes by suggesting where future assessment policies should be focused.

Establishing where students are in their learning
The monitoring of learning requires assessment processes designed to establish and understand where students are in their learning at the time of assessment, either as individual learners or student groups.

Individual learners
In classroom settings, information about where individuals are in their learning is essential for at least three reasons. First, students in the same year of school can be at widely different points in their long-term learning and development. For example, in reading and mathematics, the most advanced ten per cent of students in any given year of school are typically five to six years ahead of the least advanced ten per cent of students. As a consequence, students commence each school year with very different starting points, levels of readiness and learning needs. Effective teachers are sensitive to these differences and work to establish and understand exactly where individuals are in their long-term progress.

Second, and related, successful learning is unlikely when individuals are given material that is much too difficult or much too easy. Inappropriately difficult material leads to frustration and disengagement; inappropriately easy material leads to boredom and lack of effort. Successful learning is most likely when learners are given stretch challenges beyond their comfort zones, in what Vygotsky (1978) called the ‘zone of proximal development’, where success may depend on scaffolding and support. Effective teachers maximise the probability of successful learning by providing individuals with well-targeted learning opportunities.
Third, students usually have different skill gaps and understandings of subject matter. It is now well established that learners create their own mental models of what they are learning. These models can be different from learner to learner, as well as being markedly different from the understandings that teachers assume. Student misconceptions often remain hidden and become obstacles to further learning progress. Effective teachers work to uncover and understand how individuals are thinking about subject matter and intervene to address specific errors and misconceptions.

For all these reasons, establishing where individuals are in their learning is an essential part of effective teaching. More generally, the processes of studying and understanding presenting situations and developing tailored solutions appropriate to those situations are defining characteristics of professional work. Professionals do not simply implement pre-specified, one-size-fits-all routines; they use their professional knowledge to develop tailored interventions and solutions. In this sense, the close monitoring of a student’s learning is as essential to effective teaching practice as the close monitoring of a patient’s health is to effective medical practice. And, as in medical practice, this monitoring can be undertaken at varying degrees of diagnostic detail.

The process of establishing where individuals are in their learning is not always recognised as part of good teaching. ‘Teaching’ sometimes is viewed simply as the process of delivering a specified course or curriculum, with the onus being on students to learn what teachers deliver—a view that is often more prevalent among teachers of older students. This view is still widespread among many teachers in Australia, as well as in parent, media and political discussions of teaching. However, when the same undifferentiated content is delivered to all students regardless of their starting points, less advanced students often struggle and perform poorly and more advanced students often coast and are not challenged or extended.

The Organisation for Economic Cooperation and Development (OECD) estimates that 40 000 Australian 15-year-olds (i.e. one in seven students) lack the reading skills required to participate adequately in the workforce and to contribute as productive citizens (Thompson, de Bortoli and Buckley 2013, OECD 2013). An estimated 57 000 15-year-olds (i.e. one in five students) fail to achieve this
minimum standard in numeracy. In each of their ten years of school, these students were delivered the relevant year-level curriculum. The majority no doubt struggled with this curriculum and performed below expectation year after year.

At the other extreme, the number of Australian 15-year-olds achieving high international standards in reading and mathematics has declined steadily since 2000, raising a question about how well the most advanced students in our schools are being challenged and extended. The same question is raised by the observation that the lowest rates of year-on-year progress often are made by Australia’s most advanced students (Griffin 2013).

Quality information about where individuals are in their learning is essential to meeting learners at their points of need. Effective teaching recognises that individuals can be at quite different points in their learning and may be progressing at different rates, and is underpinned by a deep belief that every student is capable of making further progress if they can be engaged, motivated and provided with appropriate learning challenges. Many teachers intuitively believe this, and many parents and students desperately want it to occur in their own experience. But developing the skills, practices and supporting structures to make it happen in all schools requires intentional, large-scale effort.

Student groups
For other kinds of educational decision-making, it is important to have quality information about where groups of students are in their learning. School leaders, system managers and governments require dependable information of this kind to identify areas of learning requiring special attention and to establish starting points for action. They seek answers to questions such as: how well do Year 5 students in this school perform in numeracy? What levels of scientific literacy are achieved by Australian 15-year-olds?

Information about student groups enables benchmarking to clarify what it is possible to achieve and to identify effective policies and practices in other educational settings. For example, how do Year 3 reading levels in this school compare with reading levels in other schools in similar circumstances? How do ICT literacy levels in Australia compare with levels in other countries?
When group performances are of interest, the focus usually is on distributions of student achievement and distributional statistics such as the mean. These can be estimated from scientifically drawn samples. There also tends to be less interest in fine diagnostic detail and more interest in overall levels of achievement.

International surveys such as the OECD’s Program for International Student Assessment (PISA) and the IEA’s Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) are designed to provide information about where student groups are in their learning in particular learning domains. These groups include national student populations (e.g. all Year 8 students in a country) and various subgroups (e.g. students in each state and territory, males and females, urban, rural and remote students, students in different school sectors, and students from different socioeconomic backgrounds). In Australia, the National Assessment Program (NAP) also provides information about student groups through sample surveys in science literacy, civics and citizenship and information and communication technology literacy and through the NAP—Literacy and Numeracy (NAPLAN) testing of all students in Years 3, 5, 7 and 9.

Quality information about where student groups are in their learning is essential for educational leadership and informed policy-making. It allows schools, networks, regions, systems and governments to identify starting points for action and to target resources and interventions on areas of greatest need.

Learning domains

The process of establishing where learners are in their learning depends on a deep understanding of the relevant learning domain.

An analogy would be the monitoring of a person’s progress through physical terrain. An appreciation of where an individual is in their progress depends on familiarity with, and at least a mental map of, the terrain through which they are travelling. Understanding a learning domain includes understanding typical sequences and paths of learning; appreciating how learning builds on earlier learning and lays the foundations for further learning; understanding the importance and role of prerequisite skills and knowledge to learning progress; and familiarity with common student errors,
misconceptions and obstacles to learning. Such understandings—sometimes referred to as pedagogical content knowledge—are developed through professional experience and informed by domain-specific learning research.

Progress in an area of learning usually takes the form of increasing ‘proficiency’ reflected in more extensive knowledge, deeper understandings and higher-level skills. Establishing where students are in their learning at any given time means clarifying what they know, understand and can do at that point in their progress. This can be done at the level of an entire learning domain such as mathematics, for particular subdomains such as number, space/geometry and algebra, or in relation to specific skills and understandings.

Most learning domains extend over many years of school. Some begin before, and continue beyond, school. Examples include the broad domains of reading, mathematics and science. Most general attributes and capabilities, such as the ability to work in teams, to communicate, and to create innovative solutions to problems, also develop over extended periods. Because students of the same age tend to be at widely varying stages in their learning progress, teachers require a good understanding of the nature of long-term development if they are to ensure that every student is appropriately challenged and extended.

An example of a learning domain for which increasing proficiency has been well defined is music. This domain often is divided into subdomains such as theory of music, music craft and musicianship, with student progress being monitored and recognised in each subdomain separately. Within each subdomain, increasing proficiency is defined by a series of levels or ‘grades’. Students progress through these grades at their own pace, demonstrating that they have achieved each grade at a time of their own choosing—a process that occurs over a number of years.

When students understand what higher levels of proficiency and better quality work look like in an area of learning, they have a basis for reflecting on their current levels of achievement and for setting realistic, challenging goals for further learning. In this way, students are supported to take a degree of responsibility for their own learning and long-term progress.
It is common to interpret progress through a learning domain by reference to the points students are expected to reach by particular stages of schooling. For example, the minimum level of reading proficiency expected of all students by the end of Year 3 might be specified. The specification of minimum expectations (or ‘standards’) leads to yes/no decisions about whether students have achieved these expectations. This approach has gained considerable profile and priority in Australia since the mid-2000s following the introduction of national minimum standards in NAPLAN in 2008. These standards are used to decide whether individuals have met minimum expectations for their year group and to calculate the percentage of students in each year group meeting minimum standards. In other systems around the world, policy and performance targets have been built around such yes/no thresholds, with mixed results.

**Evaluating progress over time**
The monitoring of learning also depends on the ability to evaluate the progress students make over time.

Conclusions about progress (or growth) require information about where students are in their learning at different points in time. At a minimum, information is required at two time points; for example, before and after a course of instruction. Ideally, progress is monitored over multiple time points to reveal long-term learning trajectories (Khoo 2008).

Attempts to evaluate learning sometimes are based on information collected at only one time point—for example, at the end of a period of instruction—and referred to as the assessment of learning. However, unless all students commence a period of instruction at the same point in their learning (a highly unlikely scenario in actual school settings) information collected only at the end of instruction is inadequate for comparing and evaluating how much students have learnt. Assessments of learning require information about progress over time. Once again, learning progress can be evaluated either for individual learners or student groups.

**Individual learners**
Information about the progress an individual makes can be used to judge the adequacy of that student’s learning. If a student is making
no progress, or very little progress over time, that might indicate lack of effort or a particular difficulty that the student is experiencing (e.g. the absence of prerequisite skills or understanding). By studying rates of long-term progress, it is possible to identify students who are on learning trajectories that have plateaued and who are slipping behind in their learning. Such information is crucial for effective intervention.

Current approaches to organising and delivering schooling often deny students the opportunity to see and appreciate the long-term progress they are making. Schooling usually is divided into school years, semesters, courses and learning modules, which are often treated as discrete and unrelated. Students are judged and graded on the content taught in each of these learning periods, often with each new period being treated as a fresh start. As a result, less advanced students can receive low grades year after year, reinforcing low self-perceptions and providing little indication of the long-term progress they actually make. At the other extreme, more advanced students can be judged to be performing well on year-level expectations, and so receive high grades, but make relatively little year-on-year progress.

Perhaps the most effective way to build individuals’ confidence in their ability to learn is to assist them to see the progress they make over time—possibly over multiple years of school. Long-term pictures of progress allow students to appreciate how the quality of their work has improved and how they can now perform tasks that once were beyond them. Information about improvement also gives students a better understanding of the relationship between effort and success.

Student groups
Information about group progress allows teachers, school leaders, system managers and governments to determine whether levels of achievement are improving or gaps are closing. Ultimately, almost all educational interventions and policies can be evaluated in terms of group progress.

Teachers require information about group progress to evaluate the effectiveness of their teaching. For example: did this teaching strategy result in better learning and higher levels of achievement?
Was this teaching technique more effective than others in improving students’ writing?

Educational leaders require information about group trends over time to evaluate the effectiveness of their improvement efforts. For example: have Year 9 numeracy levels in this school improved over the past five years? Have the mathematical literacy levels of Australian 15-year-olds changed over the past decade?

Governments require information about changes in the relative performances of subgroups to evaluate policies and programs to close achievement gaps. For example: has the relative performance of Indigenous students improved over time? Has the achievement gap between students from low and high socioeconomic backgrounds closed over the past decade?

And policy-makers and researchers require information about rates of learning to understand why some groups make faster progress than others. For example: why do students from more advantaged backgrounds make faster progress in reading in their first year of school? Why do students in some countries make greater progress in their mathematics learning during the primary years?

**Paradigm shift**

The use of assessment to monitor learning can be contrasted with more traditional uses of assessment to judge and grade students on how well they have learnt what they have been taught. These two approaches to assessment differ in several important respects.

First, they differ in intention. The intention in grading is to judge students’ performances on what they have been taught. The onus is on students to learn what teachers teach and assessment is the process by which they are held to account. In contrast, the intention in monitoring is to gather information that can be used to promote further learning and improved learning outcomes. Monitoring is viewed as an integral part of professional work and effective educational decision-making.

Second, these two approaches differ in focus. The focus in grading is on the content of a particular course (e.g. a topic, learning module or school year). Assessments are undertaken to establish how well students have learnt the course content. In contrast, the focus in monitoring is on students’ long-term progress in a domain
of learning. Assessments are undertaken to establish what students know, understand and can do at the time of assessment—a question that can be asked before, during or after a course of instruction, or without reference to a course of instruction at all.

Third, these two approaches differ in the priority they assign to year-level expectations. In grading, students who perform well on year-level expectations receive high grades; those who perform poorly receive low grades. All students are held accountable for achieving common end points despite the fact that they might have very different starting points. In contrast, in monitoring the priority is to establish students’ levels of achievement in a domain regardless of their year level—that is, in an absolute sense. This does not preclude also setting expectations of student achievement by particular times in their schooling.

Fourth, and as a result, the two approaches differ in their interpretation of what it means to learn successfully. In grading, successful learning is defined in terms of year-level curriculum expectations and usually is summarised in a mark or grade. A student can receive the same grade (e.g. ‘D’) year after year, disguising the progress they actually make over time and sending a message about their ability to learn (a ‘D-student’). In contrast, in monitoring, successful learning is defined as progress or growth towards greater knowledge, deeper understanding and more advanced skills, regardless of starting point.

Where should policy be focused?
Assessment practices in schools are shaped by traditional ways of organising teaching and learning. Students are grouped with their age peers; curricula are developed for each of these year groups; teachers deliver the relevant year-level curriculum; and students are judged and graded on how much of the taught content they have successfully learnt. They then move to the next year where the process begins again, often with little reference to what happened in the previous year. This is sometimes referred to as the ‘industrial’ or ‘assembly line’ model of schooling.

This chapter has sketched some of the consequences of this model, particularly for less advanced students who fall behind in their learning and are judged to be poor learners, and more advanced students who are not stretched by year-level expectations.
Over the next ten years we can expect this traditional model of schooling to be challenged, in part because of new technology that will allow teaching and learning to be better targeted on individuals’ levels of progress and learning needs. As teaching is better differentiated, students increasingly will be able to progress at their own pace.

These changes will require new ways of thinking about assessment. The purpose of assessment will be to establish and understand where students are in their learning, to provide appropriate, tailored feedback to promote further learning, and to track the progress students make over time. In this chapter, this way of thinking has been described as ‘monitoring’ learning.

These changes also will have broader implications for how we think about the curriculum; what it means to teach; how learning is tracked and reported; the nature of credentials (including alternative ways of recognising achievement); the nature of learning; and how we think about learners themselves. In other words, policies to reform assessment need to be part of a broader set of reforms to teaching and learning. Following are four suggestions for where assessment-related policies should be focused to promote the improved monitoring of learning.

**Ensure that curricula and assessment processes are underpinned by empirically based learning progressions**

The monitoring of student progress (whether by individual learners or student groups) requires a well-mapped domain—that is, a description of what it means to make long-term progress in the domain. Important in this mapping are learning progressions informed by empirical evidence. These define the direction and nature of progress. As the Australian school curriculum is further developed and refined, it should continue to reflect not simply opinions about what should be taught and learnt in each year of school but also research evidence concerning the nature of long-term student development.

It will continue to be a challenge to build empirically based learning progressions for newly prioritised capabilities such as collaborating, communicating, innovating and problem-solving. However, the meaningful development of such capabilities in schools
and the monitoring of student progress in these areas of learning depend on well-constructed, empirically informed descriptions of their long-term development.

Ensure that teachers have access to tools for establishing and understanding the points individuals have reached in their learning, with related teaching resources
To understand where students are in their learning and to design interventions to promote further learning, teachers require quality tools built for this purpose. They also require skills in using these tools. Many teachers lack these skills. Even when using assessment resources such as the Progressive Achievement Tests (ACER 2008), which are capable of providing useful diagnostic information to guide teaching and learning, many teachers use only numerical scores and year-level norms.

In the early years of school it is particularly important that teachers have access to quality tools for establishing and understanding the points individual children have reached in their learning and development. Over the next ten years quality resources also will be required to assist teachers in their assessment and monitoring of more generic, cross-curricular skills and attributes.

Abandon forms of reporting that do not indicate where students are in their long-term learning and that do not assist in monitoring learning progress over time
Australia cannot afford to have large numbers of students written off as poor learners because they perform below year-level expectations year after year. The alternative would be reports that identify the points individuals have reached in their learning, indicate what might be done to support further learning, and provide information about learning progress over time. The expectation should be that every student will make excellent progress every year, regardless of their starting point.

However, useful alternative forms of reporting are not widely used and are difficult to develop. Research into best practice principles and ways of using technology for ongoing communication between parents, teachers and students should now be a priority.
Develop systems for recording, tracking and certifying student attainment independently of year levels and phases of schooling

As traditional ways of organising teaching and learning are challenged, and students are increasingly able to learn at their own pace, there will be a need for alternative and better ways of tracking and recording the points individuals have reached in their learning. There are implications for the development of data management systems that will record where students are up to in their learning as well as the evidence underpinning these conclusions.

There will also be a need for new ways of recognising and certifying achievement. Students increasingly will be judged against performance standards that are not tied to particular years of school (or even phases of school). Just as music students are able to take assessments when they feel ready to demonstrate performance at the next level, students may move through levels of certification at their own pace. In general, the assessment systems that would enable this do not currently exist and need to be developed.

Above all, the use of assessment information to monitor learning requires a shift in mindset. It requires an expectation that assessment results—whether for individuals or groups—will provide more than uninterpreted scores and grades for the purposes of ranking and comparing. Teachers, students, parents, school leaders, system managers and governments should expect assessments to provide useful, substantive information about what students know, understand and can do, as a basis for informed decision-making.

The biggest impediment to this change in mindset is existing practice and the lack of alternatives that embody and illustrate the required change. The Australian community is familiar with A–E grades, NAPLAN scores, ATARs, and PISA, TIMSS and PIRLS results in the form of scores, grades and rankings. In most cases, users do not expect to be able to interpret assessment results as substantive information about the points students have reached in their learning.

The most effective way to promote this change in mindset may be to provide practical alternatives that help users understand what long-term progress in an area of learning looks like, to establish and understand where individuals and groups are in their learning (in terms of what they know, understand and can do) and to monitor learning progress over extended periods. The development and
promotion of practical alternatives should be a key policy focus in reforming assessment practices in school education over the next decade.

Biography

Geoff Masters AO is Chief Executive Officer and a member of the Board of the Australian Council for Educational Research (ACER). He has a PhD in educational measurement from the University of Chicago and is an adjunct professor in the Queensland Brain Institute. He has published widely in the fields of educational assessment and research, including Reforming educational assessment: imperatives, principles and challenges (2013) and Five challenges in Australian school education (2016).

His contributions to education have been recognised through the award of the Australian College of Educators’ Medal in 2009 and his appointment as an Officer of the Order of Australia in 2014.

Notes

1 Although this distinction may appear to be the traditional distinction between ‘formative’ and ‘summative’ assessment or assessment for learning and assessment of learning, formative assessments (or assessments for learning) usually are viewed only as classroom-based; monitoring, as described here, is an activity also undertaken by school leaders, systems and governments. And the assessment of learning progress is an essential part of such monitoring.
Part 2
New pathways to student achievement
Early childhood learning and development have important implications for individuals’ subsequent learning. Early childhood education helps to prepare children for smooth transitions into school and, given the cumulative nature of education, it helps to determine an individual’s trajectory within and beyond formal school education into adult life (Tayler, Cloney and Niklas 2015). Some models of high-quality early childhood education are associated with long-term positive influences on high school completion rates, tertiary qualification completions, reduced teen pregnancies, improved health and improved employment status (e.g. Campbell and Ramey 1995, Reynolds, Temple, Ou, Arteaga and White 2011). Early childhood experience is of fundamental importance for children’s longer-term development and therefore for those considering ‘school readiness’ and how to achieve it.

Many early childhood educators and primary schoolteachers prioritise children’s social and emotional preparedness as they transition towards school (Dockett and Perry 2002, Wesley and Buysse 2003). In this chapter, we propose that this focus underestimates children’s capacity for learning in the years before school and fails to
recognise the importance of learning for children’s attention and thinking capabilities, as well as their literacy and numeracy skills, as they start school. In fact, ‘school readiness’ should be seen as a complex, comprehensive construct containing not just social–emotional but also cognitive–intellectual, motivational, literacy and numeracy child competencies and aspects of the family, childcare and school environment a child experiences.

As a consequence of this view, we argue that early childhood education programs are an important aid to school readiness, and should be modelled to foster dispositions for independent thinking, creativity and problem-solving from the very earliest years of life. These dispositions are developed through human communication as children observe and relate to those around them, and learn a range of skills for getting along, doing tasks and solving problems in a society in which communication and access to information increasingly demand innovative thinking. Even when constructed through fibre optic cables or Wi-Fi connections, social bonds and social interchange are essential, as the formation of young minds lays foundations for the further learning and development that lies ahead.

During the early years, the dispositions and skills that children acquire through engagement with others influence school readiness by helping or impeding their preparedness and capacity to learn how to learn. The workings of the human mind are based on the functioning processes within the brain, and are constructed by the interaction of genetic endowment and everyday experiences (Rutter 2002). The experiences of infants, toddlers and young children and their relationships with people around them help to shape brain functioning and the way in which children’s thinking develops (Tayler and Sebastian-Galles 2007). Children’s thinking influences their everyday functioning, including the capacity to transition between different settings such as home, early years education and school. This does not imply that the responsibility for ‘school readiness’ rests with the child. Instead, early childhood settings and schools must be ready for the children they serve.

This chapter examines how the concept of ‘school readiness’ has evolved and how different views are reflected in current debate and public policy. We argue that supporting the optimal learning and
development of children requires that their strengths and abilities be recognised early, including through school readiness assessments, so that educators and teachers can be better equipped with an understanding of a child’s competencies and learning needs. We conclude with implications for the Australian early childhood educational system and challenges that lie ahead.

We argue that although national policy has brought about an important shift in focus over the last decade, a different kind of shift is needed in the years ahead. To support greater school readiness, including among the children who most need it, requires a clearer emphasis on the development of learning capabilities of very young children, along with consistent effort among policy-makers, practitioners, researchers and communities to strengthen the various ‘ecosystems’ that influence and support children’s long-term development. Progress in meeting these challenges requires an intensive investment in professional learning, wider and more purposeful use of reliable school readiness assessments, much greater partnership between schools, families and other service providers, and a proactive effort by governments to target and reduce the causes of multiple disadvantage.

The concept of ‘school readiness’
In medieval Europe, making a decision about a child’s school readiness was straightforward. The child was brought before a teacher who stretched out both hands with an apple in one hand and a coin in the other. If the child chose the apple, the child was deemed not to be ready for school. If the child chose the coin, the more abstract but more valuable option, the child was deemed to have demonstrated mature judgement and could start school (Fertig and Kluve 2005).

More recently, physical characteristics such as the number of second teeth (Association of Waldorf Schools of North America 2015), the way the child moves or the morphogenesis from an infant’s body shape to a child’s shape were taken into account when deciding whether the child was ready to start school (Niklas 2011). Only in the last century have the child’s cognitive characteristics become the focus of education and research related to school readiness. Initially, intelligence was prioritised. Later, the child’s socio-emotional development and aspects of the environment were taken into account. By
the end of the twentieth century, attention shifted from children needing to be school-ready to schools needing to be ready for children with diverse abilities and differing family expectations.

Today, a common view of school readiness is elusive (Google Scholar offers about 150 definitions). The diverse conceptualisations of the last hundred years range from maturationist views focused on an individual child’s innate abilities and biological development, to the environmental, social constructivist, cognitive and interactionist views that are now more common (see also Dockett and Perry 2002). Since the 1990s, researchers have extended their focus on school readiness to include the specific period of transition into school as a critical component of children’s academic achievement (Ramey and Ramey 1999). Recently, the precursors for later success in learning how to read and write, as well as for developing mathematical skills, are gaining more prominence in the discussion of school readiness (cf. Niklas 2011). This trend reflects analyses of large-scale, representative samples that identified specific precursors of children’s reading, spelling and mathematical competencies to be the best predictors of later academic achievement in primary school (Duncan et al. 2007, LaParo and Pianta 2000). Recent international literature also identifies other factors such as general cognitive skills, attention and motivation, and child behaviour (e.g. Dockett and Perry 2013).

These different views on school readiness matter in part because they have varying implications for specific achievements of children that are given priority (Petriwskyj, Thorpe and Tayler 2005). Our approach aligns with an interactionist view: we believe that ‘school readiness’ should be regarded as a complex and comprehensive concept. Only if the ecosystems of the child, family, early child education and care (ECEC) setting and school are taken into account together can one build a comprehensive picture of a child’s readiness for school. We also recognise that the relative weighting of key components of those ecosystems can change the level of attention given to specific tasks or practices. Children’s cognitive competencies, especially specific precursors such as vocabulary, letter and number knowledge, counting abilities and phonological awareness are key in the identification of school readiness, given that they are the best predictors of an individual’s later academic achievement. Ongoing formative assessment conducted by education professionals is
important. In addition, summative assessment of these competencies is achievable through the sensitive application of validated assessment tools. In practice, however, many education professionals in early childhood and primary schools tend to focus predominantly on a child’s social–emotional competences and self-help skills (Cuskelly and Detering 2003, Lin, Lawrence and Gorrell 2003).

While the focus on specific skills and competences has important implications for children, the broader ecosystem remains fundamental in influencing their long-term development. There is no single way to ensure that ecosystems are aligned for optimal ‘readiness’, but when they integrate positively, a successful transition to school is much more likely to occur.

Figure 7.1: A comprehensive school readiness model
Source: adapted from Niklas 2011, p. 12.

Figure 7.1 illustrates the key ideas in a comprehensive model of school readiness. This model recognises the reciprocal influences of the early social environment: a young child’s development is influenced by (and influences) the child’s early social environment. The social environment encompasses both the home learning environment provided by the family and the child’s experiences within ECEC settings. Children’s dispositions, including psychological, physical, motivational and emotional characteristics, are presented to the left,

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while aspects of the school and the curriculum that have a strong influence on the school's expectations of the child are presented on the right. This model recognises that the child's development at school commencement and the school's expectations together contribute to the perceived school readiness of the child. Aligning with Bronfenbrenner's (1979) Ecological Systems Theory, modern concepts of school readiness are embedded not only in social institutions such as the family, ECEC setting or school, but also in surrounding systems including the legal framework, school system and structure of society. Transition to school is not merely a phase for the child to experience alone or with family support; rather it is part of a broader national sociopolitical context. This perspective results in an ecosystemic process model of transition to school (see figure 7.2).

![Ecosystemic process model of transition to school](image)

*Figure 7.2: An ecosystemic process model of transition to school*

*Source: adapted from Niklas 2011, p. 14*
A successful transition to school depends on the adequate interaction of several ecosystems, as represented in figure 7.2. A smooth transition is more likely when the child possesses adequate cognitive and behavioural competencies, is supported by a favourable home learning environment, has experienced high-quality early childhood education and care, and enters a school that is prepared to provide for the particular needs of the individual child.

Here, a favourable home learning environment engenders positive dispositions towards learning and is characterised by, for example, frequent high-quality interactions between adults and child such as reading to the child, playing games that support numeracy skills, visiting libraries or counting in everyday life as they demonstrate parents valuing reading and mathematics as important competencies and support children's competencies development (Niklas, Cohrssen and Tayler 2016a, Puccioni 2015). Even non-intensive interventions providing parents with general information about the importance of the home learning environment and simple ways to support their children have a positive influence on children's precursors of academic achievement (Niklas, Cohrssen and Tayler 2016b, Niklas and Schneider 2015). Likewise, high-quality ECEC programs comprise a high level of instructional support in the language modelling, feedback and concept development provided by educators to the child (Tayler et al. 2013). Collaboration and communication between parents, ECEC educators and schoolteachers are clearly important (Cohrssen and Niklas 2016).

In reality, such optimal conditions seldom coincide in all areas. When children experience multiple ecosystem conditions that work against their optimal development, their interaction creates forms of disadvantage that compound, increasing the possibility that the transition to formal school education for those children will be characterised by poor adjustment and continuing poor academic outcomes, unless the conditions are changed. An advantage of this model is that it is compensatory; strong ecosystems counterbalance weaker ecosystems, and early interventions can be effective in decreasing developmental gaps between children who are well or poorly served by the systems around them (see for example Bann et al. 2016, Marjanovič Umek et al. 2008).
School readiness priorities and policy in Australia

Children in Australia start school with widely varying competencies: some are able to solve complex mathematical problems and have extensive vocabularies whereas others struggle with the meaning of easy words and the identification of numbers (Tayler et al. 2015, Wildy and Styles 2008). For such heterogeneity to be effectively addressed in early years programs, early childhood educators, schoolteachers and other stakeholders need to rethink and reshape what transition to school ‘looks’ like, working over time towards a cohesive approach. The systems of support provided to children before and on entry to school need better integration. System reforms need to account for the learning capabilities of each child long before school, taking into account contemporary home learning environments, the practices that support learning in ECEC settings and the culture of life and learning in a diverse multilingual society. An effective early education system must also make targeted efforts to enhance the achievement outcomes of children with developmental, social or cultural differences that might lead to disadvantage (Petriwskyj et al. 2005).

The Australian National Quality Framework (NQF) was established for ECEC services by the Council of Australian Governments (COAG) in 2009 as part of a burst of policy development and collaboration between governments, which advanced a series of national education priorities and which includes a major policy response to evidence showing the key role the early years contribute to children’s learning, development and well-being. The NQF policy reform marks a paradigm shift in the orientation of early childhood education and care programs towards early learning, and signals a shift in educator practice that, if achieved, will change the way school readiness is understood and approached.

The NQF takes a long-term policy and implementation approach to raising the quality of the early educational experiences of Australian children aged from birth to five years, and onwards into formal school education. The National Quality Standard (NQS; ACECQA 2012) and ‘Belonging, Being and Becoming: The Early Years Learning Framework for Australia’ (EYLF; DEEWR 2009) flow from the NQF. Both documents are concerned with the concept of
readiness and children’s transition from ECEC service to school. The EYLF heralded national attention to early learning and mandated five learning outcomes to be achieved by all children in the phase before school entry. It aims ‘to extend and enrich children’s learning from birth to five years and through the transition to school’ (DEEWR 2009, 5.) In Victoria, further steps were taken to expand the reach of the five outcomes through a more integrated effort. Maternal and child health, ECEC and the early years of school serve as connected services supporting a strong start in life for all young children (VCAA 2009, 2016).

A distinguishing characteristic of these policy documents is the attention they give to pedagogy, particularly by promoting intentional teaching in play settings. In lieu of conventions that had hitherto signified free play as the dominant approach within ECEC programs, ‘intentional teaching’ heralds purposeful adult-child engagement within informal early learning settings, in contrast to the approach based on free play that had hitherto dominated. This shift stemmed, not from a will in the field to change practice, but from research findings, including the EPPE study in the United Kingdom (Siraj-Blatchford and Sylva 2004), which showed the importance of early years pedagogy to children’s ongoing achievement (Hatfield et al. 2016). How Australian educators might adjust their pedagogical practices to align with the intent and direction of the EYLF is the focus of current research effort (Whittington, Shore and Thompson 2014), particularly through studies of professional learning and change (Barber, Cohrssen and Church 2014, Colmer, Waniganayake and Field 2014, Irvine and Price 2014).

Another important aspect of the policy is the principle of formative ‘assessment for learning’ outlined in the EYLF. ‘Assessment for children’s learning refers to the process of gathering and analysing information as evidence about what children know, can do and understand. It is part of an ongoing cycle that includes planning, documenting and evaluating children’s learning’ (DEEWR 2009, 17). This principle draws early years educators to consider their assessment and recording practices for the ways they can be used to direct learning programs for children. The NQS sets out an expectation that each child’s program is individualised and iterative in light of
interests, capabilities, skills and needs: ‘Educators and coordinators are focused, active and reflective in designing and delivering the program for each child’ (NQS, Standard 1.2, ACECQA 2012).

**School readiness assessments**

Every country must decide for its education system at which age children are ready to enter school and what kind of school these children experience. In most European countries children enter formal schooling at six or seven years of age. In Australia, as in the United Kingdom, children start school earlier. The legal requirement is six years of age, although entry to ‘preparatory’ (called ‘kindergarten’ in New South Wales, ‘pre-primary’ in Western Australia and ‘reception’ in the Northern Territory) programs is almost universally at age five. In Australia, as in most other countries, age is the main criterion for school entry. Some countries, including Germany, Estonia, Poland, Russia and some US states, also use specific assessments (i.e. school readiness tests) to decide whether a child is ready for school (Niklas 2011, Bertram and Pascal 2016). An accurate and comprehensive picture of the child’s strengths and abilities gained soon after a child’s school entry is crucial to the provision of optimal support.

School readiness is not formally tested in Australia, but it is important for early childhood educators to know which learning outcomes to focus on and how best to support children’s learning. Despite the recent shifts in Australian policy, it is not apparent that parents or practitioners have a clear view of what ‘school ready’ means, how to assess it or prepare for it. As we noted above, many educators tend to focus on social–emotional development while ignoring important aspects of learning like attention, problem-solving, and specific academic precursors.

Parents typically have discretion about the exact year in which their child commences school. Some Australian parents delay their child’s entry to school for a year after the child is age-eligible to commence, a practice known as ‘academic red-shirting’, to give them more time to develop cognitively and emotionally and start school ‘ahead’ of their peers (Edwards, Taylor and Fiorini 2011). The same study estimated that some 14.5 per cent of age-eligible Australian children experience delayed school entry. Boys are more likely to be
delayed, especially those perceived by parents as less able to persist at tasks, and who live in non-metropolitan areas. However, delaying school entry may be counterproductive. Research indicates that when these children reach secondary school, they experience academic disadvantage in motivation, engagement and performance (Martin 2009).

Early and continuous assessment of children’s strengths and abilities is necessary to design individualised programs that enhance children’s learning, particularly as they transition to school. The transition process is one that requires collaboration on the part of schoolteachers, early childhood educators, families and children in order to engender a shared understanding of school readiness and to achieve optimal outcomes for children. We do not propose that school readiness assessments be compulsory for all Australian children; however, we argue that it is important to assess children’s strengths and abilities regularly. Most educators throughout the country currently conduct observation-based assessments and develop child learning portfolios, in order to determine what children know and understand. Few services use more objective, reliable and valid assessments such as standardised tests in addition to observations, perhaps missing an opportunity to differentiate teaching and to build more precisely on prior learning. Counteracting some established attitudes and practices towards school readiness that do not optimise the long-term learning and development of children will require a clearer focus on how families, early childhood educators and school personnel could work together towards shared understanding of the child and successful transitions into school.

Table 7.1 summarises our recommendations for good practice in what should be considered when assessing children’s school readiness and what to avoid. Given the diversity of Australia’s schooling systems and jurisdictions, an important priority for the decade ahead is to encourage clear understanding of these principles across different communities of practitioners and families, and to develop tools that will support their sharing and consistent application.
Table 7.1: Recommendations to consider and practices to avoid when assessing school readiness

<table>
<thead>
<tr>
<th>Assessing school readiness</th>
<th>Practices to avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess as many child characteristics as possible that contribute to school readiness (e.g. physical, cognitive, language and socio-emotional development characteristics as well as approaches towards learning)</td>
<td>Avoid focusing on one single aspect of school readiness only (e.g. physical or cognitive child characteristics)</td>
</tr>
<tr>
<td>Recognise that children are individuals as well as members of families and communities. Have conversations with the child. Ask families and other adults about their experiences with the child, and use several assessment tools (e.g. observations, portfolios, surveys, interviews, tests)</td>
<td>Avoid reliance on one assessment score</td>
</tr>
<tr>
<td>Use reliable and validated assessment tools in everyday settings familiar to the child</td>
<td>Avoid using assessment tools that are not reliable and validated, or assessing the child in unfamiliar settings</td>
</tr>
<tr>
<td>Assess child's strengths and abilities in order to identify next steps along the learning trajectory</td>
<td>Avoid making assumptions about children on the basis of their background or behaviour</td>
</tr>
<tr>
<td>Identify implications of your assessment evidence to guide planning for further learning</td>
<td>Avoid over-emphasising a single point-in-time school readiness assessment</td>
</tr>
<tr>
<td>Assess school readiness over time and check whether supports for the child should be developed or modified</td>
<td>Avoid assessing school readiness at only one point in a calendar year</td>
</tr>
<tr>
<td>Assess school readiness early</td>
<td>Do not assess school readiness too late</td>
</tr>
</tbody>
</table>

**Priorities for policy in the next decade**

Although schools should be prepared to accept children with widely varying competencies, families and ECEC programs play a critical part in preparing children for school (Centre for Equity and Innovation in Early Childhood 2008). High-quality early childhood education has a proximal influence as it builds on children's complex and intuitive understandings of the world in which they live. It therefore plays an important role in supporting children's learning and development as they transition from a predominantly home-based
learning environment to a formal school context. Effective early childhood educators need to provide authentic scaffolding for children’s learning, recognising, assessing and responding to children’s intuitive and learnt understandings (see for example Hachey 2013). As the Australian NQF makes clear, this requires a new level of professional practice by early childhood educators. They must lead learning and be creative and innovative: gather evidence of what children know and can do, and use this information to consolidate and extend children’s learning. In short, early childhood educators are required to be interventionist practitioners. A significant level of professional learning is needed to increase early childhood educators’ knowledge of early learning and development and to increase their ability to assess individual children’s developing abilities. Interventionist practitioners plan playful learning experiences that support sustained attention while growing cognitive-intellectual, motivational, literacy and numeracy competencies. Such experiences not only equip children to succeed in the here and now but also support smooth transitions to school (cf. Niklas 2011).

Effective preschool programs target multiple factors such as education, health and parenting, they start early and are continuous, and both parents and local communities are involved (Tayler 2013). Effective education programs both in ECEC and the early years of school also consistently promote children’s literacy and numeracy abilities, the key predictors for later success in school (Duncan et al. 2007, LaParo and Pianta 2000).

However, Australian research indicates that the quality of educator–child interactions in many ECEC services is not very high (e.g. Tayler et al. 2013), leading to some children’s development of competencies not being adequately supported (e.g. Hildenbrand et al. 2015). Targeted professional learning to support interventionist practice is needed as a priority in order to continue the shift towards a more coherent and impactful early learning system.

**Challenges ahead**

Children’s school readiness and positive transitions to school depend on the adequate interaction of several ecosystems. Children will continue to live in contexts where some or even all of these ecosystems are far from perfect; however, strong ecosystems counterbalance
weaker ecosystems, and consequently it is critical to provide appropriate systemic support where necessary to enhance school readiness and children's transition to formal education.

Australian policy that leverages the home learning environment, especially for children encountering multiple risks to learning and development, is important to assure a strong foundation for later academic achievement. Families are the primary influence on children's learning and early childhood educators, and teachers need to collaborate with families to support school readiness and to smooth the transition into formal school education (Cohrssen and Niklas 2016). In Australia's multicultural society this is not always an easy task as families from different backgrounds will have different expectations of education. Diez, Gatt and Racionero (2011) demonstrated that when schools purposefully established structures that supported the authentic involvement of families from minority and vulnerable communities, provided flexible and less formal opportunities for participation and recognised the opportunities provided by such partnerships for teachers to draw on funds of knowledge held by these communities, families who were previously marginalised became increasingly involved, which in turn positively influenced children's learning.

The promise of early intervention to improve child outcomes and the cost effectiveness of intervening early both suggest improving the ECEC system as a primary target (Cuna and Heckman 2010). Research shows that attending ECEC programs can contribute to school readiness, especially for children living in disadvantaged circumstances. However, in Australia both attendance rates and the quality of ECEC programs are too low to ensure that these children will make the necessary cognitive gains before school (Cloney et al. 2016, Gilley et al. 2015, Hildenbrand et al. 2015, Tayler et al. 2015, Cloney and Niklas 2015). Funding is needed to make ECEC services desirable, affordable and accessible for all children, together with policies to target the engagement and participation of those children experiencing disadvantage.

Learning is cumulative: children's learning begins in the home environment and is enhanced by high-quality ECEC programs that systematically include regular, evidence-based assessment of strengths and abilities as children progress along multiple learning
trajectories that guide planning for further learning. Children's transitions to school are most successful when families are involved in this process. Targeted professional learning opportunities that equip early childhood educators to assess dispositions for learning, such as attention, motivation and self-regulation as well as physical, emotional and cognitive–intellectual characteristics of the child at multiple points during the years before formal school commencement, will encourage stronger collaboration with first-school-year teachers to support the school-ready child and the child-ready school.

To increase shared understanding of school readiness in order to support children's smooth transition into formal education will require professionals, policy-makers, researchers and community leaders to work together in Australia over the next decade in pursuit of the major opportunities for aligning the different ecosystems that influence child development. Although further changes in national policy and funding will be important, the most urgent opportunities involve using professional learning and community-level collaboration to better support specific competencies that evidence shows will increase the success of children's later learning. Targeting these efforts and focusing investment to reduce disadvantage, amid a diverse and fast-changing society, remains an fundamental priority.

Biographies
Frank Niklas is a developmental and educational psychologist and works as Senior Lecturer at the University of Würzburg, Germany. In addition, he works part-time as a Senior Research Fellow at the University of Melbourne, Australia. He conducts research on how children learn in the context of families (Home Learning Environment), the development of children’s mathematical and literacy competencies, and children's school readiness. His work is widely published in journals such as Contemporary Educational Psychology, Early Education and Development, Early Childhood Education Journal, European Journal of Psychology of Education, Learning and Individual Differences, Reading and Writing

Colette Tayler holds the Chair in Early Childhood Education and Care (ECEC) at The University of Melbourne.
Her research addresses learning and development from pre-birth to age eight. She reports on experiences that stimulate children's learning, and the teaching skills, strategies and relationships needed to promote learning and achievement. Collette's work includes home-, centre- and school-based environments in culturally and linguistically diverse urban, regional and remote Australian communities.

Collette holds a PhD from the University of Western Australia, and is a Fellow of the Australian College of Education. She is a chief investigator in the Australian Research Council National Science of Learning Centre, the Project Leader of the E4Kids longitudinal study of 2,500 young children, and the Australian academic leader with oversight of 3a (Abecedarian Approach Australia) projects. Collette serves on the Board of the Victorian Curriculum and Assessment Authority and, having completed an appointment as Deputy Chair of the Australian Children's Education and Care Authority, she recently took up an appointment to the Victorian Children's Council.

Caroline Cohrsen is a Senior Lecturer and the Clinical Teaching Practice Coordinator on the Master of Teaching (Early Childhood) at the Melbourne Graduate School of Education. Caroline's particular research interests centre on children's learning in the home environment, and preschool children's varied demonstrations of mathematical thinking. Her work addresses how assessment of children's mathematical thinking informs effective early childhood play-based pedagogical strategies in the years prior to school. Caroline publishes her research at conferences, in peer-reviewed journals such as the Australasian Journal of Early Childhood, International Journal of Early Years Education, Early Childhood Education Journal and Journal of Early Childhood Teacher Education.
In the 1992 Spring–Summer issue of the Melbourne University Gazette, the Vice Chancellor, Professor David Penington, wrote:

Young people entering diverse careers will in many instances need to be multilingual and have a well-developed capacity to understand other nations and cultures. Universities have a major role to play in this process of adjustment. We must equip our students with the necessary language skills and cultural and historical perspective. More broadly, we should use our expertise to influence beneficially the curriculum in primary and secondary education, thereby contributing to the ongoing development of the community.

Nowhere was there greater agreement with the Vice Chancellor's views than among government officials in the People's Republic of China. In 1983, China had made a pass in English compulsory for both high school and university graduation. To implement this policy, English lessons were scheduled daily from kindergarten, and
at university and technical colleges, those not majoring in English had to pass four consecutive years of ‘College English’.

The intensive pursuit of a bilingual workforce, achieved by giving English as privileged a place as Chinese in the education of China’s young citizens, met with a range of responses from those engaged in the education sector. For their part, the Shanghai Bureau of Education proposed teaching content subjects in English and putting English labels on objects in public parks (Shanghai Education Commission Office of Teaching and Research 2000, 67–8). But others, while appreciating that knowing English was important, felt it should not be at the expense of a deeper knowledge of Chinese language and culture coming from studies in classical literature, nor that every student was likely to benefit from such intensive language teaching (Orton 2009, 278–80). In a forum run in 2007 by the Chinese national English-language television channel, China Central Television, Contributor Number 6 expressed the view held by many Chinese: ‘How could we call someone who doesn’t know much about his/her own traditional culture a talented person?’ Others, like Number 144, foresaw benefits in the longer term: ‘English is a weapon … a tool that young people have to master for the sake of the nation’s rejuvenation. Our goal is to replace English with Chinese as an international language as soon as possible. At that time, young generations won’t have to waste time on learning English’ (China Central Television 2007). Three decades after the universal learning of English in China began, two cohorts of students have graduated into the workforce having studied English for eighteen of their twenty-two years of life.

In contemporary Australia, twenty-four years after David Penington’s call, the number of non-Chinese-background Australian adults with superior all-round proficiency in Chinese language has been estimated at fewer than 130 (Daniel Kane, Emeritus Professor of Chinese at Macquarie University, reported in Orton 2016). Furthermore, perhaps half of this group would be older than 55 years of age. Nor is this likely to change greatly in the short term. Nationally, members of the Chinese Language Teachers Federation report the number of non-Chinese-background students taking Chinese at Year 12 has actually fallen 20 per cent in the six years to 2015 (Orton 2016).

Building on their school-learned English, after two and a quarter years in Australia Chinese first-language (L1) speakers from
China are able to tackle university entrance in Australian state-run examinations (Australian State Boards of Study/Curriculum and Assessment Authorities 2015). In 2015 they made up approximately half the Chinese English-speaking Australian high school graduates who entered university. The bulk of the other half were local L1 Chinese home speakers. Considerably less proficient in the language, only some 400 non-Chinese-background high school students also graduated with Year 12 Chinese as a Second Language (L2 Chinese). At university, these students joined some 40,000 Chinese first-language bilinguals entering university in Australia directly from China (Australian Government Department of Education 2015c). As these numbers make evident, Australia will be struggling to match the bilingual Chinese workforce in the coming years, and almost all who do qualify in Australia will be of Chinese background.

A decade ago a report to the British Council on the international status of English pronounced the economic outlook for the monolingual English-speaker to be bleak (Graddol 2006, 6). There is little evidence that those in charge of Australia’s school systems have come to terms with such a future. Nor have Australian universities moved to bolster numbers learning Chinese, despite David Penington’s clear vision for their leading role in Australia’s bilingual future.

There are compelling reasons to include language learning in school curricula as a potentially powerful educational experience and a useful skill. Six main languages are taught in Australian schools: French, German, Italian, Chinese, Japanese and Indonesian. They are the languages and cultures traditionally valued by the English, and/or are the heritage language of many immigrants to Australia, and/or that of an important trading partner or regional neighbour. Chinese is unique among these languages because it alone meets all of these criteria, and is also the language of an emerging world power.

‘In a globalised, China-engaged world, language skills are needed by all involved with China for creating relationships which develop connections and friendships that will enable us to talk easily and at will with many people [and] provide stability and sustainability to over-arching dialogue and summitry’ (Fitzgerald 2014, 28). Monolingual English-speakers risk becoming rare among those holding positions of influence in professions, management and government.
In the twenty-first century, state departments of education need to reconsider their current policy, which is that all languages are equally valuable to learn and that schools are free to choose which language they offer regardless of national needs. Instead, while maintaining other languages, Chinese should be promoted, even privileged, over a sustained period.

This requires that we deal effectively with the very particular demographic and linguistic challenges presented by Chinese language education. To do so, education departments must devise legally justified regulations that prevent classroom learners of Chinese being overwhelmed by home speakers in senior years, and promote new, research-based pedagogies and resources to develop proficient learners who can reap the benefits of engaging with the language, and provide the country with the cohort of experts needed to manage the future.

**Beyond the status quo**

In his 1939 inauguration speech Prime Minister Robert Menzies said, ‘Australia must regard itself as a principal, providing herself with her own information [on the “near north”)’ (Sydney Morning Herald, 27 April 1939). It is no less true today that to be able to communicate, cooperate and compete internationally, Australia must be able to source and judge on her own behalf information from around the globe that is central to her interests. To build a strong, loyal clientele that is being competently served inside or outside Australia, government agencies and companies need be informed of clients’ needs and preferences, of the social and political environment in which clients live and operate, and able to discern trends early. To survive and flourish, not only major companies but also small businesses, shops, hospitality organisations and cultural bodies need to have a bilingual capacity and be interculturally knowledgeable. For this they cannot continue to rely on just what is available to them through other people speaking their language. Future Australians will need varied competence in Chinese. Some will need to use the language fully in their work, and some will just need to be comfortable engaging with Chinese people and able to speak basic Chinese.

In addition to commercial and cultural interactions, Fitzgerald points out:
We need our centres of Chinese Studies to be training more Sinologists who think strategically, think about Australia–China relations, think about China’s relations with the world so that in future, institutions like the ONA [Office of National Assessment] or the Lowy Institute no longer lack a ready supply of China specialists with the mix of qualities and qualifications they require. (2014, 60)

Candidates for such a cohort would have diverse strengths and be drawn from all sectors of the population. They would include students of Chinese and non-Chinese background. Those selected would need to be proficient enough in spoken and written language to take substantive courses in Chinese from their moment of entry to university. To develop this level of language and cultural knowledge by the time they leave school, their study of Chinese would need to begin from the earliest years and continue in a systematic, graduated development throughout their schooling. Developing such a group is nowhere yet visible in the vision of those who could make it a reality.

It is still a novel idea for most native English-speakers that, while owning their mother tongue is a world advantage, knowing no other language is a disadvantage. Faced with this proposition, parents and business leaders have been quick to point out that around the world English is the language of international business and tourism, the common language of heads of state and journalists, and the first choice of most students and their parents. This is essentially a colonial view based on the unspoken assumption of a relationship in which it will be other people who will be seeking information or a relationship that they want, which is available only through English. But this will not always be the case in the future relationships being discussed here, where it might often be the native English-speakers who are seeking information that is vital to them. Relying only on what people can or choose to tell them in English, or put into English for them to read, leaves them in a very passive position in any relationship in which the information is of importance. English might be the language of international business at present, but not all the Chinese that Australians might want to reach can operate comfortably in English, and as China’s power grows, not all might want to. Certainly the governments and businesses of South
Korea, Japan, Thailand and India are taking this prospect seriously and are systematically training huge sectors of their already English-speaking workforce in Chinese.

A second common argument against developing Chinese-language skills broadly in the community is that there are already plenty of bilingual Chinese Australians who can do the interpreting. In fact this is not true, as Chinese-background Australians comprise only 4.5 per cent of the population. In addition, relying on someone else to gather information or represent your interests and views is quite hampering. It is also risky. No matter how technically competent, how loyal or how well intentioned the other person might be, they do not have your experience, your understanding or your capacity for judgement, and might not always know or recognise your interests. Translating is also cumbersome. Except for routine statements, communicating through translators, human or technical, even at its best, is tedious and limiting. It tends to curtail exploration of possibilities, and makes it difficult to build the intimate relationships based on mutual understanding and trust needed to develop new paths of cooperation.

The essential point of language skills is their power in developing relationships of more than superficial depth and the independent access they give to information, some of which is not otherwise available. As the Business Council of Australia puts it, we need to teach Chinese, and other languages, ‘in order to strengthen our ability to engage’ (BCA 2012). Not least, research shows that becoming bilingual develops an individual’s capacity to bear uncertainty, to think laterally and to tolerate difference (see American Council on the Teaching of Foreign Languages 2013)—all essential attributes for successfully participating in intercultural interaction. When everyone else at the international table will have developed these competencies, monolingual Australians will be considerably disadvantaged in cognitive and affective terms.

In a globalised, China-engaged world, ‘well educated, professionally trained, Chinese-English bilingual’ can be expected to become the default criteria for many key positions at work. Yet currently most Australians graduating from university lack the language skills to match their professional education. The status quo
is totally inadequate for participating in the future and protecting national and individual interests.

**Languages policy**

State departments of education in Australia uphold the value of learning ‘any language’ and so leave it to individual schools to choose the particular languages they offer. Data gathered in 2015 show that since federal funding from the National Asian Languages and Studies in Schools Program between 2010 and 2012, there has been a doubling of Chinese-language programs, mostly in primary school,

and increases in international students coming from China. Total figures therefore show healthy increases in the number of students taking Chinese. But states do not monitor the details, so they do not know, for example, whether their figures mean beginning students continue with Chinese or are replaced by new beginners or international students. Nationally the number of students learning Chinese between Years 6 and 9 drops by 75 per cent and continues to decrease throughout secondary school. In 2015, only some 2.4 per cent of the total of 172,878 students learning Chinese nationally were taking Chinese in Year 12, and only an estimated 400 of them were not of Chinese background.

Improving the numbers in Chinese would involve a concerted and sustained effort to tackle two complex challenges unique to it among the six most commonly taught school languages. The first is the ratio of first-language-speaking students to second-language learners in the school system, and the second is the nature of Chinese language itself.

**Student demographics**

Unique among the most commonly taught languages in Australian schools, there is a large number of local students who speak Chinese at home. Working alongside classmates who already speak the language presents one of the greatest deterrents to classroom learners of Chinese as a Second Language (L2) continuing. Not only are they constantly outdone in every task despite their best efforts but also in the rank-ordered Year 12 assessment it is effectively impossible for them to do well in competition with L1 students. The
result has been that classroom learners in even the strongest programs have begun to quit before Year 12, and many others decide not even to begin. Rich programs that have been built up over decades are at risk as hardworking, keen and able learners of Chinese opt out of a subject they love because they have no hope of doing well when outnumbered 6:1 by students who have spoken Chinese since birth. Home speakers do also present in the other five commonly taught languages, but their numbers are such that at least half of the top places can still be filled by L2 learners. In Chinese it is the overwhelming numbers of home speakers, not simply their proficiency, that makes for a qualitatively different situation.

This problem has begun to be successfully addressed in New South Wales and Western Australia. Both offer a separate senior years course and examination for home speakers (Heritage Chinese) and, most importantly, have worded the regulations for cohort allocation finely enough to ensure that those with L1 language skills are ineligible to take the L2 course, designed for those who have only learned the language in a classroom. Other states, notably Victoria—home to more than half the national Chinese Year 12 cohort—still have regulations that allow most home speakers to take L2 Chinese. Fear of threatened legal reprisals by Chinese parents has prevented Victorian regulations from being changed. The validity of this position has been challenged by the Commonwealth Antidiscrimination Commissioner (Lane 2011) and expert staff in the Melbourne Law School (Gaze 2012), and when such a claim was made to the Human Rights Commission in 2015 by Chinese-background parents from Western Australia, it was rejected (West Australian 2015). In 2015 the Victorian Commissioner for Human Rights and Equal Opportunities wrote an extensive memorandum on the matter, stating that no direct racial discrimination was involved, and that with respect to indirect discrimination, the Victorian Curriculum and Assessment Authority (VCAA) could present arguments to show special circumstances, or that any negative outcome would be outweighed by the seriousness of the negative consequences of not proceeding with the tighter regulations (Orton 2016, 152–8). To date VCAA has declined to take up this option.

The bilingual capacity of home-speaker students is a national and personal asset, and the current situation is a great waste of their talents. The Australian Curriculum for Languages recognises that
home speakers are not only more proficient than classroom learners but also on a totally separate language development trajectory with very particular learning needs of their own. However, there is nothing for them to learn in Year 12 L2 Chinese (and most actually sit the subject in Year 11). As a result, they often finish school with advanced but not entirely adult language skills. In line with the Australian Curriculum, states should ensure that in their own right these students are provided with an appropriate education in Chinese language that expands their capacities.

At a time when Australia needs its best students learning Chinese in combination with substantive content areas of study—when in their own interest students would do well to be familiar and better with Chinese thinking, Chinese people and the language—the country cannot afford to have participation rates in L2 Chinese in the senior years steadily dropping. But until the particular demographics of Chinese learners are squarely dealt with nationally, there can be no real future for the study of Chinese as a Second Language in schools.

**The nature of the language**

Even without the Year 12 issue, the development of Chinese in Australian schools faces considerable challenges that derive from the nature of the language itself. Learning any second language requires some cognitive adjustment to new rhythm, sounds and forms and dedicated effort to absorb a large volume of vocabulary and new ways of encoding the language in writing. Compared to another European language, Chinese demands of the English-speaking learner relatively small adjustments in form, but it presents four challenges that make progress in acquisition constantly difficult: spoken Chinese is tonal; the language is written in characters; the lexicon is composed from a set of only 1200 syllables (many words in their own right, they also form the syllables of compound words); and Chinese contains no English cognates and a great many homophones.

Being tonal means that, unlike English, despite the common sounds ‘ma’ recurring in each, the Chinese words mā, má, mǎ and mà have very different meanings (mother, hemp, horse, curse) because they are said in different levels of pitch and contour. Tonal proficiency is very challenging for all but very young foreign students to acquire. Characters encode meaning, not sound, and each syllable
in Chinese has its own character. Learning them presents a huge burden on memory. Characters receive the greatest attention in Chinese teaching, and the difficulties students have in remembering them causes teachers the most worry. By contrast, the challenge of Chinese vocabulary receives very little attention, yet acquiring Chinese vocabulary is a considerably greater task than learning the vocabulary of another European language because Chinese words have some features that make them very hard to grasp. First, they are composed of only a small variety of sounds. Second, there is a huge number of homophones (represented in writing by different characters); many common words heard in speech might have three or four possible meanings, and until tone becomes more clearly perceived, students may hear very large sets of words as all the same—for example, the word

- shī for 师 teacher
- shí for 十 ten, 时 time, 食 food, 识 recognise
- shǐ for 使 to make, and
- shì for 是 is, 视 vision, 事 matter, 试 test and 世 world.

Third, Chinese words are hard to assimilate because they look unfamiliar: they are very short, many only two letters long, and nearly 24 per cent of them begin with the letters X or Y or Z, compared to only 0.6 per cent of English words. Fourth, there are virtually no cognates, so every word must be learned new and its character learned as well. A comparison with Italian as an example shows the incommensurate burden on memory of learning the same list of vocabulary in the two languages (table 8.1).

**Table 8.1: Chinese and Italian vocabulary lists**

<table>
<thead>
<tr>
<th>Chinese</th>
<th>Italian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shùxué</td>
<td>Matematica</td>
</tr>
<tr>
<td>Shēngwù</td>
<td>Biologia</td>
</tr>
<tr>
<td>Wūlǐ</td>
<td>Fisica</td>
</tr>
<tr>
<td>Yīnyuè</td>
<td>Musica</td>
</tr>
<tr>
<td>Lǐshí</td>
<td>Storia</td>
</tr>
<tr>
<td>Wùdāo</td>
<td>Danza</td>
</tr>
<tr>
<td>Jīsuànjī</td>
<td>Computer</td>
</tr>
</tbody>
</table>

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New pathways to student achievement
The key to success in conquering these challenges is for teachers and learners to appreciate that if students just rely on habits learned from infancy to school in developing their English skills, they will never become proficient in Chinese. Instead, mastery of Chinese requires the learner gradually to develop some new and very basic motor skills involving the vocalic system, eye movements and cognitive skills to support processing and remembering of the new language. One reason for the poor progress many students make is that the extended foundation that needs to be developed from the start has rarely been appreciated and hence the new base is almost never thoroughly constructed. This problem is compounded by the fact that, unique among the commonly taught second languages, a very high proportion (94 per cent) of teachers of Chinese are L1 speakers themselves and, like native speakers of all languages, are blithely unaware of the challenges their language presents to foreign learners unless trained.

In line with national professional standards for language teachers (AFMLTA 2005), tackling the challenges of Chinese successfully requires a teacher with deep linguistic knowledge of Chinese combined with penetrating understanding of the carefully scaffolded learning tasks needed by the student to gain entry to the new phonological, orthographic and morphological systems, and a repertoire of techniques for helping the learners shift from reliance on habits developed to conquer these systems in English and begin to work towards mastery of perception and production of Chinese. However, to date, to become a registered teacher of Chinese candidates study in generic modern languages method courses in faculties of education, but receive no direct training in teaching the specifics of their language. Furthermore, although most secondary teachers of Chinese spend more time teaching home-speaker and international L1 students than L2 students, no teacher preparation courses are available to provide guidance in teaching at these advanced levels. In addition to this, even in dedicated masters courses in L2 Chinese offered in China, and in resources produced everywhere, the specific challenges of L2 Chinese and the learning needs they create are generally poorly understood. Attention in courses and resources is directed instead to descriptions of the language. As a result, worldwide, Chinese is presented to learners much as another European
language would be presented to them, with the expectation that they already have all they need to learn it. They do not—and a sense that they are not making much progress is a very common deterrent to continuing. Ninety-four per cent of school students who begin Chinese quit and, typically, about 50 per cent of university students drop out each year, leaving only some 12 per cent of a cohort to go into final year.

The future
Mike Smith, former CEO of the ANZ bank, raised for discussion the national ‘lack of attention’ to ‘an over-arching view of the Australia–China relationship and its long-term health’ since the mid-2000s and more (FitzGerald 2014). As part of rectifying this, a drive for stronger language programs with numbers and proficiency achievements well above what is now common must be renewed, and the education of a top-level group needs to become a priority on grounds of national interest.

Bilingual Chinese programs, in which 30 or 40 per cent of the Foundation to Year 9 curriculum is taught only in Chinese and intensive Chinese continues to Year 12, offer the only chance to develop the kind of proficiency needed for students to be using the language by university entrance. In one such program in inner-city Melbourne, home-speakers comprise a tiny percentage of each class group of twenty-four, but all students leave for secondary school having mastered close to a thousand characters, which is double the Year 12 L2 standard. For a very long time, there was nowhere for such students to go to continue study of the language at an appropriate level and depth. In 2014 a new high school opened, offering secondary courses in History and Geography, Science and Chinese language development, all taught strictly in Chinese only. Even in its first year, students continuing from bilingual primary school finished Year 7 able to produce connected accounts of a range of scientific and historical processes and phenomena, and read and write efficiently about them in characters.

Although still embryonic, these combined primary and secondary programs provide substantial concrete evidence that when Chinese is taught meaningfully and intensively, it is highly learnable by English-speakers and that having fluent, proficient
users of L2 Chinese graduating in Year 12 can be a viable proposition. These are not simple programs to run. There are no textbooks or published resources to support the teaching of school subjects in L2 Chinese. The success of these bilingual programs is totally dependent on the participating teachers shouldering considerable workloads. The future of these programs remains fragile. Supporting and extending them is a priority and doing so would barely catch Australia up with the United States, where more than 300 such programs are running.

In sum, articulated primary and secondary programs in Victoria are able to develop the competent learners of Chinese that are vital to Australia’s capacity to make our own way in the Asian century. They and other innovative programs around the country are also proving that the past failures to achieve widespread success in Chinese teaching and learning need not be endlessly repeated. What is needed for improvement is known and their pioneering work could be shared methodically using online teacher courses and coaching, along with face-to-face support and sharing.

To implement such a proposal would require coordinated action from state education jurisdictions, assessment authorities and universities. It would not require excessive additional funds. The essential catalyst to change would be a sober appreciation of where Australia now stands and a public acknowledgement of the problem and the desire to change it. For state education departments and other school jurisdictions it would mean accepting that times have changed and that, just like China in 1983, policy now needs to recognise that one language should be promoted and protected, not to the exclusion of other languages but as a language of unique significance. The action strategies that would flow from such a policy would be to:

1 Improve retention and quality for learners in all streams by:
   • Creating an acceptable form of wording that will make Chinese as a Second Language in Years 11 and 12 legally accessible to classroom learners only. Providing home-speaker background students with a high-quality course to develop their Chinese appropriately.
   • Developing a cohort of local high school graduates from among
home-speakers and classroom learners who are super-proficient in Chinese, to serve national security and development needs, by establishing a small, national network of bilingual primary and secondary programs.

2 **Negotiate with universities to improve the quality of teaching by:**
   - Testing all teacher candidates in English and Chinese
   - Offering an incentive to non-Chinese-background speakers to train as teachers of the language
   - Providing pre- and post-service teachers with dedicated training in Chinese language teaching—a first- and second-stage certificate, taught nationally online
   - Introducing a teacher training certificate for those teaching international L1 and local home speaker (Heritage) levels.

3 **Create resources that support bilingual learning:**
   - Developing new resources aligned with the perspectives of the Australian Curriculum for Language—resources that develop students’ intellectual capability, bilingual perspective and capacity to mediate between two languages.
   - A national body could also be established that, starting with a deep appreciation of the situation and the task, considerable authority and a long-term view of success, would drive the new agenda beyond the next election. It is unclear yet where the leadership needed to initiate such a project might come from.

**Biography**

*Jane Orton* is an Honorary Fellow at the University of Melbourne where she was director of the Chinese Teacher Training Centre, a national research centre for Chinese language teaching, from 2009-2015, and where prior to that she coordinated Modern Languages Education for 20 years. Jane has researched widely in the learning of Chinese as a Second Language, especially in developing oral skills and in Chinese teacher education. In 2008 and again in 2016 Jane published a comprehensive report on the teaching of Chinese in Australian schools. Jane is a Board member of the international Chinese as a Second Language Research Association. Her recent publications include Chinese Language Education: Teacher Training,

Notes
1 Data in this section were provided in 2015 by the state and territory government departments of education, independent schools and Catholic education branches, and board of studies/curriculum and assessment authority.
Chapter 9
Lying on the floor
Why Australia can lead the world in music education

_Pip Robinson and Ros McMillan_

Australia, a country where communities are separated by vast distances, is also geographically isolated from the rest of the world. These conditions have spurred innovation, leading to life-saving discoveries in medical research, new methods of metal extraction and the invention of products ranging from the Black Box flight recorder to the ‘ute’ (utility truck). With more than 200 languages spoken and one in four Australians born overseas, Australia’s national identity, including the unique culture of its Indigenous people, is one of the most diverse on earth.

As a nation, we are capable of similar innovation and creativity in the arts and education. For example, in the second half of the twentieth-century Australia saw the invention of the Fairlight Computer musical instrument (ground-breaking in its use of sound ‘sampling’) and the founding of the Bangarra Dance Theatre, Australia’s internationally acclaimed professional Indigenous contemporary dance company (Johnson 2003, 345). Integrating elements of Aboriginal traditional music into rock-music settings is a strong stylistic feature of the Indigenous band Yothu Yindi (Dunbar-Hall 2003, 337), a group that has provided powerful inspiration to
Indigenous people the world over (Geia 2003, 339). In music education, the Jazz and Improvisation Studies course at the University of Melbourne is unique in Australia, and possibly the world, with its philosophy that students should aim to develop their own musical 'voice', their own unique sound (Brown 1979, 66).

In the early twenty-first century there are good reasons to believe that music education, and the arts in general, should play a more pivotal role in schooling. The development of creative, critical, collaborative and intercultural knowledge and skills is acknowledged as vital to the future success of our societies and economies. The understanding, capability and experiences that can be developed through music education have important benefits, including their own inherent value to those who experience them.

In this chapter we argue that Australia's diversity, distinctiveness and capacity for innovation could enable us to become world leaders in music education. However, realising such a goal would require us to confront practices and assumptions that have fragmented and marginalised music education over the last century, leading to a situation where much of what is practised in schools is disconnected from the creative power of music and arts learning. To address this situation and become world-leading requires us to embrace opportunities for collaboration and development that go beyond the traditional conceptual, professional and institutional structures bequeathed to Australia by our history.

Three crucial shifts are needed. First, creative learning must be embedded in the curriculum and everyday practice of music education, so that all students develop their own musical ideas, expression and collaborations alongside the skills of audiating and performing. Second, the role of teachers as music educators must evolve from directing performance to facilitating and scaffolding this wider set of creative experiences. Teacher education programs should therefore be redesigned to embrace more diverse sources of music and to nurture living connections between musical knowledge, professional performance and the writing of music. Third, acknowledging cultural difference within musical systems and sharing this knowledge with broader communities would enliven knowledge, learning and culture for all students. The music that students can relate to and create themselves—the music that they
engage in informally and outside the school setting—should be pivotal to the curriculum of the future.

**A creative curriculum**

Australia’s approach to music education followed that of Great Britain. In the early twentieth century, musical appreciation and singing were the staples of the music curriculum. Although some independent schools offered instrumental tuition, music classes until mid-century generally consisted of listening to the ‘Great Masters’—such as Bach, Mozart and Beethoven—and singing traditional songs, mostly folksongs, plus hymns in schools with a religious affiliation. The performance of music was usually confined to school choirs.

Little changed until the late 1960s when the work of music educators from around the world became known. These included the Englishman Peter Maxwell Davies and the Canadian R. Murray Schafer, both composers who believed that creating music should be just as important as its appreciation (listening and analysing) in the school curriculum. At a national music education conference in Australia in 1965, Maxwell Davies was asked to state the ‘supreme aim’ of his work as a music teacher. His reply was forthright: ‘... to liberate music education ... from the chains ... which are imposed in ignorance on the part of those who ... are not aware of music as a creative thing as well as a reproductive thing’ (1965, 189). Schafer, who visited Australia in 1971, demonstrated his philosophy through creative music-making workshops, where he challenged the passive nature of much musical learning. He wrote: ‘As a practising musician I have come to realise that one learns about sound only by making sound, about music only by making music ... The sounds produced may be crude, or lack and form and grace, but they are ours’ (1986, 47).

Another program with creativity at its heart was the Manhattanville Music Curriculum Program (MMCP), devised in the United States in 1965. In discussing improvisation, one of the program’s founders described it as ‘a most prevalent form of musicianship’ and an experience that was ‘vital in establishing a sense of authenticity and relevance in education’ (1991, 192).

These visitors and programs generated an enthusiastic response. Doreen Bridges, a doyenne of Australian music education
Lying on the floor

(Comte 1992), noted that such projects as the Manhattanville Program showed that music teaching in the USA ‘is at last coming in for the kind of uninhibited re-assessment that has caused a revolution in the teaching of Mathematics and Science ... How long must we wait for a similar upheaval here?’ she asked (Bridges 1968, 23). Keith Humble, a prominent Australian composer, argued that creative activities had been neglected in school music and that ‘writing music’, far from supplanting the conventional curriculum, completed the triangle of playing/singing and listening/hearing. He was an early supporter of the concept of ‘ownership’ through creative learning, arguing that the sounds produced by students through this approach become the ‘exclusive property of those students participating’. This, he believed, would provide the ‘necessary stimuli to combat the fatigue of learning yesterday’s skills’ (Humble 1969:13).

In the early 1970s, teacher training institutions were established with departmental heads who believed in the value of creative music-making. At Burwood Teachers’ College in Melbourne, Frank Higgins developed a curriculum based on ‘a process of discovery and guided experimentation’ (Ferris 2002, 114). This approach was also embraced at Melbourne State College by Geoff D’Ombrain (Burke 2014), enabling pre-service music teachers to investigate ideas being championed by such educators as John Holt, A.S. Neill and Paul Goodman (Miller 2002).

The next major advance towards acceptance of creative activities as an essential aspect of music learning came at the end of the 1980s, with an attempt to develop National Statements and Profiles in eight Key Learning Areas (KLAs) of the school curriculum. The authors of the arts KLA documents, Lee Emery and Geoff Hammond, both visual artists and arts educators divided the learning area into five ‘strands’: dance, drama, media studies, music and visual arts (Curriculum Corporation 1994). They proposed that each strand should also contain the same three organising principles of Creating and Making, Arts Criticism and Aesthetics, and Past and Present Contexts.

Through this work, three components of creative music-making—composing, arranging and improvising—were officially endorsed for the first time. As the writers noted in the ‘Statement on the arts’ in schools: ‘Music in education should reflect the ways
music is used in society, with students learning by involvement in creating, experimenting, recreating, discussing, researching, listening, analysing and appraising music’ (Curriculum Corporation 1994, 21).

This ‘opening up’ of the music curriculum coincided with new thinking on the place of the arts in Australian society, symbolised by the launch of Prime Minister Paul Keating’s 1994 policy document ‘Creative Nation’. Where the arts had previously been defined by the ‘high art’ of opera, ballet and national orchestras, ‘Creative Nation’ included television and film, radio, school programs, libraries and information technology. On the twentieth anniversary of Keating’s speech, Rebecca Hawkings argued that Australia’s first Commonwealth cultural policy document ‘forever changed the way that Australians saw themselves. Culture was now an economic concern, the arts were for all Australians, and the nation could no longer so rigidly define its national identity through its British colonial past’ (Hawkings 2014).

A change of federal government saw the proposed national statements and profiles for schooling abandoned. It took another two decades before the Australian Curriculum, Assessment and Reporting Authority (ACARA) developed a national framework for the Australian Curriculum under the aegis of the Gillard government.

ACARA notes that the arts can engage, inspire and enrich all students, ‘exciting the imagination and encouraging them to create, design, represent, communicate and share their imagined and conceptual ideas, emotions, observations and experiences’ (ACARA, 2015).

Problems in music education
During the last half century, public policy on arts, music and creative education has developed a long way towards embracing the role of creativity in the nation’s development. However, the existence of policy does not mean that it is enacted in practice. A number of obstacles currently prevent what could be a key area of creative development from flourishing fully.

First among the obstacles is curriculum content. As Teachout (2012, 686) notes, ‘For the most part, today’s teachers were once students learning the same materials in the same ways that they are
teaching today.’ Teachout’s point is reflected in the choice of content in many school programs today. ‘Classical’ music has dominated the curriculum since recording devices provided the means for musical appreciation early in the twentieth century, and while it has provided a vast repertoire of sublime music, many other genres developed during the twentieth century. Louis Armstrong’s pivotal role in the history of jazz and its influence on Tin Pan Alley led to the rock and roll movement of the 1950s and subsequently to today’s ‘popular’ music, which dominates the music heard in the Western world. Other styles of music became widely known, including non-Western (world) music and folk music, while new technology has created a vast and almost unimaginable sound world. Yet classical music is still regarded by many as the ‘correct’ music to study, and the instrumental tuition undertaken by many thousands of school students is overwhelmingly ‘classical’, boosted by the syllabi of the Australian Music Examinations Board (AMEB 2016).

This narrow focus has been reinforced by university music departments, whose programs are almost exclusively focused on the re-creation of music, much of it pre-twentieth century. Any form of creative activity is usually confined to specialist composition streams. The demise of teacher training institutions in the early 1990s did nothing to help and, in the case of Victoria, proved a major setback for arts education generally and music education particularly. Music courses in these institutions had emphasised the need for all students to experience a syllabus catering to the widest interests, including creative work and the performance of popular and world musics. When most of these institutions were absorbed by universities, trainee teachers became subject once again to the tenets of the classical music tradition.

Today, well into the twenty-first century, there is once again a diversity of tertiary institutions offering music programs, yet an obvious dilemma is evident in the approaches taken to teacher education. While courses in the former teachers’ colleges integrated music and education studies concurrently, today most school music teaching qualifications are obtained through an undergraduate music degree followed by post-graduate teaching studies. The results of undergraduate studies are usually the only criterion for selection into teacher training programs for music education. As very few
institutions interview candidates to assess their suitability, there is little scrutiny of the philosophy of music education that students bring.

The situation in schools is complex. Programs where creative activities coexist with performing and listening certainly occur, although some teachers still regard creativity as ‘mucking around’ and not ‘real’ learning. However, even when teachers would like to involve their students in creative activities, often they have never been taught how to incorporate them into teaching and learning. A further hurdle is assessment, which in music education is usually required in a format that allows no room to evaluate students’ personal expressive activity. The NAPLAN assessment regime does nothing to encourage wider creative learning.

Information technology has great potential to engage students in creating their own music. Certainly technology has led to the production of programs that assist them to compose, such as the widely used GarageBand. A more advanced composition program is Ableton, where students can sample sounds from an almost infinite set of sound sources. The music they produce certainly satisfies the Generating or Creating focus of the Australian (Music) Curriculum, but too often students fail to complete the expected outcome of this focus (Cotton 2016); that is, ‘to produce new configurations of meaning to communicate to audiences’ (ACARA 2015). Re-creating easily found sounds is often the outcome with students making little effort to develop their ‘own’ voice, an important goal of creative music-making.

As Brian Brown, founder of the University of Melbourne’s Jazz and Improvisation Studies course, has written (1979, 66): ‘Listen to any improvisation of Louis Armstrong, Charlie Parker, Miles Davis or John Coltrane to understand the effect of personality in a creative performance. [Creative music] in its most exciting and meaningful sense is an act of the artist being him or herself, innovative, challenging and very personal.’

Other barriers
Teaching material from other countries in recent decades has also had a profound influence on the nature of the music curriculum in many Australian schools. These ‘methods of teaching’ include those of the Hungarian composer Zoltan Kodaly (1882–1967) and the
Japanese music educator Shinichi Suzuki (1898–1998). Proponents of these are, in many cases, enthusiastic and efficient teachers providing intensive workshops that cover every aspect of a child's musical learning. These highly codified methods are particularly attractive to teachers because they are graded from beginners to advanced, with distinctive goals and accompanying assessment methods. However, they provide little or no scope for individual expression, except in recreating the music of, usually, the ‘Great Masters’.

The Kodaly and Suzuki methods have little to do with the outcomes of current Australian curricula documents. The concept of students creating their own music is not an aspect of the Suzuki Method. Although Kodaly endorsed creativity as an important aspect of musical learning, he believed it was ‘necessary to have a musical vocabulary in order to create music … One must be able to hear, think and write notes and know how to organize them into patterns, phrases and forms in order to compose’ (Choksy et al. 1986, 337). With music compulsory only in Year 7 in many schools, the chances of students gaining this knowledge in a year is negligible, yet music teaching advertisements frequently require a teacher with ‘Kodaly experience’.

Other popular teaching material emanates from the United States, a country whose music education programs tend to focus on reproducing music through choral, orchestral or band performance. American ‘clinicians’, as they are termed, appear regularly at Australian conferences, their sponsoring companies featuring prominently in accompanying trade displays. The products of these educators provide little chance for students to learn ‘the stylistic conventions to compose music’, a major aim of the Australian Curriculum (ACARA 2016).

With so many circumstances discouraging the inclusion of compositional activities, many teachers find little reason to embrace a curriculum focused on students’ creative outcomes. There is no other subject in the school curriculum that spans such a variety of genres and processes, leading to a vast spread of understandings and outcomes. When these factors are combined, a lively, empowering form of music education for all Australian students becomes a distant prospect.
Possible solutions
If music education is to be relevant in the twenty-first century and to achieve the substantive goals of the Australian curriculum, major change is needed. We argue that action must occur in the areas of student engagement, the role of the teacher and community engagement.

Student engagement
Paramount to a successful education system is student engagement. Dillon (2007, 88–9) argues that humans are playful beings and that playing with and organising sound is widespread and universal among human cultures: ‘If children will naturally make sounds and be playful with sound and expressive with sound, why do so many [adults] have such bad memories of school music teachers and classes?’

Dillon suggests that this is caused by some combination of teachers’ values, the curriculum and the approach or method, noting: ‘At the very least we should not get in the way of the intrinsic nature of music activity [but] aim to build on the child’s natural aesthetic responses—create environments where they can be both playful with artistic materials and learn.’

Musical experiences are often social in nature, as well as educational. Skills developed by students through collaborative, interactive ensemble and group playing and creating can enable them to negotiate the difficulties of social interaction. Through many years of work in schools, we have seen how musical ensembles allow children and adolescents to flourish. For example, individuality and personal quirkiness is accepted more readily in musical groups than in traditional school environments.

The British music educator Lucy Green espouses the concept of informal learning as a means of engaging students in school music (2002). In her work she draws on the creative music movement of the 1960s and 1970s in combination with ideas of how popular musicians learn, such as in ‘garage bands’. Those teachers who include informal learning activities and approaches in their curricula find a range of benefits from greater student engagement in music learning to improvements in aural and group-working skills.
Robinson (2013) researched these methods through case studies in two Victorian schools, finding that self-directed group work, scaffolded with stated and expected outcomes, enabled students to gain significant breadth in their musical knowledge. Informal projects allowed less ‘musically proficient’ students to engage on an equal footing with other students. Robinson also found that allowing students to sit on desks and explore their physical space informally led to greater creative development and cohesive group work.

Overall, the study found that the groups were happy with their musical outcomes and that these outweighed personal success, despite imperfections. ‘Perfection’ was seen as less important than credibility. Mistakes were acceptable, and students showed acceptance of others, rather than displaying hierarchical behaviour. Thus a broad picture of peaceful social negotiation was achieved, with good results all round.²

Research by Boyle (2013), based on her classroom music program, found an overwhelmingly positive response from students to the creative activities they encountered. They expressed pleasure in both their personal accomplishments and successful group collaboration. One student wrote: ‘When I was working with my group it was awesome … when we do this work I feel really calm and peaceful. Obviously I love doing this work’ (p. 43).

In most groups, there was also evidence of a more relaxed approach to class activities and a greater willingness to experiment. Another student observed: ‘We started slow and didn’t know what to do, we started to fool around a bit so the first part of the lesson wasn’t very progressive. Then we started to get ideas from us fooling around and just playing anything on the instruments’ (Boyle 2013, 39).

Wiggins (2007, 457) suggests that in this type of learning we can assume that ‘what may appear chaotic is actually musical thinking in action where students are “trying out” or “finding” their ideas on instruments, judging their merit and then either adopting or discarding them’. While sources of creative thought vary, sometimes emerging independently and at other times a product of collaboration, two important results of this type of work are more cohesive relationships among peers and assisting students to develop greater self-esteem.
Although business leaders constantly express a need for innovative thinking, they need look no further than arts education that has creativity at its heart. Yet for the arts to truly flourish in the school education system, they must be acknowledged as ‘equal’ in value to literacy and numeracy.

We believe that if data showing student learning experience in the arts in both the formal curriculum and co-curricular settings was collected and publicly shared, along with data on all other curriculum areas, it would show the influence of music in the lives of young people.

**The role of the teacher**

If change is to occur, the practice of teachers is obviously central. Traditionally, music educators have a tertiary qualification that has usually focused on the development of high-level performers. Although this is important in the music industry, jobs are limited, and many graduates find themselves turning to a career in teaching as an alternative to performing.

Changing the self-perception of music educators would strengthen their intrinsic belief in the role they play. A broader belief in the importance of music for every member of society needs to be engendered in musicians at all ages. This begins in schools, where music could be more highly valued as a social tool and for its role in creative expression. For this to occur, however, the teacher must operate as a facilitator of student action and not a director of those actions. This aligns with Carl Rogers’ view of the music educator's role as ‘the facilitation of learning’, which he suggested ‘may hold constructive, tentative, changing process answers to some of the deepest perplexities that beset humankind today’ (1969, 121). Rogers believed it was essential that teachers saw themselves as mentors who guide rather than experts who tell, in order to support authentic ‘unforced learning’ among students.

Recent research by Robinson and Boyle confirms the importance of the teacher supporting students to find their own direction creatively. Robinson noted that too often teachers seem programmed to intervene in student learning and that this actually interfered with the outcomes of less formal, self-directed student activities (2013, 15). Boyle reflected:
This study has made me realise the importance of leaving students alone to work things out for themselves and the enormous untapped productivity of informal learning. While at first sight ‘lying on the floor’ and other apparently unproductive behaviours could be interpreted as avoiding creative endeavour, it has become clear to me that they are, in fact, an important part of the creative process. (2013, 56)

In a creative music program, while educators may initiate the process, they are secondary to it in that students must own that process. More than forty years ago Murray Schafer wrote that ‘in a class programmed for creativity the teacher must plan for his [sic] own extinction’ (1986, 245).

**Community engagement**
As Australia’s school population becomes more diverse, pre-service music teacher education needs to give the next generation of teachers pedagogical tools to cater for the diversity they will encounter and to make more of the potential for creative learning. Undergraduate and postgraduate music education should draw from a wider selection of genres, including classical, folk, world, jazz and contemporary popular styles of music.

This would enable teachers to help their students identify and analyse music of different styles and learn how to evaluate the musical choices ‘they and others from different cultures, times and places make to communicate meaning as performers and composers’ (ACARA 2016).

Music lecturers with recent school experience who loved that experience are sorely needed in tertiary institutions. Enthusing teacher trainees with stories and direct experience of students who are fully immersed in creative musical learning is the key to connecting passionate students, fulfilled teachers and enthusiastic education lecturers.

Engagement with schools by the wider community is a relatively unexplored area of music education. Given Australia’s cultural diversity, many students encounter rich musical experiences in their specific cultural community settings. If more schools brought
cultural practitioners and their knowledge from local communities into the classroom, students would experience greater musical diversity and deeper musical understanding.

Cultural engagement is an aspect of most people’s lives. In its 2015 report the Australia Council for the Arts found that half of this country’s population is involved in some type of creative arts practice, while almost all Australians ‘consume at least one form of art’. Data from the Council’s 2013 Arts Participation Survey showed that Australians’ engagement with the arts is associated with a significant positive increase in life satisfaction (Smithies and Fujiwara 2015).

Relevant research in this area was undertaken by McPherson (1993). In a study of 728 adults, he found that of those who had played by ear or improvised as music students when they were young, 58 per cent were still playing an instrument as adults. This was in comparison to 42 per cent of adults who were no longer playing and who had not done so as students.

Conclusion

Australia, with its diverse and developing culture from our Indigenous population’s 40,000 years of culture and traditions and two centuries of immigration, is a unique country. It has seen waves of migration from Europe, South America, Asia and more recently the Middle East and Africa due to war, hardship and economic opportunities. This diversity is a great strength for the future enabling us to draw on the art forms and cultural knowledge of the population to develop educational experiences that can enrich society and create opportunities for creative expression for all Australians. Education clearly holds the key to the development of a ‘creative nation’, especially activities and approaches that embrace diverse music and arts programs.

For music education to make the fullest contribution, different thinking is required on several levels. In a digital age in which music can be downloaded on demand, most people engage with music in dramatically different ways from a century ago. Music education also needs to change. Educational approaches and pedagogies that enable students to participate in relevant, contemporary musical experiences are essential to enliven music in the curriculum. Creative
Learning activities are pivotal to the development of the next generation.

Developing music programs that allow all students to explore their creative abilities is also important for fulfilling the goals of Australia’s most recent National Cultural Policy, *Creative Australia* (2013). In her introduction to the document, then Prime Minister Julia Gillard wrote of her ‘great confidence in the men and women who constitute our nation’s creative sector’. She noted that their ‘sense of daring and imagination, their pursuit of excellence, their creative spirit and their willingness to share their gifts have profoundly shaped and uplifted Australian society’.

If we are to instil the same ‘sense of daring and imagination’ in our students, curricular change is needed. Much current music education remains irrelevant to the interests and needs of students in secondary schools. Musical literacy is important, but theoretical models from the nineteenth century need to be replaced with relevant ‘living’ musical tools and skills. Acknowledging cultural difference within musical systems and sharing this knowledge through broader communities would enliven cultural understanding for all students.

The music that students can relate to and create themselves—the music that they engage in informally and outside the school setting—should be pivotal to curricula of the future. Music educators need to see the relevance of creative musical expression not only for their students’ future but also, in Julia Gillard’s words, to ensure that Australia ‘continues to be a source of inspiration to our nation and to the world’.

**Biography**

Pip Robinson is a lecturer in pre-service teacher education and International Baccalaureate education at the Melbourne Graduate School of Education. She has over 35 years experience teaching music at primary, secondary and tertiary levels. She is a senior music examiner for the IB Diploma Programme and is currently Chief Assessor of the Externally-assessed Task component of Music Style and Composition for the Victorian Certificate of Education. She has published on issues related to musical culture, IB education and...
informal pedagogies in the music classroom. Her research interests include early career teacher practices and musical culture.

**Dr Ros McMillan** is Honorary Senior Fellow in Arts Education at the Melbourne Graduate School of Education, an appointment that followed her retirement in 2005 after 11 years as Head of Music Education. In fifty-six years of teaching she established the Yamaha Music Courses in Australia, was Director of Music at PLC Melbourne and lectured in the former Melbourne College of Advanced Education and the University of Melbourne's Faculties of Music and Education. Ros has presented papers and workshops at fifty-three national and international conferences and has written seven school music texts and over forty chapters and articles in publications including the *British Journal of Music Education*. Her discography includes thirty CDs and LPs, twenty-six playing keyboards in Brian Brown Ensemble recordings.

**Note**
1. The eight KLAs were English, mathematics, science, technology, languages other than English, health and physical education, studies of society and environment, and the arts.
2. Although it is beyond the scope of this chapter, the issue of the value of the current situation of norm-referenced, exit-level examinations and assessments and a culture of competition that may result is nevertheless an area that could be profitably examined.
Early school leaving places vulnerable young people at greater risk of long-term unemployment, dependence on welfare, mental health issues and social exclusion (Robinson and Meredith 2013). Mainstream educational settings currently struggle to include and meet the needs of these students. In Victoria, an estimated 5.5 per cent of early school-leavers have not reconnected with employment or training in 2016; significantly higher figures are reported in some areas (Wangaratta, for example) (State Government of Victoria 2016a, 2016b). For many of these young people, there is a familiar set of factors at play: their initial school experience is one of rejection, and they have experienced long-term socioeconomic disadvantage, complex family relationships to navigate, a difficult history of involvement with multiple government agencies and, in many cases, mental health problems.

Young people themselves have highlighted the marginalising and disempowering capacity of many schools, characterised by: a lack of student voice and individual recognition (i.e. not feeling listened to, or feeling ignored or ‘lost’ in large and impersonal secondary school environments); inequity of access to additional
learning opportunities like excursions and extras (often owing to family poverty); and inadequate help from teachers. Schools also often lack the capacity adequately to accommodate more challenging students and, in some cases, fail to perceive or understand the personal challenges that a child may be facing (Campbell, McGuire and Stockley 2012; Phillips 2011). Smyth, McInerney and Fish (2013) cite the frustration of some young people who find themselves expected to fit into ‘static, container-like classrooms’ (p. 301), inhaling ‘middle-class’ learning experiences that are irrelevant to lives often characterised by high mobility, family dysfunction, unemployment and mental health problems. At the same time, the attempts of schools to increase their flexibility and provide meaningful learning experiences constructed around the students are often hamstrung by the imperative to achieve standardised outcomes in areas like curriculum and assessment.

A recent survey found that around 70 000 young people in Australia are using alternative education programs (te Riele 2014). These young people return to (or retain themselves in) education by attending alternative learning options provided locally. The pattern of provision varies widely between different regions, as there is no systemic response to provision of education for young people at the margins. How then can educational systems better cater for the needs of these young people?

This chapter examines the growth of alternative educational settings in Australia, some of their common characteristics, and the issues of practice and policy that need to be addressed over the next decade if the needs of marginalised students are to be properly met.

The growth of alternative education settings

The rapid expansion of the ‘alternative education’ sector has coincided in Australia and many other countries with increased policy commitments to post-compulsory school retention (specifically universal year 12 completion). As a result of changing labour markets and industry structures, paired with rising youth unemployment, Australian federal and state policies have sought to keep disengaged and vulnerable young people connected to education and increase the numbers achieving senior secondary certificates of education.
The growth of educational alternatives can also be seen as a pragmatic response to mainstream exclusion policies and practices by education systems focused on academic achievement and outcomes. Schools are sometimes too ready to rid themselves of students they see as challenging or underperforming because such students might affect the schools’ public profile at a time when success or otherwise is increasingly defined through league tables and the comparison of schools in line with standardised testing through such policy mechanisms as the National Assessment Program Literacy and Numeracy (ACE 2010, Mills, Renshaw and Ziplin 2013). Such school policies, in turn, reinforce educational inequities, perpetuating the marginality of schools in socioeconomically disadvantaged areas (Mills, Renshaw and Ziplin 2013).

Smyth, McInerney and Fish (2013) point to a growing group of students who are commonly identified and represented as being ‘on the margins’ of education/employment and stereotyped as suited to alternative settings. The Dusseldorp Foundation has identified more than 900 so-called Flexible Learning programs currently operating throughout Australia, within and outside mainstream schools, catering for more than 70 000 students each year (te Riele 2014). The need for such settings is by no means peculiar to Australia. An even greater proliferation of alternative programs has occurred in both the United Kingdom and the USA. In the USA, the rapid growth of the sector (literally thousands of programs) reflects what has become a silent epidemic of mainstream schooling that is both letting down and being rejected by marginalised young Americans (Smyth, McInerney and Fish 2013). Thomson and Russell (2009) highlight the sheer heterogeneity of British programs geared to keeping at risk under sixteens in school (as required by legislation). Like Australia (see Cole 2004, Milbourne 2009), the UK sector is characterised by fragmentation and lack of transparency; inconsistent entry and exit practices/policies; limited qualifications being achieved; and lack of program accountability to diverse funding sources.

The alternative education sector in Australia
An identifiable ‘alternative education sector’ has evolved in Australia in recent decades. Programs within this sector are often supported by time-limited federal and state programs. Recent initiatives include...
the Victorian Government’s Better Youth Services Pilot and (subsequent) Youth Partnerships program, the West Australian Government’s Youth Futures program, and the federally funded Youth Connections initiative. Overall, the sector includes a range of diverse initiatives and promote a diversity of approaches, such as ‘practical pedagogies’, ‘authentic learning experiences’, ‘specialist engagement programs’, ‘flexible learning’, ‘real-life curricula’ and even ‘trauma-informed education’.

Alternative education activities in Australia fall into three broad categories. First, there are programs operating within mainstream schools, which can take the form of alternative assessment programs, electives or replacement/alternative classes within the school timetable. These programs are usually aimed at keeping young people connected to school. In the middle years of schooling, the programs are frequently developed and supported by philanthropic organisations such as Hands on Learning Australia or the Beacon Foundation. There are also in-school programs, developed by the school itself, sometimes supported by government initiatives as Links to Learning (New South Wales) or Youth Partnerships (Victoria). At the system level in Victoria, the Victorian Certificate of Applied Learning (VCAL) was developed in 2002 in response to the Kirby Review. The review highlighted the need for an alternative year 11 and 12 certificate not dominated by the academic demands of university entrance (Kirby 2000).

Second, there are programs operating within Technical and Further Education (TAFE) or Adult and Continuing Education (ACE), which are often general education courses providing varying levels of certification (up to year 12 equivalent); some institutions have developed general education courses directed specifically at disadvantaged young people. Examples include Certificate in General Education for Adults (CGEA) to a year 10 level and also VCAL, which can also be delivered in TAFE or ACE.

Third, there are separate or ‘stand-alone’ programs, often referred to as Flexible Learning Options (FLO), commonly at year 9 and 10 levels, which include alternative courses and curricula governed by a mainstream school. There are also separate schools operating in their own right (te Riele 2014), which may also offer
alternative year 11 or 12 options such as VCAL in Victoria and/or curricula developed to meet the specific needs of their students, such as responding to the impact of trauma in their lives (Stokes and Turnbull 2011, 2016).

Below we examine in more detail specific examples, within each category, that have emerged in Victoria in recent years, in order to illustrate how the complex alternative education sector operates for different age groups and levels of identified need. Data on the Hands on Learning Program (HOL) are drawn from reports on the Education Benalla Program (Stokes and Turnbull 2015), and data from the FLO and the Alternative School are drawn from reports on the Youth Partnerships Program (Wyn, Turnbull, Stokes and Grimshaw 2013).

**Hands on Learning**

Hands on Learning (HOL) is a highly regarded alternative educational program, originally delivered at Frankston Secondary College in 1999, and since developed as a school-based model of engagement for middle years students identified as being at risk of early school leaving. These students are deemed likely to benefit from small-group educational experiences that are authentic (i.e. practical, real-life instructional experiences of relevance and interest to the learner), that cater for individual differences and that emphasise teamwork, communication, negotiation and the achievement of personal success. Under the auspices of Hands on Learning Australia, the program has been adopted by more than forty-five Victorian secondary schools.

One version of HOL in a regional P–12 school in Victoria has been delivered on campus for five years through a partnership between the school and a local philanthropic trust, as one part of the Tomorrow Today Foundation’s comprehensive whole-of-community education program (Falkiner-Rose 2015).

During its five years at the school, HOL has addressed the needs of more than a hundred students, who reflect a mix of disengaged young people; some with histories of suspension or non-attendance, and others selected more for socialisation opportunities. According to a member of the school leadership team: ‘Some of the kids are from traditional middle-class families and, for some reason, are just
off the rails … [However] most of the kids have a pretty tough home life … intergenerational poverty, low socioeconomic issues … [Several] of the kids have contact with Juvenile Justice workers.'

Between 70 and 80 per cent of participants have literacy and numeracy problems, and 90 per cent are male. Duration of enrolment in the program is flexible and based on individual need. Participants are referred to the program by middle school management and welfare staff.

Two days a week, the young people work (in groups of around ten) with a teacher and experienced tradesperson (a cabinet-maker). The foundation supports the program by funding the tradesperson's salary and some expenses for materials. The students spend the full day together, sharing recess and lunch breaks. Following an informal group meeting at the ‘Shed’ (renovated and decorated by participants themselves on the school site), they undertake a variety of hands-on maintenance and construction projects. Projects on site, including erecting a cyclone fence, installing garden seating, construction of a pizza oven, and development of a vegetable garden, have helped develop student pride in the college. Off-site projects have included the construction of exercise stations in the town's Civic Gardens, painting at the local railway station and renovation of seating at the local Children's Cemetery. These off-site projects have nurtured the young people's awareness of and connections to the wider community.

Lunch preparation, including decisions over the day's menu, shopping for ingredients, and spending time as a group are key elements of the program. Incidental training in safety and occupational health and safety is reinforced by online ‘Safe at Work’ modules. Cooking together provides opportunities for negotiation, division of tasks, practical maths (including measurement), practical literacy and other incidental learning opportunities.

Individual student goals and desired outcomes are negotiated weekly with the supervising teacher. Typical personal goals might range from attending class on time, being sent out of class less frequently and being willing to ask for assistance with academic work. A key condition of enrolment in the program is agreement by the young person that he/she attends other classes. In this regard, HOL is seen as a useful lever to improving overall school attendance.
Involvement in HOL has been credited with decreased absenteeism, improved attitudes to schooling and improved well-being among the participating students. Young people have reported that, as a result of the program, they feel more connected to the community, better able to cope when things go wrong, feel supported by friends and family and have intentions to continue with study to year 12.

High-quality staffing, strong support within the school, informed student selection and strong community connections have been identified as key ingredients in program success. The college has expanded its HOL commitment by targeting vulnerable young people in its grade 5–6 cohort. The town’s Catholic secondary college has also recently decided to set up its own HOL program. In both instances, the foundation is providing partial funding for the initiative.

**Flexible Learning Options**

As noted above, a growing number of stand-alone Flexible Learning Options (FLO) programs have become an alternative option for some students in the middle years of schooling. We consider two such programs here. The first is currently in operation as an annexe of a regional Victorian secondary college. Set up at the start of 2012, this FLO caters for fifteen to twenty young people, mainly in years 9–10, identified by middle school coordinators as likely to benefit from a calmer environment and alternative forms of training, and less likely to succeed in either VCE or VCAL. Funding from the Department for Education and Training's Youth Partnerships initiative enabled the employment of a project worker and brokerage arrangements with local further education providers.

The program operates five days a week, providing students with a mix of personal development activities, literacy and numeracy, and vocational and job readiness training. While the participants formally remain secondary college students, and have the right to participate in school sports, special events and VET programs, their learning environments are deliberately off-campus (the ‘home base’ is located in a Youth Services building at the centre of town) and they are requested not to enter the main campus without notice. The college’s well-being staff visit them in town.
Several factors made the FLO’s first year difficult, including limited funding, the lack of an adequately trained teacher to run the program, and limits to the communication between education and support agencies. In the second year, the school delegated program supervision to one of the secondary school’s most experienced teachers (who had a history of working with challenging behaviour in the Special Education sector), which also relieved budget pressures by reducing the need for literacy and numeracy sessions provided by external providers. The decision reflected an acknowledgement that the success of an alternative program requires rigorous pedagogy delivered by skilled and well-trained teachers, as well as sustained, adequate resourcing.

The FLO has achieved a number of successful outcomes since its inception. Stakeholders (school leadership, students, the project officer and further learning and support agency representatives) have reported significant improvement in attendance rates, increased usage of support services by young people who had limited or inadequate access to services in the past, improvements in learning skills, reduction in drug use (in some cases), and positive changes in the young people’s physical and mental health. Some young people talked about improvements in their friendships with peers and improved relationships with family members and other adults.

Young people who participated in our research reported on the importance of such factors as small group learning, hands-on activity linked to practical skill development, opportunities to try ‘other learning pathways’ (including access to work experience/placement), and the opportunity to learn off campus. The absence of bullying was cited by a number of young people as an important factor in their decision to ‘give it a go’ and in their renewed enjoyment of learning in a safe environment.

For the school, the FLO’s positive outcomes have generated greater awareness among teachers of the need for earlier identification of young people at risk of disengaging, to examine why disengagement from school is occurring, and to implement ‘different ways’ of delivering curriculum to meet diverse learning needs.

The second of the two FLO projects we researched is delivered in a mixed on and off campus mode and draws its intake from two
schools. Initial funding from Youth Partnerships paid the salary of a youth worker to facilitate learning and social experiences for a mix of students from both a local technical high school and a secondary college in a town thirty minutes away. The students combine, two days a week, to attend joint CGEA courses and also do community projects, team-building exercises and personal development sessions. The CGEA tutor, a trained Special Education practitioner, engages the young people using an individualised ‘calmer classrooms’ model (Downey 2007). On other days, the students participate in the standard curriculum at their respective schools, enrolled mainly in VET and other flexible options.

Young people undertaking the program are sourced through the schools' welfare teams. Particular care is taken to ensure that the program includes a mix of students who are likely to facilitate positive interactions. (Recognising that teachers can sometimes be tempted to relocate young people to alternative classes simply because they are difficult to manage within the mainstream, school representatives stress that student behaviour is not a criterion for selection into the project.) Outcomes have included noticeably improved school attendance, positive parental feedback and indications that the students had developed a strong sense of ownership of the program.

The Alternative School
Alternative Schools refer to cases where students have left mainstream schooling and attend a different education provider as a means of re-engaging with education. The Alternative School we report on here was set up in 2011 and encompasses a central campus and a cluster of outreach sites. The overall initiative constitutes a Flexible Learning network providing for around 200 students. The Alternative School was a direct response to widespread and growing concern in the welfare and education sectors about the proportion and visibility of young people out of school in this particular metropolitan local government area. The district has a mixed socioeconomic profile and includes pockets of significant social disadvantage. Recent studies have shown declining numbers of young people completing school in the area (and growing numbers of young people out of school), as well as an over-representation of
young people among mental health service users, high levels of child protection notification rates, growing youth homelessness as a result of family breakdown, and a general lack of employment opportunities. The Alternative School targets students assessed as being at high risk. All students have experienced significant trauma and are dealing with a range of post-traumatic stress disorders. An estimated 85 per cent of students have learning difficulties, and 30 per cent are funded in line with the Victorian State Government’s Students with Disabilities Program (many of whom have been diagnosed with mental health conditions).

Teaching is informed by the school’s own distinct model of education that it has developed: an integrated therapeutic/educational prototype that has been influenced by best practice in the area of trauma-informed teaching. The model is characterised by key ‘success factors’, including: an integrated case management approach to health, welfare and education; provision of a nurturing and accessible physical environment; negotiation of goals, boundaries and outcomes; engaging student-focused pedagogy; small learner groups, high-quality staffing and support; commitment to student voice; catering for diversity; and building and maintaining positive and respectful relationships.

The staff at the Alternative School prioritise relationship-building as key to re-engaging young people who have experienced trauma. They pride themselves on their capacity to build trusting relationships between staff and students. Ongoing monitoring of individual student progress and well-being includes intensive and regular follow-ups, informally and through care team meetings, three-way conferencing and student support groups. The school makes use of Bloom’s Sanctuary model (1995) and the Calmer Classrooms philosophy (Downey 2007), with a strong focus on peaceful learning experiences within a safe environment. The need for stability is echoed in the clarity of the timetable and the gradual nature of the re-engagement process.

A number of students at the Alternative School have referred to the school’s central role in renewing their self-belief and confidence in their ability to learn, and as an important step in thinking about their options for their future education and training. These young people have praised the understanding and supportive staff during
times of stress and trauma, and the provision of a safe learning environment.

**Conclusion**

Similar characteristics to those identified in the three models above can be observed in many other alternative education programs and settings that have emerged since the mid-2000s. Core characteristics of these successful programs include:

- a flexible learning environment focused on both the educational and welfare needs of the young people
- low student/teacher ratios with an emphasis on establishing positive relationships between teachers and students, and
- a practical or ‘hands on’ approach to learning (see Stokes and Turnbull 2011).

All the examples share the broad aim of providing inclusive pathways for young people who, for varied reasons, have disengaged from mainstream education (te Riele 2014). Many of the programs grapple with the delivery of a rigorous curriculum, the expectation of student academic achievement and the creation of an opportunity for students to return to mainstream education and training. Given the tensions that exist between (a) the desire to provide meaningful and individualised learning experiences and (b) the reality of what is valued more broadly by post-school education and job markets, educators need also to contend with the possibility that alternative programs actually distance young people from mainstream success. One important question for understanding the potential significance of these sites of education for the future focuses on whether they offer a distinctive developmental approach that should influence curriculum and pedagogical design more widely. This relates to the central issue of whether ‘alternative’ educational provision is defined only by default, as gathering places for students who have struggled or been rejected by mainstream schooling, or as a growing part of a more coherent system capable of meeting a wider range of student learning needs.

As Milbourne (2009) notes, there have been few examples of successful pedagogical approaches in alternative settings. Te Riele (2007, 2014) argues the importance of instituting developmental
approaches that start from a student’s strengths and advocates changing the approach, rather than problematising the student. In turn, she argues that such approaches can lead to whole-school change that will benefit all students.

One important change is the recent understanding of how trauma affects young people’s engagement in learning. The Alternative School’s use of Bloom’s Sanctuary Model and Calmer Classrooms is one example of a growing understanding and use of trauma-informed practice. Trauma Informed Positive Education (TIPE) is another specific pedagogical approach that assists teachers to promote a set of classroom-based interventions in a developmentally sequential way by increasing student capacity in the area of self-regulation, which then fortifies the development of stronger classroom relationships through repairing broken attachments, and also builds student readiness to learn by increasing psychological resources in their areas of strength (Brunzell, Waters and Stokes 2015, Brunzell, Stokes and Waters, forthcoming). This understanding includes the need not only to ‘repair’ but also to draw on the strengths of young people, in order to improve their well-being and resilience (Brunzell, Stokes and Waters 2016).

Such approaches show promise for supporting not just those students at risk of disengaging from secondary education entirely but also the resilience and well-being of all young people in mainstream schooling. TIPE can also be used throughout primary schooling as a pedagogical model to prevent disengagement in later years of schooling (see Stokes and Turnbull 2016 for an evaluation of a TIPE model implemented in two mainstream schools in low socio-economic areas).

However, the alternative education sector will not be able spontaneously to offer solutions to these issues without explicit commitments of support from policy, paired with adequate funding. In our view, schools need to take back responsibility for adequately catering to the needs of a growing sector of marginalised young people in the school-age population, in order to prevent wholesale disengagement, and to learn to work effectively in partnership with specialist and community-based organisations and support achievement for all students.
Over the next decade policy-makers, school leaders and researchers need to address a number of systemic challenges. In the United Kingdom, for example, there is a call for an annual system of registration for alternative providers that lists courses and their enrolments. This needs to be mandated through policy at a national level and then enacted at a local level. As Thomson and Russell (2009) note: ‘We remain convinced … that the rights of young people who are on the edges of schooling could be better served if the system of schools, colleges and alternative provision was better understood, managed and monitored’ (p. 435). This contrasts markedly with the situation in Denmark, where the government has taken on educational responsibility for all types of schools (CIRIUS 2008). In a country where ten years of education are compulsory, it has always been seen as a public task to provide and finance education, including adult education and training. A dual system of academically oriented and VET secondary streams is complemented by ‘Production Schools’, which provide special options for young people with problems completing a youth education program, because of poor basic skills in literacy, numeracy and writing and social and cultural problems. A network of Production Schools, targeting young people under 25, seeks to enhance the participants’ personal development and to nurture further engagement with education.

Another crucial challenge is to provide educators with professional training in trauma-informed practice and early intervention. Linked to this, there is a need to strengthen cross-sectoral communication and build effective ‘wrap-around’ approaches through collaboration between different services and professional groups. Such collaboration can be supported by greater flexibility in the use of student resource monies (similar to the national disability funding) to target funding support more effectively at student need. Australia’s school funding system makes public money available for a very wide diversity of registered schools. However, non-school educational provision that can prevent disengagement and drive effective collaboration between education and welfare services has not been effectively resourced or incentivised.

Together, the combination of greater transparency and better data, more consistent funding practices, professional skills
development and effective local partnership between agencies could, over time, contribute to a cultural shift in which Australian schools come to provide education for all young people, not just those engaged in the 'mainstream'.

Biographies

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Dr Malcolm Turnbull is a research fellow at Melbourne Graduate School of Education's Youth Research Centre and has particular interests in the refugee youth experience, rural collective action and the educational impact of entrenched social disadvantage and trauma. A former teacher and administrator in the state education and ACFE sectors, Dr Turnbull combines his activity at the university with work as a freelance historian, and has published widely in the areas of Jewish history, classic detective fiction and the folk music revival.
Chapter 11

What if you're not going to university?
Improving senior secondary education for young Australians

John Polesel, Mary Leahy, Suzanne Rice, Shelley Gillis, Kira Clarke

This chapter examines the transitions young people make from schools to further study and employment in Australia. These transitions occur in the context of a labour market that has seen manufacturing superseded by the service industry, credential inflation and a weakening of the role of trade unions. These phenomena have led to increased stress on young people, for whom work is increasingly casual, part-time and precarious. Although the majority of young people make a successful transition from school to vocational education and training (VET), higher education or full-time work, the outcomes for a significant minority are troubling. Moreover, gender, socioeconomic status (SES) and regionality all influence the quality of transitions, with some groups being much more vulnerable than others. In particular, the chapter considers the roles of school-based vocational programs, careers education and the partnerships schools form with external parties, such as employers and other providers of education and training. We argue that strengthening the quality of each of these is central to improving
the educational experiences and transitions for those young people most at risk.

**Current transition patterns**

Recent surveys of school-leavers, conducted in New South Wales, Victoria and Queensland, have found that most young people make a relatively successful transition from school into university, VET, apprenticeships, traineeships and, to an extent, directly into the labour market. However, transitions for the remainder are more problematic. Almost 25 per cent of the age cohort does not complete school, and there is considerable variation between states, regions and equity groups (ABS 2013). Australia’s school retention rates are relatively low by international standards and have not improved greatly over the last twenty years (ABS 2013). This is concerning given the link between dropping out of school and weak labour market outcomes, as well as poorer health and well-being (Leigh and Ryan 2008). Dropping out not only harms individuals but also produces significant social costs in the form of lower productivity, lower tax revenue, weaker social cohesion and increased crime and welfare spending (Rumberger 2011).

The majority of young people who complete school make successful transitions into further study. Entry into a bachelor degree at a university is the most common destination, accounting for approximately half of the school-completer cohort (DEECD 2013, DETE 2013, Polesel et al. 2013). The next largest destination comprises VET programs, including apprenticeships and traineeships. For those not in an apprenticeship or traineeship, the majority of VET students are enrolled in a higher-level VET qualification (i.e. a certificate IV, diploma or advanced diploma). While the proportions entering different qualifications vary somewhat from state to state and from year to year, VET courses, including work-based apprenticeships and traineeships, account for roughly a quarter of the school-completers.

The final group of destinations accounts for the remaining quarter of the cohort. This covers those who are not in education or training. Most enter the labour market, working in casual and part-time positions. Only a minority find full-time work. On average, around two-thirds of the school-leavers who are not in education or
training are working part-time or are unemployed. The majority of school-leavers whose primary activity is paid employment are working in low-skilled and low-paid casual jobs in personal services, hospitality and sales. A small proportion of school-completers (usually around 1 per cent of the cohort) are neither in education or training nor in the labour market (i.e. neither working nor looking for work). This category includes those who might be caring for a child or relative, or might be unable to work owing to disability (DEECD 2013, DETE 2013, Polesel et al. 2013).

Data from these studies also show the influence of SES, gender and residential location (metropolitan/non-metropolitan) on students’ destinations. There is a consistent link between students’ SES and their transition. For example, the proportion of year 12 completers going to university increases as SES increases. In contrast, low SES students are much more likely to enter the labour market without any further education or training. This means that low SES school-completers are more likely to be working full-time, to be working part-time or to be unemployed. Year 12 completers from the lowest SES quartile are the group least likely to go to university and most likely to be unemployed or not in education or training or the labour force (DEECD 2013, DETE 2013, Polesel et al. 2013).

Location also exerts an influence on post-school destinations. Students living in metropolitan areas are much more likely to enter university than those in regional and rural locations. Young people in regional areas are more likely to enter the labour market and, consequently, are more likely to be in the precarious situation of unemployment or part-time work. This regional influence remains even after controlling for SES (Polesel et al. 2013).

Gender is also influential, although its effect is somewhat more complex. To begin, young women are more likely to go to university but less likely to access apprenticeships. These are two relatively secure pathways to well-paid work, and they represent good outcomes for the two sexes. However, among young people who make a direct entry to the workforce, the situation is much worse for young women than it is for young men. Over recent years, females with no post-school qualifications have consistently been found to be more likely to be working part-time than their male counterparts. Young men are more likely than young women to find full-time jobs.
This reflects the nature of a gendered labour market that offers fewer opportunities for full-time work to young women. In part, this is due to an understandable reluctance among young women to enter traditional male-dominated workplaces and occupations that can be unwelcoming, sexist or even openly hostile. It is also, in part, due to lower participation of women in science, technology engineering and mathematics (STEM) fields of study that can limit their range of occupational pathways and further study opportunities. Karmel and Liu (2011) argue that the best pathway to full-time employment for young women, even low academic achievers, involves a bachelor degree rather than a VET qualification.

Although the destinations of school-completers are problematic for the groups identified above, they are much worse for young people who do not complete school. Again, the destination patterns reveal some disturbing gender trends. A significant proportion of young male early school-leavers is able to enter the relatively secure pathway offered by apprenticeships (e.g. approximately a third in Victoria), but the destinations for the remaining two-thirds of the male early leavers and for the great majority of the females are not so positive. Some enter VET programs (in TAFE and private registered training organisations), but these are predominantly very basic programs at Certificate I and II levels. These lower-level qualifications do not tend to lead to secure employment (Karmel and Liu 2011). More than a third of boys and nearly four in ten girls dropping out of school enter the labour market, the majority being either in part-time work or unemployed (DEECD 2013, DETE 2013, Polesel et al. 2013).

These patterns suggest mixed success in achieving successful transitions for school-leavers. To summarise, patterns of transitions are strongly affected by SES, with students from higher SES backgrounds being more likely to enter university and less likely to be working part-time or unemployed, and there is also evidence of regional disadvantage. Young women making a transition directly into the labour market are more likely to experience part-time casual work with its associated insecurities. For most early leavers, the reality is a cycle of under-employment and unemployment, with outcomes likely to be even worse for female early leavers.
**VET and program cohesion**

VET in Schools (VETiS) has been proposed as a solution to some of these problems of poor transition. However, VETiS typically involves very basic vocational qualifications that usually form a very minor part of the broader program of years 11 and 12 studies (Polesel 2008). Previous research (e.g. Phillips KPA 2006) has criticised this approach for not delivering the basic competencies required by industry and for operating within the constraints of schools and their assessment requirements. Vocational studies are not regarded highly in schools (Polesel and Clarke 2011), with traditional subjects being given priority in staffing and resourcing in a secondary school culture that privileges pathways to university. In many cases, students can do only a limited number of vocational subjects because of the overriding rules and needs of the senior certificates. Moreover, research suggests that vocational programs in schools, often lauded for their value in engagement, have not had the desired effect on retention, with rates being largely unchanged since the programs were introduced in Australian schools in the 1990s. Other research (Polesel 2008) suggests that VETiS students entering the labour market have no advantage over their non-VETiS peers, as both groups enter the same low-paid, part-time jobs. This suggests that including one or two vocational subjects in a broad program of senior certificate studies provides young people with no real advantage when they are looking for employment.

Clarke (2014) argues that to be effective an individual student’s program of vocational studies needs to be coherent. This means that the subjects selected need to be connected, approaches to literacy and numeracy being informed by the needs of the occupation and the requirements of employers. As an example, VETiS programs designed to lead to higher qualifications in occupational areas such as carpentry, electrical trades and plumbing should include mandatory studies in mathematics and physics. However, current Australian senior certificates allow students virtually free choice in subject selection, with many schools reluctant to mandate subject choices, even in ostensibly vocational programs. As a result, many of the combinations do not align to form programs with clearly identifiable pathways (Wheelahan et al. 2012b).
Schools also struggle to provide effective work placements. Research being conducted at the University of Melbourne suggests that schools require better financial resources and staff capacity to successfully manage partnerships with business, community groups and external providers of vocational programs (Klatt et al. 2016). These links are essential for schools to offer their students quality work experiences, structured workplace learning (which is mandatory for some qualifications) and the opportunity to learn and practise both occupation-specific and generic employability skills that cannot be taught in schools. However, these partnerships require time to build and maintain. Klatt and colleagues (2016) found that teachers lack the time, support and financial resources to implement such partnerships effectively. Hence there is a need to develop stronger links between schools and other providers and employers of the kind seen in the apprenticeship systems of Germany and Denmark (e.g. Education Council 2014). These are apprenticeship systems that have constructed strong and enduring links between businesses, unions and government, each formally constituted as social partners in legislation. The international evidence suggests that skills development is stronger in systems such as these where the social partners contribute to the design and availability of quality training. However, the Australian education system is underpinned by an 'education logic' (Iannelli and Raffe 2007) in its delivery of vocational programs in schools. This leads to the privileging of the needs of students in academic programs over the needs of those in vocational programs, along with a reluctance to engage with employers.

For vocational programs to be effective and valued by employers, there is a need to strengthen industry engagement with vocational education, a two-way process that requires flexibility and openness on the part of schools and a shared sense of responsibility for the education of young people among employers. However, strengthening and maintaining industry engagement with vocational education is a major challenge faced by all providers of VET, not just the school sector. Compared with companies in Germany and Denmark, Australian enterprises do not have the same level of engagement in the development, provision and/or certification
of vocational qualifications. Less engagement by Australian industry has been largely attributed to limited resources and competing demands on employers, as opposed to a lack of interest or willingness. However, Gillis and Bateman (2015) found that the level of engagement and commitment of industry over time was stronger if the industry was a large employer (e.g. government department) or a large industry body/association (e.g. Masters Plumbers Association), as opposed to a small business.

Despite such challenges with engaging industry at the local provider level, particularly small businesses, there is interest in strengthening communities of trust to support the development of vocational qualifications (e.g. Wheelahan, Buchanan and Yu 2015). Some Australian state governments have established structures to facilitate links between business, schools and other educational institutions. For example, in New South Wales, Work Placement Service Providers are funded to liaise with employers and schools to coordinate compulsory work placements, and in Victoria, the Local Learning and Employment Networks (LLENs) collaborate to support student engagement, attainment and post-school transitions.

**Career development**

The provision of quality career development is also central to improving outcomes for more vulnerable students (OECD 2004). Quality provision supports students to make successful transitions between school and work, and reduces the costs to individuals of poor career choices (OECD 2004, Sweet et al. 2009). False starts can be demoralising and, although alternative pathways are possible, they can be circuitous and expensive (Wheelahan et al. 2012). They defer the time when young people can become established in a field of work, which affects lifetime opportunities and earning potential. There are also social effects. Where students make poor decisions about career pathways, the negative effects can include a loss of productivity when an individual is working in a job to which they are not suited, course delivery costs and fees, employer hiring costs if the person leaves a role, and time spent in an inappropriate course (OECD 2004). When students have access to comprehensive, accurate information about roles and the labour market, they may also
elect to choose a career in which there are staff shortages, which increases the alignment between labour supply and demand (Bimrose, Barnes and Hughes 2008; Sweet et al. 2009).

Career development is usually seen as having three interrelated components: careers education, careers advice and guidance, and work-related learning (Hutchinson 2013).

• Careers education has been defined as ‘a series of activities and engagements that help young people to understand themselves and the influences upon them (self-development), investigate opportunities in learning and work (career exploration) and make and adjust plans to manage change and transition (career management)’ (Hutchinson 2013, 3). Quality careers education allows students to explore and understand their own interests and needs and develop knowledge about the labour market. It also should incorporate the development of skills to manage labour market transitions throughout an individual’s life.

• Careers advice and guidance comprises one-on-one discussions to support individuals in identifying career options and their requirements.

• Work-related learning comprises learning for work to develop employability skills (e.g. through activities focusing on organisational skills), learning about work (e.g. through vocational courses) and learning through work (e.g. through work experience).

There are three key models of career development delivery for school-aged students: (1) program delivery through the school, (2) program delivery through external providers and (3) a combination of models 1 and 2 through partnership arrangements.

Each of these models has inherent strengths and weaknesses. In Australia, career development programs for school students have largely been delivered by schools (OECD 2004). Benefits of school-based provision are numerous. First, this model can easily incorporate career education component activities that are appropriate to students’ development and build students’ knowledge during their time in school. Second, the model allows for the integration of career information with the broader curriculum, which helps students make sound career decisions, and supports student engagement and achievement (Hooley, Marriott and Sampson 2011). Third,
the delivery of career education to entire classes is a relatively cost-efficient way of providing information, and is much cheaper than individual counselling. Fourth, school staff often develop a detailed knowledge of students and their families that allows them to tailor the delivery of information and guidance. This can ensure that the most at-risk students gain additional support (Gatsby Foundation 2014). Finally, locating career development services within schools provides for easy and equitable access for students.

However, there are also some significant drawbacks to school-based provision. Research suggests that school provision is overly focused on university entry, and that students moving towards vocational education, the workforce or seeking to establish their own business are often poorly served (OECD 2004, Sweet et al. 2009). School careers staff often come to the role through a university pathway, and their knowledge of other routes might not be strong (OECD 2004). There is also evidence that accountability mechanisms (such as schools being judged on their capacity to retain students) might influence the advice provided to students. Stronger students might not be pointed towards options outside the school (Morris 2004, OECD 2004). A further issue is that career development roles in schools are frequently combined with more general student counselling work. The immediate pressures of students with behavioural, social, academic or emotional problems tend to crowd out the career element in the role, reducing the quality of provision (Sweet et al. 2009). Finally, where schools do not forge links with local businesses, there is the potential for the career development advice provided to students to be poorly aligned with local industry needs.

Nonetheless, provision wholly by external providers also has limitations. The capacity for such services to provide cost-effective, broad-based careers education (in addition to one-on-one counselling) might be limited, such services usually lack the detailed information about individuals that schools develop in the course of their daily interactions with students, and there might be little integration with the broader school curriculum (OECD 2004).

For these reasons, a partnership model, in which schools are responsible for some areas of career development but partner with external agencies for other elements of provision, might be the model with the greatest capacity to provide quality outcomes.
Schools could continue to provide a broad-based careers education curriculum to students and link mainstream learning with careers information. Partnership roles for external providers could include the brokerage and coordination of work placements for students, the provision of professional learning for staff around labour markets and non-university pathways, and provision of individualised career advice around these pathways. A number of overseas jurisdictions have moved to a partnership model involving both external providers and schools, including New Zealand (Careers New Zealand 2014) and Wales (Gyrfa Cymru Careers Wales 2014).

**Conclusion**

Work in Australia is changing. Automation and computerisation of work are likely to significantly reduce the number of jobs available in the next ten to fifteen years. The majority of the jobs lost will be in relatively low-skilled occupations, such as labourers, machine operators, and clerical and administrative workers. Managers and professionals will tend to be better protected (Durrant-Whyte et al. 2015). The changing nature of work is increasing the risks associated with weak post-school transitions and a lack of a tertiary qualification. The majority of young people in Australia now complete secondary school. But of those, only about half will go to university. This raises an important question: how effective are the options we are providing for the remainder? That is, the 50 per cent who do not go to university, some of whom do not complete school. The culture of our secondary schools is still one that valorises university entry at the expense of other pathways.

One option for these students is a vocational pathway. However, the vocational programs offered by our schools tend to be considered poor quality and produce weak outcomes. This is partly a problem of school culture, but it is also the effect of an approach to VETiS that is not apprenticeship-based and does not involve the engagement of strong social partners. Current careers education also runs the risk of focusing too narrowly on university preparatory pathways, with a consequent lack of information on vocational and labour market alternatives. There is also a concern that, within this model of careers education, impartial advice about subject choice, school choice and other options might not always be provided.
Traditional structures and programs still dominate. Alternative approaches to provision for young people exist, but they are mainly at the margins of Australian education. Despite evidence that secondary schools do not cater for all students, the role played by alternative school models and adult VET providers remains limited.

There are a number of strategies that might be adopted to begin to address these problems.

First, there is a need to give greater prioritisation of VET in the allocation of staff and physical resources in secondary schools. Too often, school leadership prioritises the allocation of their most effective and experienced teaching staff to senior secondary subjects that influence school performance in examinations such as year 12 academic certificates (Neild and Farley-Ripple 2008). Allocating strong staff and resources to vocational programs will:

- increase the achievement and engagement of students in vocational subjects, both of which are important if these students are to have a realistic chance of meeting the demands of higher-level vocational qualifications on leaving school, and
- send a signal to students and parents about the importance of VET that will help lift the status of vocational education both in and beyond schools.

Policy-makers may be able to support this reprioritisation by providing quarantined funds to schools that are specifically tied to their VET offerings.

Second, there is a need to provide coherent and integrated vocational programs that provide clearly signposted pathways to further study. Policy initiatives like the newly established industry pathways programs in Victoria could be an important means of improving the transitions of students who are not aiming for university. In programs of this type, students complete a suite of VET subjects in an industry-themed area (e.g. building and construction). These subjects count towards the standard senior secondary certificate, but students are also awarded an industry pathway certificate. The alignment of vocational subjects within an industry theme streamlines the transition into work or study within the theme, improving student transition outcomes.

Third, there is a need to engage industry and business in the provision of training places for students in vocational programs.
Some countries such as Germany and Denmark have effective, high-status VET systems and low youth unemployment. Australian industry has tended to have low levels of involvement in VET provision and certification, particularly in relation to school students. Although there are costs to industry, there are also likely to be benefits in terms of better trained workers and a greater alignment between industry needs and what students learn. Engaging and maintaining industry in the provision of VET would be strengthened if partnerships were formed with industry at the jurisdiction or regional level to minimise the likelihood of overburdening small businesses in the local area. There might be some capacity for government to provide financial or other incentives for greater industry participation in VET provision, particularly small businesses.

Finally, careers advice and guidance must reflect the broad needs of all young people, not just those on a professional pathway. This means prioritising the needs of students before the needs of schools. In practice, this could mean additional training and support for careers advisers in schools to strengthen their knowledge and skills about non-university pathways. Stronger partnerships between schools, outside career agencies and employers are also likely to improve provision in these areas and benefit students who are not seeking a university pathway. Policy-makers might also need to review accountability requirements for schools. For example, if schools are judged on their student retention rates, there might be a temptation to skew careers advice to students by focusing on options that keep them within the school. The individual and societal consequences of low levels of education are significant. There is a decline in the availability of secure, full-time work in Australia and in many other modern economies. Some young people patch together a series of casual and short-term jobs, and others are unable to find any work. Both groups of young people are part of the new ‘precariat’ that has emerged in developed countries (Castles et al. 2010, Castel 2003, Standing 2011).

There is no single or simple solution to the challenge of catering for the diversity of young people in secondary schools. However, the task of developing a more diverse range of options is becoming more important.
Problems in the labour market cannot be solved by the education sector alone, and the remit of schools should never be confined to preparing young people for work. However, people who are locked out of secure employment face a myriad of challenges that makes it difficult for them to engage fully as social citizens. Tackling these issues to ensure that the broad range of young people have more meaningful opportunities is therefore a matter of urgency.

Biographies

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Dr Mary Leahy is a senior lecturer at the Centre for Vocational and Educational Policy (CVEP) in the Melbourne Graduate School of Education at the University of Melbourne.

Mary has extensive experience in education research and policy, with a focus on access to education (including vocational education) and employment. Recent research projects have examined transitions within education and between education and employment; the nature of vocational education; young people’s decisions about tertiary education; vocational education funding; and quality vocational teaching. Her work draws on comparative education; theories of gender; Nussbaum and Sen’s capabilities approach; and theories on choice and preference formation.

Dr Suzanne Rice is a senior lecturer at the Centre for Vocational and Educational Policy (CVEP) in the Melbourne Graduate School of Education at the University of Melbourne. Her research interests include high-stakes testing, clinical models of teacher education, and teacher and student pathways. She has published widely, including book chapters, reports to governments and numerous
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**Associate Professor Shelley Gillis** is Deputy Director at the Centre for Vocational and Educational Policy (CVEP) in the Melbourne Graduate School of Education, the University of Melbourne. Shelley has managed a range of research projects focusing on quality and assessment issues in tertiary education, providing more than fifty research reports for governments and non-government organisations. Her research interests include competence assessment, standard referenced frameworks, qualification frameworks and quality assurance.

**Ms Kira Clarke** is a lecturer at the Centre for Vocational and Educational Policy (CVEP) in the Melbourne Graduate School of Education at the University of Melbourne. She has conducted a range of research studies focusing on senior secondary education, transitions from school to work, and further study. Her research interests include VET policy and institutional systems for young people, vocational curriculum and qualifications, and patterns of participation in post-school education by disadvantaged young people.
When Noel Pearson wrote ‘Radical hope’ (2009), he queried, in a wide-ranging and politically informed essay, whether the education system had the potential to transform the lives of Indigenous Australians and, if so, how that might be done. Pearson’s answer was in the affirmative with caveats; like many Indigenous leaders before him, from across the world, he acknowledges that the education system’s responsibility to enable and deliver good teaching in context needs to be balanced with personal responsibility. Furthermore, he does not want Australian Indigenous children to give away their identities, cultures and languages; far from it. His focus is on bringing together of world views, that of Australian Indigenous knowledge and culture and that represented as Western knowledge and culture.

Radical hope for the future of Aboriginal Australia [...] will require the bringing together of the Enlightenment and Aboriginal culture. This reconciliation is not of necessity assimilation: just ask the Jews. The education of our children in both traditions, at the highest level of effort,
ambition and excellence that we can muster, is, I have no doubt, fundamental to this hope. (Pearson 2009, 105)

This philosophical and ethical inquiry of education transcends geography and challenges all settler countries in the quest for education and schooling to deliver improved outcomes for Indigenous peoples (Smith 2003). Education as an improvement tool for Indigenous peoples is not just about scholarly achievement, such as test scores; it is also about engaging the hearts and minds of the people.

Disparities in educational outcomes between Indigenous and non-Indigenous students in many settler colonial states persist. Numerous policies and initiatives have been implemented that continually come up short of the mark. Although well intentioned, they tend to target issues in isolation and emerge from a point of view that sees a ‘deficit’ located in the Indigenous student, their families and communities, and their culture and language. From this perspective the answers tend towards assimilation or integration practices and suggest that students (and their parents/caregivers) need to make a choice between maintaining their Indigenous identity and academic success. Furthermore, discourses on Indigenous achievement also centre on students’ ‘lack’ of ability and/or knowledge and skills, particularly in literacy and numeracy, and the ‘achievement gap’. Public debates and policies on Indigenous education are all about closing the ‘achievement gap’. From a teaching practice perspective, the curriculum becomes almost entirely focused on what is measurable. However, these strategies have made little or no difference in enhancing educational outcomes for Indigenous students (see for example Bishop, Ladwig and Berryman 2014, Patrick and Moodie 2016).

In terms of enhancing educational outcomes for all students, the research indicates that teacher effectiveness is the key factor that is most amenable to change in the schooling system (Hattie 2009). This implies that the classroom is the major site for change: teacher practice, teaching quality. When seeking to change the learning culture in schools and promote teaching practices that lead to reducing educational disparities, the focus needs to be on pedagogy and learning practices as key educational levers. The chapter does not argue that the health of the education system and its
effectiveness for students should not be measured through appropriate indices. What I argue here is that, in order to enhance educational outcomes, we need to focus on quality teaching in context. I also suggest that if, by focusing on quality teaching in context, we find ways to enhance Australian Indigenous students’ outcomes, then the teaching practices will work for all students.

This chapter argues that education can ensure Indigenous students are successful, maintain their identities, languages and knowledges, and at the same time receive a rigorous schooling that gives them a means to negotiate the wider world. These are not mutually exclusive goals where the achievement of one is at the expense of the other. Drawing on international research and my work in Indigenous (Māori) education in New Zealand, I argue there are key levers and tools that assist in delivering rigorous and contextually relevant education for Indigenous students. These levers include the extensive collection and use of data to build stronger teaching and learning; personalising engagement with students and parents/caregivers around academic progress; providing intellectually challenging and relevant curriculum; and building strong relationships with Indigenous families and communities. I illustrate these key levers using examples, including some from two longitudinal research and development projects in New Zealand that have targeted Māori student success: the Starpath Project for Tertiary Participation and Success¹ and Te Kotahitanga.²

**Using data to build strong teaching and learning practices**

Research has shown that the use of ‘evidence’ and ‘evidence-based decision-making’ is seen as essential to the shared goal of addressing equitable outcomes for all students (Johnson 2002, Hattie 2009). Regardless of the negative features of data demands on schools by various authorities, there is huge potential for intensive data-use at school level to improve individual student outcomes. To realise this potential, schools cannot just rely on just state and national perspectives where they report chosen indices to look at educational performance. These global indices need to be complemented by a school perspective on the use of data, where schools do not just contribute to the national database but also develop and control their own strateging for collecting and using data. This is especially
important because, although the achievement gap between Indigenous and non-Indigenous students appears so widespread as to be universal, it nevertheless manifests itself differently in each school; as such, the response of each school needs to be an individual one. The dominant national perspective of the achievement gap also obscures the fact that collective efforts to close it still rely on the achievements of individual students.

Educational statistics can often be viewed with suspicion in Indigenous communities (Walter and Andersen 2013), and the term is sometimes seen as being synonymous with the word ‘data’. Statistics have been used as a form of ‘bio-power’ (Foucault 1991) where they have been used to regulate Indigenous populations and individuals. In education this was done through the use of IQ tests to determine the ‘natural capacities’ of individuals, and Indigenous students always appeared to be ‘lacking’. This then determined the form of education available to Indigenous students over generations. So the measuring of Indigenous students’ achievement can be viewed as another means of finding fault or deficits in Indigenous children’s learning. Achievement statistics are sometimes a two-edged sword in Indigenous education, and schools need to recognise this when discussing outcomes with students and their parents/caregivers. However, in this section I want to argue that the use of data, including achievement statistics, is essential to achieving equity in education for Indigenous students. At the same time, I want to argue for an expansive definition of data and, although not just about achievement data, it is essential that we include it for benchmarking purposes and assessment of student progress (Johnson 2002).

Data use as essential to improved student outcomes is reinforced in international research studies, especially when used as a tool in an assessment for learning process (Hattie 2009). In other words, the analysis of achievement data is able to inform teachers what students can and cannot do, and when supplemented with teachers’ professional knowledge, it identifies where students are at and the next steps in their learning. This applies for all students, including Indigenous learners. Analysis of student achievement data is also useful to help schools improve their quality of teaching, as it can provide evidence for different outcomes between different
groups of students and not just individuals, and with different teachers. These data are important for schools to identify where support is needed, and to design and implement interventions to strengthen classroom teaching. Quantifying issues also encourages rational debate, for without an evidence base it is easy to distracted by anecdotal evidence and individual experience that cannot be judged by others.

In addition to achievement data, other forms of quantitative and qualitative measure should be determined and collected so that teachers (and the school) can carry out continuous inquiry and monitoring of student progress (Johnson 2002, Darling-Hammond 2010). For example, for more than eight years researchers from the State University of New York have been studying schools that consistently performed above their predicted levels (Wilcox et al. 2013). Among their findings was that all the schools made decisions on the basis of a variety of evidence from longitudinal data they had continually collected and analysed over many years. The successful schools identified in the study collect information other than assessment data to use. Data is collected from a variety of sources, formal and informal, including daily student interaction, surveys of students, teachers, parents and community members, and from results of assessments generated by teachers, departments and national examinations. The main purpose of collecting longitudinal data is to look for trends and patterns, such as spotting risk factors or identifying timely interventions. For these reasons collecting data is an incredibly significant task to perform, particularly for students who need most support from the school to achieve to their academic potential.

It is important that schools are in charge of their own data-collection process. Being in charge of the data collection allows schools to focus on the context of teaching and learning in addition to student outcomes. Data become part of a larger toolkit for understanding the school’s current performance and formulating interventions. Properly managed databases in schools can be used to personalise learning, identify problems, formulate responses and interventions, improve policy and practice, evaluate effectiveness, promote accountability and help target resources more effectively. In essence, it provides a basis for the continuous inquiry and monitoring of both teaching and learning as each school can evaluate
their practices in light of the data. Good quality data is an empowering tool that can help show the difference between rhetoric and reality (Johnson 2002).

Subjecting school and classroom data to continual analysis can be difficult for all concerned, including board members, principals, teachers, students and parents/caregivers, particularly if people are not used to the intense scrutiny. It is important for school leaders to anticipate and address issues that will arise and gather strategies for change management. If schools are monitoring student and school progress and performance, then change will be inevitable. It is important to ensure people get plenty of opportunities to be involved with data collection, analysis and use. In the end, the use of data is about improving student achievement and ensuring more equitable outcomes, particularly for Indigenous students, and sometimes what the data says runs counter-intuitively to our perceptions.

The national data used by schools and the public with regard to differences in outcomes between student groups do not allow the authorities to assess the distribution of opportunities through which students can achieve outcomes. But schools can assess this, because they distribute many of the opportunities through their own structures and practices. The next section argues for schools to interrogate the way learning opportunities are distributed to Indigenous students and how they are supported to achieve them.

**Opportunities to access intellectually challenging and relevant teaching**

Much attention in Australian Indigenous education is paid to the achievement gap (Australian Government 2015, Hunter and Yap 2014), but not nearly enough is paid to the ‘opportunity gap’. Debates focusing on the achievement gap tend to place an emphasis on contextual factors, such as the role of poverty in educational inequality and aggregate achievement—an argument that spirals quickly into blaming students and families, or gives schools and teachers permission to find comfort in the status quo. The idea of the opportunity gap removes the focus from locating ‘the problem’ in the person and focuses on the accumulated differences in access to key educational resources—expert teachers, personalised attention, high-quality curriculum opportunities, good educational
materials, and quality informational sources—that support learning at school and home. These inequalities for Indigenous students have compounded over the years and is owed to those who have been denied access to quality education for generations. It is a form of institutionally sanctioned discrimination in access to education for many students that is both historical and contemporary.

The ‘opportunity gap’ straddles a number of educational resources and is sometimes referred to in the research literature as ‘opportunity to learn’ (OTL). According to the OECD (2013), OTL is ‘students’ exposure to subject content in school’ (p. 88). The concept of OTL has been used to argue that students’ ability to learn a subject is based on whether and for how long they are exposed to it in school, as well as the adequacy and effectiveness of their engagement in the learning process. Research has shown that OTL is connected with student outcomes in multiple and complex ways (Oakes 2005, Schmidt et al. 2015, Wilson, Madjar and McNaughton 2016).

Despite the simple definition, OTL is a complex idea as it often involves both ‘systems’ and ‘classrooms’. At the systems level, OTL resides in the schools students are able to attend and what is available in the way of curriculum, teaching staff stability, teaching quality, tracking practices and resources at the school. At the classroom level, it involves both classroom ‘offerings’ and teaching practices that have often failed to help Indigenous students improve their knowledge and skills.

Recent research carried out in New Zealand secondary schools has shown that, in relation to literacy, Indigenous students and minority students in schools that serve low SES communities are exposed to different and narrower range of texts, and hence to the assessed curriculum, than their peers in other schools (Wilson, Madjar and McNaughton 2016). The quality of the texts students read were lower, with students being given shorter texts and ones targeted at youth rather than adult readers in their coursework. As a result students were found to be diverted into a low-track curriculum with limited exposure to the content necessary to enter higher education. Furthermore, teaching approaches were observed to be highly structured and teacher directed. Given voice, the indigenous Māori students in the wider Starpath Project were able to identify how their OTL might be limited through a lack of learning conversations with
teachers (Webber, McKinley and Rubie-Davies 2016). Students were sensitive to the idea that some of their teachers spoke more often and more animatedly with the ‘brighter’ students in the class. This led to some feelings of teachers having low expectations of them, and some developed feelings of resentment. Maximising opportunities for students to succeed and develop competence fed into the pedagogical relationship Māori students had with their teachers.

However, other research suggests that OTL is also related to socioeconomic status in complex ways. Using PISA data and new student-level OTL indicators, Schmidt et al. (2015) investigated the role of instructional content, in this case mathematics literacy, as a mediator for socioeconomic inequality for all OECD countries. They found that OTL has a significant relationship to student outcomes. Supporting the findings of Wilson, Madjar and McNaughton (2016), the authors found that students from high socioeconomic backgrounds tend to receive more rigorous opportunities to learn important mathematics content. Furthermore, they suggest that about a ne third of the SES relationship to mathematics literacy occurs through its association with OTL, and in Australia it is suggested that it is as high as 50 per cent.

The Australian Government needs to understand that there are opportunity costs associated with teacher turnover and low-quality teaching. The greatest cost of poor teaching is borne not only by students through low achievement but also by the school in the provision of remedial interventions, retention rates, repeated years, special education and disciplinary problems that are often tied to school failure. Furthermore, society also bears the cost of students dropping out, incarceration and low productivity in the workforce. In the case of Australian Indigenous students subject to staff instability and poor teaching, this cost is borne by successive generations and hence the community as a whole.

The implication of offering high challenges to all students is that some of them will require more interactional support than others. This support needs to come from the teacher, but fellow students can also contribute. In other words, for some students more support will be required in order to have the same chance of success. Teachers may require further training to be able to cope with
differentiated interactional support that is responsive to catering for different student needs.

**Personalising engagement and building relationships**

The Finnish education system has found some success in achieving more equitable outcomes for all its students by also employing a system of student counselling and support (Sahlberg 2011). Having teachers (not administrative or support staff) know their students’ academic progress and related goals, be knowledgeable about career pathways (or follow-up referrals), care about what the student does at school, extend their learning as a classroom teacher, and have an interest in what is going on in their lives, will bring a trust between teacher and student. This strategy has been shown to be a very successful support for Indigenous students too.

A key feature in schools that have successful engagement of Indigenous parents and students is the degree of personalisation (Webber, McKinley and Rubie-Davies 2016). In a recent project carried out with schools that serve our most marginalised communities in New Zealand, personalisation was identified early as a possible barrier to improved student achievement. Many of the Māori students interviewed as part of the project spoke about their teachers and other leaders not knowing them and their families. The development of positive relationships between teachers and schools, and Indigenous students and their families, is critical in promoting achievement motivation and academic success (Hattie 2009, Martin 2006). Darling-Hammond (2010) argues that a school’s efforts to ensure students are well known include the construction of small learning communities; continuous long-term relationships between adults and students; advisory systems that systematically organise counselling, academic supports and family connections; and small class sizes and reduced pupil loads for teachers, which allow them to care effectively for students. The Starpath Project helped New Zealand schools with large numbers of Māori students design systems with schools that targeted a formal advisory system and working with families/caregivers.

The academic advisory program that was implemented in schools was designed in two parts: the parent–student–teacher (PST)
or three-way conferences, and student–teacher or two-way conferences. The PST conferences occurred where parents/caregivers and their child met the child’s ‘mentor’ teacher (who could be a dean or homeroom teacher) for an in-depth overview about the child’s progress in all subject areas. At this meeting the teacher had a comprehensive academic profile for each of their students, put together by the student’s individual subject teachers, to discuss with the student’s significant adults. This was a data-based discussion and included the student’s short-, medium- and long-term goals (e.g. qualifications, careers), their current academic performance, whether they were progressing towards their targets and goals, and what families could do to help support their child’s learning and achievement. There were also opportunities to discuss student success and issues relating to the student’s ability to focus on their work. The student–teacher conferences involved students meeting their mentor teacher on a regular basis to discuss their academic progress, their goals and career aspirations, and how they had planned to achieve them. Plans were regularly reviewed with the student, and students could also discuss or get advice on where to go to obtain assistance for more personal issues and challenges (see Webber, McKinley and Rubie-Davies 2016 for more detail).

The implementation of this intervention did not have a template, although guidelines could be provided if needed. The academic counselling was implemented to address a desire by students and parents for schools to get to know students and their families. Students and families responded in kind with attendance at these meetings rising from less than 20 per cent to more than 80 per cent in most cases, sustained for five or more years. The ethic of care embedded in this intervention has a number of key features. First, it is the student’s teachers who know about the child in depth (and get to know the family)—not a counsellor and careers teacher. It is not that the counsellor or careers teacher/department in schools do not have a role; they do, as excellent people in these positions can be extremely helpful to the student and teacher mentor. But the discussions on student aspirations and goals are directly connected to their academic work through the person responsible for their academic progress—their teachers. It is a feature that is often underestimated by schools. Second, long conversations with one person who has
oversight of the student’s academic, social and emotional well-being is easier for parents and builds for more trusting relationships.

The Te Kotahitanga (TK) Project carried out in fifty secondary schools in New Zealand focused on the learning relationships between Māori students and their teachers (Bishop, Ladwig and Berryman 2014). The project began with the experiences of Māori students from both engaged and non-engaged students, their parents/caregivers, teachers and principals. Through this work the team identified an effective teaching profile and produced a professional development program that included a series of structured classroom observations and feedback sessions; a series of collaborative, problem-solving sessions based on the evidence of student outcomes; and shadow-coaching sessions (Bishop et al. 2009). The project found that when Māori students have good relationships with their teachers, they are able to thrive at school.

All this research suggests the importance of developing excellent relationships with students, parents/caregivers and their communities. Furthermore, such relationships need to be developed by the students’ teachers in particular. School leadership can facilitate strong relationships through making relationship-building a priority for the school and for leaders being engaged themselves in the local Indigenous community. School structures and practices can also play a significant role in consolidating relationships with parents and communities through actions such as the display of the local language on signs, artwork and being welcoming, among many other ideas. The importance of relationship-building is paramount.

Connecting with family and community

When some parents are less involved than others with their child’s school or classroom they are often assumed to be not supportive of the school or the teacher, and care less about their child’s education. The Starpath Project found this sentiment among the teachers in the schools before the school-wide PST meetings. In fact, it was the reason given most often by staff for not wanting to expend the effort to do something differently. But this is rarely true. Most parents do care. There are many reasons for why parents/caregivers of Indigenous students do not turn up to school. There is little doubt that parents/caregivers will be more likely to support learning if they
feel they are valued partners in their child’s schooling, if they believe that education will make a difference to their children’s future, and if the child stands a good chance of doing well at school. Schools who make the effort to engage families make a difference (Biddulph, Biddulph and Biddulph 2003).

The role of parents/caregivers and community is central to all students’ motivation and achievement in school (Clinton and Hattie 2013), and this is particularly critical for Indigenous students. The reasons for this are wide and varied and include cultural reasons, generational educational disadvantage, parental experiences of schools as students and parents, and other factors including those related to health and socioeconomic status. Some research has argued that Indigenous parents located in northern Australia are content with the current engagement efforts of the school and have no expectation or intention of becoming more engaged with the school (Lea et al. 2011). The researchers have attributed this to a history of non-engagement supported by successive policies as they have characterised Indigenous parents as incapable. Wider research suggests that parents have a significant influence on students’ valuing of education (Martin 2006).

Work from the Starpath Project in New Zealand showed that Māori students’ families did not have a significant involvement with school, even when meetings were held to report progress (Webber, McKinley and Rubie-Davies 2016). However, the intervention around the PST meetings resulted in significantly more engagement between teachers and their Māori students’ parents/caregivers informally on phones and email and at more formal report meetings. One of the keys to this relationship is where the conversations address how the home and school are both committed to building enduring achievement-focused relationships: collective vision, collective efficacy and collective action. The key is to get to a point in the relationship that is trustful, respectful and focusing on their child’s progress and participation, and for parents/caregivers and community to have real input into curriculum. Too often discussions between school and home are about negative aspects of a child’s schooling: disruptive behavior, too much attitude, breaking school rules, wearing incorrect uniform and other infringements.
A word on culturally responsive and culturally relevant pedagogies

Significant amounts of research have been carried out on culturally responsive pedagogies (CRP) as they have been thought of as a promising part solution to address educational disparities. These have been defined as teaching ‘to and through personal and cultural strengths, their intellectual capabilities, and prior accomplishments’ (Gay 2010, 26). In Australia, some Aboriginal and Torres Strait Islander educational researchers have investigated and developed models regarding CRP, for example, the eight ways pedagogical framework (Lowe and Yunkaporta, n.d.). The models—and they have been developed in many other countries—tend to be specific to a context. In other words, they are developed from practice in a particular area or with a specific group of children or school, and perceived to be successful by the students, parents and teachers concerned. However, the models do not always ‘travel’ well, and nor should we expect them to.

While the idea of responding to the diverse needs of students and adapting approaches for different cohorts of students is appropriate, and much of the work has been insightful, after forty years it has had little influence on teacher practice. Indigenous researchers have argued that CRP is often reduced to essentialisms, meaningless generalisations, trivial anecdotes and caricatures (Castagno and Brayboy 2008, McKinley and Stewart 2009). What constitutes CRP needs to be carefully considered before being put to use, as there are limitations. For example, some argue that many CRP approaches do not address the central problem of power imbalance (Sleeter 2011), racism (Castagno and Brayboy 2008), emphasise deficit thinking (Bishop, Ladwig and Berryman 2014), and do not address Indigenous epistemologies (McKinley and Stewart 2009). Culturally responsive pedagogies are possibly best left to an education system deeply embedded in Indigenous epistemologies, languages and pedagogies, such as Kura Kaupapa Māori developed in New Zealand.

Māori academic Bishop argues that effective teachers of Māori students create a culturally appropriate and responsive context for learning in their classroom. He suggests that this includes teachers committed to making a difference for Māori students and their
achievement; caring for the student as culturally located human beings; caring for Māori student performance; creating and managing positive learning environments; engaging in effective teaching interactions with Māori students; using a range of strategies that promote effective teaching interactions and relationships; and promoting, monitoring and reflecting on outcomes that lead to greater achievement.

Conclusion

In this chapter I have argued that the challenge for Australian education is to place in front of each and every Indigenous Australian child, every day, quality teachers and quality teaching. International research investigating where Indigenous students are positively engaged with school and the curriculum demonstrates a number of qualities. These include schools that: respect and value the individuality of students; link effectively with indigenous families/caregivers and communities; develop an academic curriculum that is demanding but allows for flexibility; demonstrate a high level of tolerance; support innovative teaching strategies and practices, including culturally responsive strategies; facilitate positive relationships between teachers and students, academic and pastoral; and create a welcoming environment that promotes validity and legitimacy of local Australian Indigenous cultures. In addition affective factors are crucially important, such as continuous, long-term relationships between adults (teachers) and students; and advisory systems that systematically organise counselling, academic supports and family connections are essential for students to be well known by their teachers.

This chapter uses educational research to make suggestions about what can be done in schools to improve Indigenous students’ educational outcomes. There is much left unstated. Education systems and structures, education policy, teacher education, teacher professional development and school leadership are all factors that affect Indigenous student outcomes. My purpose in this chapter is to deconstruct the prevailing learning paradigm for Indigenous students, from continually focusing on ‘inequality’ and ‘achievement gaps’, to debating what constitutes quality teaching for Indigenous
students and ensuring that it is accessible to every Indigenous child in Australia.

**Biography**

Elizabeth McKinley is Professor of Indigenous Education at the Melbourne Graduate School of Education at the University of Melbourne. She has a background in secondary teaching, teacher education and leadership roles in Māori education. She was a Professor in Māori (Indigenous) Education at the University of Auckland, and the director for eight years of The Starpath Project for Tertiary Participation and Success. Professor McKinley was a member of the Minister of New Zealand’s Ministerial Cross Sector Forum (MCSF) on Raising Achievement (2012-2014) and advises a range of government agencies on education policy and use of data.

**Notes**

1 The Starpath Project was a research and development project whose goal was to raise the achievement of Māori and Pacific Island students, and other students from low SES schools in Auckland and Northland through a series of interventions.

2 Te Kotahitanga was also a research and development project that focused on building classroom relationships between teachers and Māori students to improve achievement.
Part 3
The role and impact of teachers
Chapter 13

Supporting the development of the profession

The impact of a clinical approach to teacher education

Larissa McLean Davies, Teresa Angelico, Barbara Hadlow, Jeana Kriewaldt, Field Rickards, Jane Thornton, and Peter Wright

There are many debates in and about education; however, there is universal agreement that quality education can change the life choices of individuals and bring about a more just society. Given this understanding, it is unsurprising that, for more than a decade, teacher quality has received international media attention and has been debated by researchers and policy-makers. As a result of international research, it is now well established that the quality and effectiveness of teachers are paramount to the project of education and that teachers have the greatest ‘in school’ influence on student learning (ACER 2003; Hattie 2012; Masters 2003; OECD 2005b, 2009; Wenglinsky 2002; World Bank 2012).

As a result of evidence about discrepancies in the quality of pre-service preparation among different program and providers in the United States (Levine 2006), research into the importance of teacher quality has put the spotlight on initial teacher education (ITE). Concerns about theory/practice divide in ITE, the quality of partnerships between universities and schools, the amount of time
pre-service teachers spend in practice and the kind of support they receive has led to a ‘practicum turn’ in teacher education (Mattsson, Eilertsen and Rorrison 2011). Both within Australia and internationally, this has led to significant policy reform (Donaldson 2010, Carter 2015, TEMAG 2015).

Most recently, and following the advice of the Teacher Ministerial Advisory Group (TEMAG), from 2016 all pre-service Teacher Education Programs in Australia will be required to show evidence of the influence of their graduates on student learning, both during their pre-service degrees and while in practice (AITSL 2016). This policy assumes that quality teacher preparation can and will transcend the Initial Teacher Education phase. There is significant and long-standing research evidence about the challenges many graduate teachers face when they commence their careers and feel obliged to adopt local school practices, even if they might be pedagogically regressive, in order to assimilate into the school context in which they are practising (Zeichner and Tabachnick 1981). In order to ameliorate this, universities and schools will need to work closely together, not only to ensure that teacher candidates have suitable school experiences and exposure to classrooms, but also to ensure that professional conversations are at the heart of the partnership and that teacher professional learning is understood as a shared responsibility that continues throughout a teacher’s career.

In this chapter, we consider these issues as we explore a paradigm that supports the ongoing professional learning and evaluation of teachers’ practice across the stages of career development. Since the early 2000s, teacher educators and policy-makers in the United States, United Kingdom and Australia have been exploring ways of understanding teaching as a clinical practice profession (Alter and Coggshall 2009, Burn and Mutton 2013, Conroy, Hulme and Menter 2013, Dinham 2013a, McLean Davies et al. 2013, McLean Davies et al. 2015).

The opportunity to develop a clinical approach to teacher education at the Melbourne Graduate School of Education (MGSE) came as a result of significant curriculum reform at the University of Melbourne. In 2008, the University of Melbourne moved to a system that offered six generic undergraduate degrees and relocated professional preparation (such as law, medicine and education) to graduate
This significant change required the MGSE to reconceptualise pre-service teacher education and to seek a framework that would support robust teacher preparation for graduates. Although the Master of Teaching at the MGSE drew the Stanford Teacher Education Program (STEP) (Hammerness and Darling-Hammond 2002) and the Oxford Internship Model (Benton 1990), a key significant difference between the MGSE Master of Teaching and these ‘boutique’ programs is both scale and geography. The Master of Teaching program serves geographically diverse communities and locations, and is able to sustain large numbers of teacher candidates.

The intention of this chapter is to show the way in which clinical thinking and dispositions, when applied systematically and systemically to teaching, provide a framework for quality teacher education that supports the development of pre-service teachers’ professional capacities and ‘readiness to teach’ (TEMAG 2015). We will also argue, however, that the potential of this approach extends beyond initial teacher education and affects practices at both of the sites of learning: the university and the school; in this way, clinical teaching can be understood as an approach that can reform and transform not only teacher education, but also the schools and systems that work in partnership with universities.

The chapter is structured around the reflective accounts of personal and institutional experiences of key staff in the Master of Teaching program, and commentary on and analysis of these accounts. The structure and methodology of this chapter reflects a deliberate intention to explore an alternative way in which universities and schools can engage in scholarship and research. The role of the practitioner researcher has been well established in research literature (Cochran-Smith and Lytle 1999, Bartlett and Burton 2006); however, when university staff become involved, the traditional separation of school colleagues providing data and academics engaging in ‘research’ often ensues. In contrast to this practice, in this chapter, ‘data’ is provided by school and university staff in the form of reflections, and this data is used to identify a number of key themes: MGSE’s reform agenda; establishment of the partnership model; significance of partnerships support roles; building mentoring capacity; and reflecting on benefits and impacts. The
writers of this chapter are all involved in the design and delivery of the University of Melbourne’s clinical Master of Teaching either as university staff or staff at Koonung Secondary College, a large secondary school in the eastern suburbs of Melbourne. Koonung has been a core, or ‘base’, school of approximately a thousand students and has been committed to placing approximately twelve teacher candidates each year since 2008. Like the other forty-one core schools in the program, Koonung also supports, through a dedicated staff-member, twenty or more teacher candidates placed in neighbouring schools.

Through the professional dialogue created by these reflections and commentaries, we will examine the ways in which a clinical approach to teacher education can influence learning and teaching in the broadest sense, beyond an immediate influence on pre-service teacher candidates. Moreover, we will contend that teacher education reform must be a shared responsibility between universities, school sectors and governments, and requires a commitment to appropriate funding and resourcing from all key stakeholders. We will argue that key to reform in teacher education, and education more broadly, is a shared conceptual framework between key stakeholders and the sites of practice.

**MGSE’s reform agenda**

Professor Field Rickards, Dean of the Melbourne Graduate School of Education, reflects on the reconceptualisation of initial teacher education in 2008, following the relocation of professional preparation graduate schools.

When I learnt that the Faculty of Education at Melbourne was to become a graduate school, I immediately asked my colleagues ‘what does a master’s pre-service teacher look like? What kind of preparation is appropriate for mature individuals who have a degree and considerable life experience?’ Some have been scientists or lawyers, some have PhDs. In seeking answers to these questions, I was influenced by the principles of the Carnegie Corporation of New York’s *Teachers for a New Era* (2001)—in particular the notion that teaching be recognised as an academically
taught, clinical practice profession. This view that challenges the enduring ‘apprenticeship’ model of teacher preparation, which encourages pre-service teachers to forget everything they learn at university and learn primarily through the experiences of the supervisor on placement. I had the opportunity to travel to Stanford University and see their clinical program first-hand, and returned to Melbourne determined to reform our programs and implement a clinical approach to scale.

This notion of teaching as clinical practice was one that resonated with me personally. I came to education with a sixteen-year background in clinical teaching in the field of audiology and in educational intervention for young children with impaired hearing. The linking of the basic and clinical sciences with clinical practice, the importance of evidence, and of visible, measurable developmental learning has always been fundamental to my teaching experience and so clinical teacher education simply made sense. (Field Rickards)

Derived from medical models of education, clinical teaching has at its core a commitment to integrate theoretical and practice-based knowledge. In their international survey of various teacher education programs that identify as clinical, Burn and Mutton (2013) observe that clinically based initial teacher education (ITE) programs focus on developing foundational knowledge, understanding through professional experience and integrating ‘different sources of knowledge, bringing research-informed perspectives into dialogue with classroom practice and the professional understandings of classroom teachers in ways that allow beginners to make sense of, interrogate and learn from them all’ (p. 1).

While the robust premise of clinical programs is generally acknowledged in international contexts, this has not been the case in an Australian context. As Dinham (2013a) and Kriewaldt and Turnidge (2013) note, among Australian teacher educators there is a suspicion of employing medicalised terminology and concepts to teaching. The concern is centred around this approach potentially pathologising students and approaching learning from a deficit.
position (for discussion see McLean Davies et al. 2015). Further, while tertiary institutions in the United Kingdom and the United States routinely use the word ‘clinical’ to describe field experience, and some education faculty staff in teacher education programs overseas are considered ‘clinical faculty’, this is not the tradition in Australia, where ‘clinical’ has often meant sterile and dispassionate—qualities one would not ordinarily associate with teaching. Therefore appropriating medical paradigms for teaching requires conceptual, disciplinary and linguistic agility and openness.

Establishment of the partnership model
As Professor Field Rickards notes below, the pre-service teacher preparation represented by the clinical Master of Teaching requires coherence of vision and a shared commitment to a teacher development approach that pervades all sites of learning. A different kind of partnership with our schools was developed enabling the establishment of primary, secondary and early childhood networks. A commitment was made to funding teaching fellows, expert teachers at ‘base’ schools in each network, and university-based clinical specialists, to support teacher candidates to make links between theory and practice.

In medicine, trainee doctors experience opportunities to integrate theory and practice through teaching hospitals. In a similar vein, the Master of Teaching places teacher candidates in schools for two days a week. For the remaining three days of the week, teacher candidates undertake classes at university, where they are taught by clinical specialists and other academic staff. Teacher candidates also undertake periods of ‘block placement’ each semester, which range from two to four weeks in duration. This deliberate integration of university and school learning is fundamental to the MGSE Master of Teaching clinical approach, and has been vital to its success. (Field Rickards)

This, like other professions, such as medicine and audiology, the Master of Teaching program recognises the importance of
dedicated and substantive time in practice supported by experts in the field. This notion of shared concepts of practice is also taken up in reflections by clinical specialist Barbara Hadlow and teaching fellow Jane Thornton.

Great strength lies in the connections, the relationships and shared understandings that grow out of unified endeavours, a common language and recognition that the teacher can make a profound difference to the learning and life choices of the student. Our partnership schools provide a seed-bed to apply and to build theoretical learning. (Barbara Hadlow)

Understanding a shared vision of what is best practice and what that looks like within the context of a school is critical to achieving positive outcomes for teacher candidates and students. (Jane Thornton)

The systemic affordances of a clinical approach to teaching, articulated here, resonate with Bryk's notion of a 'networked community' that utilises 'improvement science' (Bryk 2015, 469) and a cohesive and inclusive framework to work towards systemic and sustained learning outcomes for students. Surveying three significant approaches to improving student learning in schools, Bryk notes the affordances and limitations of performance management thinking, evidence based-practice and professional learning communities, and draws attention to the ways in which the limitations of these approaches can be traced to the dominance of the interests of one group of key stakeholders in the educational field. Bryk argues that each approach is limited by its perspective, and that networked communities which draw together the viewpoints and expertise of all stakeholders (Bryk 2015, 475) have a far greater likelihood of creating the systemic conditions needed to bring about improved learning outcomes for pupils in schools. This notion sits at the core of our argument about clinical teaching and its potential to create a network and shared understanding among key stakeholders in the education field.
Significance of partnership support roles
The role of clinical specialists, teaching fellows and mentor teachers is vital in ensuring consistency of approach between the early childhood, primary and secondary programs of the Master of Teaching. Clinical specialists work one day a week in a partnership school group explicitly to support teacher candidates to make links between theory and practice. They work closely with teacher candidates throughout the program, observing lessons, providing feedback and facilitating seminars in schools, which are like the ‘grand rounds’ in medicine, and contribute to and participate in professional learning activities for all personnel working in schools. Barbara Hadlow provides further insight into the role:

Clinical specialists use a particular lens to observe, remark upon, interrogate and influence a candidate’s development during practicum. Links to the academic content of the course and to evidence and research, enable deep questioning and solution-building. Understanding the impact of this role has grown through knowing the influence that each stakeholder can exert and the necessary interweaving of the work we all do in professionally developing the candidates, and consequently, ourselves.

During lesson observations, key questions frame my debrief discussions: what does the student currently know and how can you measure this, where to next, and how can you enable them to get there? To teach well (and to be an effective clinical specialist) is thus to be many things: a diagnostician, an interventionist practitioner who makes strong decisions based on good evidence, a temperate and empathetic professional and a team player of the highest order.

Professional development becomes reciprocal. Teaching and learning broadly is impacted, and the schools and university are deeply enmeshed in the transactions. It was not ever thus. Candidates learn about the power of measuring, monitoring, diagnosing and intervening with evidence-based strategies that have impact. They live the reality that teachers work collaboratively to
gain insights into a student, to provide rich context for learning and to mitigate factors that impede growth. My role is to encourage, clarify, elicit responses, share strategies and instruct. The clinical approach and the power of the team have enabled a visible shift in delivery, thinking and reflecting in our classrooms. (Barbara Hadlow)

Hadlow’s reflection shows the key role clinical staff play in repurposing clinical language and ideas for teaching, and the affordances of this approach. Rather than distancing teacher candidates from students, words such as ‘intervention’, ‘measurement’ and ‘diagnosis’ are used to support teacher candidates to think clinically and to focus on the needs of individual learners in their classrooms. Teaching fellows, who are expert teachers located at a ‘base’ school in each network, support our teacher candidates. Jane Thornton makes the following reflection:

As teaching fellow I have observed candidates adopt the “clinical approach” during placement. One way that stands out is the open manner in which they receive feedback. I observe each one twice during their placement and provide non-judgemental, evidence-based feedback. Together we analyse the feedback and patterns revealed, relate it back to theory and make plans for the next lesson. When candidates observe my lessons I try to make my teaching as visible as possible by explaining what I am doing and why. I use the same language and theories covered at university.

The close partnership between the clinical specialist and teaching fellow is a strength of the program. They jointly set clear roles and expectations, use common language, use evidence to support practice and are the link between the university and the school. They become reflective practitioners with the skills needed to be an impactful teacher. (Jane Thornton)

Central to a clinical approach to partnership is the importance of having a mechanism for meaningful feedback and shared language.

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through which to talk about teaching. It is through a shared discourse that teacher candidates develop professional clinical judgement and ability to support the learning of each individual in their classrooms.

It is clear from both reflections that in order to serve the needs to students, a clinical approach is dependent on mutual respect and collaboration between key stakeholders. This is perhaps an aspect of clinical approaches to teacher education that is less frequently discussed: effective clinical practice in teaching, as in medicine, is dependent on relationships, both on the macro level between institutions and on the micro and personal level, between staff, between staff and teacher candidates, and between teacher candidates and students.

**Building mentoring capacity**

In the TEMAG report (2015) and the revised Initial Teacher Education Program Standards provided by the Australian Institute of Teaching and School Leadership (AITSL), the importance of mentor teacher professional learning has also been emphasised.

In 2011–12 MGSE formed an alliance with Koonung Secondary College to form a Centre for Teaching Excellence (Department of Education and Training 2014a), along with six partner schools to improve supervising teacher skills as mentors.

The Centre for Teaching Excellence initiative was a federally funded project that provided funding for 30 teachers from the seven cluster schools to undertake a ‘Specialist Certificate in Education—Clinical Teaching’ developed by the University of Melbourne. MGSE’s Jeana Kriewaldt provides background to this initiative:

It began with a conversation. Musing led to an exhortation of the vital importance of mentor teachers in the teacher education partnership. What followed was a grant application, which led to funding of a program which over 80 mentor teachers completed through multiple courses from beginning in 2012 and concluding in 2014. It was designed to advance the alignment of clinical field experiences in MGSE partnership schools with the Master of Teaching’s clinical teaching model. Recognising the critical role of mentor teachers, the Specialist Certificate was
designed to build on insights drawn from mentoring and developed mentors’ understanding of the importance of data in developing pedagogical interventions to develop student learning. (Jeana Kriewaldt)

The value of these concepts and practices for in-service teachers, beyond their mentoring role, is evident in the establishment of a ‘praxis’ group, initiated by participants in the certificate course to continue exploration of their own practices. Now in its fourth year, the Koonung Praxis group is an effective example of an ongoing, teacher-led collaborative improvement group that uses lesson video analysis to improve practice. The establishment of this group and the regular use of a dedicated classroom at Koonung—fitted out with cameras and recording equipment as part of the project and funding—further reinforces the importance of collaboration, feedback, shared problem-solving, and modelling to clinical teaching.

Graduates of this course are qualified and able to apply MGSE’s clinical model to their personal practice and mentor beginning and practicing teachers using this framework. The Specialist Certificate challenged accepted practices at Koonung, and introduced notions of collegial feedback and transparency. Jeana Kriewaldt reflects on the benefits and influence of this initiative:

Though specifically designed to support mentoring, the certificate has enabled participants to use ideas and concepts from clinical teaching to rigorously interrogate what works better leading to improvements in their school settings. They have applied many of the ideas and concepts they learned during the course to their mentoring and interactions with pre-service teachers, and also with their teacher colleagues. Increased dialogue and shared activities within partnership schools occurred.

Teachers report that the certificate has improved the way that they think and work and understand teaching and learning. It has led to higher outcomes for their students. Graduates of this certificate have written articles for professional journals (Aspire) on clinical praxis and
mentoring, resulting in sharing of concepts of clinical teaching across Victoria.

For partner schools it has made a positive difference through activities that have including the establishment of a collegial support group formed by a group of teachers with the aim of helping each other review aspects of their teaching practice in order to improve student learning at Koonung Secondary College. (Jeana Kriewaldt)

The implementation of the Specialist Certificate contributed to the research base of clinical teaching and was a key catalyst for the full implementation of the possibilities of clinical teaching. The success of the Specialist Certificate initiative shows that investment must be made if we are serious about improving Initial Teacher Education in Australia. Although employing key staff, such as clinical specialist and teaching fellows, goes a long way to improving clinical pre-service teacher education, it is also vital that in-service teachers also share a common understanding and commitment to improving clinical teaching practice.

**Reflecting on benefits and impact**

As further reinforced by Peter Wright, Principal of Koonung Secondary College, university and school clinical partnerships have the potential to facilitate professional learning in educational communities.

Since the inception of the Master of Teaching clinical practice approach to pre-service teacher training in 2008, Koonung has hosted approximately 200 students with a further 360 hosted in our partnering schools. Currently seventeen members of Koonung's substantive teaching staff are MTeach graduates in subject areas including Mathematics, Science, English, Physical Education, History, Art, English as an Alternate Language and Geography. Their addition to our teaching staff has enriched the school experience for students and fellow teachers due to the enthusiasm and pedagogical expertise the graduates bring with them. (Peter Wright)
The partnership between MGSE and Koonung has enhanced the overall quality of teaching at the school. Jane Thornton notes that Koonung’s involvement in the Master of Teaching has transformed teaching for her colleagues:

We now routinely seek feedback from peers, candidates and students, and we reflect on this in light of research and theory. This has changed the focus in the classroom, with more formative assessments conducted, helping to identify the learning needs of students. Informed grouping of the students based on their ability enhance the potential to learn from each other. We complete activities based on a theoretical underpinning. Backward design is employed, whereby we analyse what skills and concepts we want the students to know and then what activities will build that knowledge. Our classrooms are louder with students questioning each other, as well as the teacher. We learn together. The biggest change for staff has been a striving for continual improvement, understanding that good teaching is an ongoing cycle of planning, practicing and reflecting. (Jane Thornton)

The impact on the ground at Koonung as a result of delivering the MTeach model was to open the door to classrooms, where team teaching, observations and visiting neighbouring classrooms and indeed neighbouring school classrooms is now commonplace. Pre-service, graduate and experienced teachers share ideas, lesson plans, strategies and techniques used in their classrooms on a daily basis, and collegiality is powerful. Experienced teachers have been enriched through their interaction with MTeach candidates in their role as mentors and indirectly through working side by side with them throughout the ebb and flow of the school day and week.

Most significantly, the partnership between MGSE and Koonung has improved learning outcomes for all students. As Peter Wright indicates, ‘There is no doubt that this program has delivered improved student outcomes at Koonung, the data around student relationships, well-being and teaching and learning shows this.’ According to Jane Thornton, the ‘collaborative attitude of staff from
University of Melbourne, Koonung Secondary College and partnership schools has resulted in better graduate teachers and improved student outcomes'.

**Conclusion**
This chapter has demonstrated the way in which a clinical approach to teacher education influences learning and teaching in the broadest sense, beyond an immediate influence on pre-service teacher candidates. We have shown that a clinical model of teaching offers an approach that supports pre-service and in-service teachers, and provides a language to focus attention on the influence of teachers on student learning.

We argued that the key to reform in teacher education, and education more broadly, is strong leadership and a shared vision between universities, school sectors and governments, placing students at the centre of conversations about learning. This vision includes a common understanding of learning and teaching and the importance of clinical judgement skills and the integration of theory and practice. The needs of pre-service teachers, students and professional learning communities are met through collaborative partnership that are essential for bringing about comprehensive improvement for students and teachers.

An important element of this teacher education reform agenda is a commitment to appropriate funding and resourcing from all key stakeholders to enable expert teachers to have dedicated time to focus on teacher candidate development. The infrastructure for such a program is considerable, and well exceeds the current funding provision for initial teacher education.

The imperative is to get teacher education ‘right’ by seeing the powerful connections that can be made between schools and universities. There is much to lose, though, if in exploring these partnerships we choose not to take the opportunity to pursue an integrated, coherent approach to teacher learning that locates pre-service teacher education within a broader developmental continuum of professional development.

Currently, in Great Britain, through the ‘Schools Direct’ program, teacher preparation is increasingly being relocated to schools and university expertise dismissed and dramatically reduced
Supporting the development of the profession (Furlong and Smith 2013; Universities UK 2014). The professional reflections presented in this chapter show unequivocally that powerful teacher education can be best achieved if universities and schools are responsive to each other’s needs and if teacher professional learning is understood on a continuum and as a shared responsibility.

Biographies

Larissa McLean Davies is an Associate Professor in Language and Literacy, and Associate Dean—Teacher Education Research in the MGSE. In this role, she leads research at the interface of pre-service curriculum development and teacher education effectiveness. She led the review and redesign of the Master of Teaching in 2015–2016 and has responsibility for supporting research on the impact of the suite of Master of Teaching programs on student learning. Larissa is regularly asked to talk about teacher education and a clinical approach to learning and teaching, and has given invited presentations at the House of Lords as part of the UNESCO Educational Futures Forum, at Oxford and Plymouth Universities, and closer to home for the Victorian Institute of Teaching and the Victorian Department of Education and Training.

Teresa Angelico is Senior Lecturer in Education and Deputy Director, Learning and Teaching in the MGSE As Deputy Director, Learning and Teaching, Teresa has oversight of the Master of Teaching, Early Childhood, Primary, Secondary, Secondary internship and Early Childhood/Primary courses. She was the inaugural Program Coordinator of the Master of Teaching (Internship) stream, and has led research concerning clinical teaching and alternative pathways into teaching. Prior to commencing at MGSE Teresa held a range of senior research and leadership roles in the Catholic Education Office.

Barbara Hadlow is a Clinical Specialist in the Melbourne Graduate School of Education at The University of Melbourne, where she has led a very cohesive and productive connection between school-based learning activities, partnership schools, and Melbourne University, that explicitly link research and theory with classroom practice. Her recent work also includes leadership of the School
Centres for Teaching Excellence Project in the Eastern Metropolitan Region, and academic seminars delivered on VIT standards to over 600 pre-service teachers. These roles have given her a great depth of understanding of data, improved outcomes and enhancing teacher capacity and wide-ranging technical, consultative and project management skills.

She has enjoyed a range of leadership roles across secondary education, including as a Teaching and Learning Coach, which have given her deep knowledge of the challenges faced by the teaching profession and the processes that lead to quality improvements. This has enabled her to transfer her knowledge and professional processes effectively into cluster, regional and international settings.

**Jeana Kriewaldt** is a Senior Lecturer in the MGSE, University of Melbourne. Her research interests include professional learning in initial and in-service teacher education and the development of clinical reasoning in teachers’ practice. She is currently Senior Leader: Clinical Teaching Practice. Jeana makes a key contribution to research in clinical teaching and clinical reasoning, and was instrumental in the design and delivery of a Specialist Certificate in Clinical Teaching for In-service Teachers. Additionally, Jean's is widely regarded as an expert in the field of Geography education, and is widely published in this area.

**Field Rickards** became the Dean of Education at the University of Melbourne in 2004. He is widely published on education for the hearing impaired, audiology and education research and reform, and also holds a number of patents.

With over four decades experience at the University of Melbourne, Professor Rickards began as a Lecturer in Audiology in the Department of Otolaryngology where he directed Australia's first postgraduate course in Clinical Audiology. One of the first group of research students in the Bionic Ear program, Professor Rickards' research led to the commercial development of a computer-based brain wave audiometer that accurately measures hearing in newborn babies. With this new ability to diagnose deafness at a very early age, he became deeply involved in early intervention and parent
guidance. His early Master of Education from Manchester University provided the foundation.

Professor Rickards’ move from audiology to education of the hearing impaired in 1989 focussed his research on early detection, diagnosis, and educational and audiological intervention. Professor Rickards has held the Foundation Chair in Education of the Hearing Impaired since 1994. He is also a Director of the Bionics Institute, the Royal Children’s Hospital Education Institute, a member of the CRC Hear Board.

As Dean of Education he has guided the transformation of the Faculty of Education to the Melbourne Graduate School of Education, and the introduction of the new world-class clinical Master of Teaching program. His ground-breaking application of a clinical approach to teaching has seen him become a leader in the reform of teacher education.

Jane Thornton has been the Teaching Fellow at Koonung Secondary College for the past four years working with pre-service teachers, and a corps of partnership schools, whilst teaching Physical Education and Psychology. In 2012 Jane enrolled in, and completed a Masters unit in mentoring- Clinical Teaching at the University of Melbourne. In 2012 Jane developed a digital tool to capture and give evidence based, instant feedback called the ‘Teacher Tracker Tool.’ Jane was filmed by AITSL in 2014 to reflect on her role and how to best develop school and university partnerships. In 2015 and 2016 and in collaboration with her Teaching Academy for Professional Practice group from the MGSE, the team worked to further develop, research the impact and refine the tool. In 2016 Jane co-presented at the Australian Association for Research in Education on fostering learning through evidence-informed mentoring dialogues in school settings.

Peter Wright has been teaching for 40 years and is currently the Principal of Koonung Secondary College. Peter has had a lifelong commitment to supporting pre-service teachers and the professional development of practicing teachers. He has presented at many conferences, in particular for the Australian Council for Health Physical Education and Recreation (ACHPER). Peter is a fellow of
ACHPER and continues to contribute to their professional development portfolio. In 2008 Peter saw the potential of the University of Melbourne Master of Teaching initiative and with the full support of the school's teaching staff, Koonung became one of the university's first MTeach Lead Schools. Koonung was the lead school in the School's as Centre's for Teaching Excellence project in partnership with The University of Melbourne and this relationship continued in 2015/16 with the Teaching Academy for Professional Practice project.
School students have been missing as a partner in teacher education. The traditional approach to pre-service training provides two spaces for learning: the theoretical space of the academy, and the practicum conducted within the school. The academic space is used to help teachers to learn about pedagogy, curriculum, assessment and the cultural and psychological needs of their future students. They learn about why they should work in particular ways and what this might look like in practice. Within the second learning space, pre-service teachers enter the school and learn through using their knowledge in action. They practise on students and receive feedback and coaching from advanced practitioners. However, there is a third space that can be harnessed in teacher development: a levelled, experimental and consultative space within which teachers in training learn with and from students.

New possibilities for teacher development emerge when a third space is created for consultation, rehearsal and feedback. The inclusion of students as informants and advisers can provide authentic and transformative research encounters. In this chapter I discuss the use of a ‘third space’ for learning within initial teacher education via
the use of learning partnerships workshops. In these workshops school students work with teacher candidates to examine the ways in which teacher–student relationships affect student engagement, well-being and learning. The students identify teacher behaviour that positively and negatively influences their learning, provide advice about how teachers can deal effectively with common student problems, and demonstrate this advice through role-play and simulation activities.

This chapter explores draws on data collected as part of an initial PhD study (Cahill 2008) and a subsequent study conducted at the University of Melbourne (Cahill and Coffey 2013), both of which took a mixed methods approach, collecting data from students and teachers via focus groups, interviews and surveys. The two studies produced very consistent data, demonstrating that the pedagogical method produced consistent outcomes when led by a range of tertiary educators. Data sources from both Studies 1 and 2 are used in the following discussion. In the first study data was collected from two classes of pre-service teachers (2003 and 2004). In the second study data was collected from five classes of pre-service teachers (2013). Classes were each of around thirty pre-service teachers, matched with classes of twenty-five secondary school students (aged 13–16) from Victorian schools. In both studies the ‘teachers’ were mid-way through their post-graduate teacher training course and had already benefited from practicum experience in their role as a classroom teacher.

**The importance of positive teacher–student relationships**
Teaching is a relational act. Students engage with learning tasks within the frame of the relationships that they have with their teacher and peers. A significant body of research has been established which demonstrates that positive relationships between teachers and students lead to improved student engagement, achievement and well-being (van Uden, Ritzen and Pieters 2014). Students try harder, and communicate more with their teachers, when they think their teacher cares about them and their learning (Finn et al. 2009). Students read this ‘caring’ as evident when the teacher gets to know their students, provides encouragement and constructive formative feedback, treats students in a fair and respectful way, and takes a
positive approach to managing class behaviour (van Uden, Ritzen and Pieters 2014). Not only do positive teacher–student relationships promote students’ engagement in learning but they are also protective of young people’s mental and social health (Resnick, Bearman and Blum 1997).

The importance of relationship skills has been noted in a research review conducted by the Organisation for Economic Cooperation and Development (OECD), which found that investing in social and emotional skills has greater influence than investing in cognitive skills when it comes to improving student physical health, mental health, behavioural issues, bullying and feelings of victimisation (OECD 2015). However, despite evidence about the important contribution to be made to children’s learning and well-being through positive relationships, graduate teachers report that they are entering the profession with insufficient confidence and self-efficacy in the area of relationship skills (Cho et al. 2011). There is therefore a significant need for teacher education courses to invest in effective approaches to enhancing the relationship skills of their graduates. It is here that findings from the research into the Learning Partnerships program points to powerful possibilities.

What happens in a Learning Partnership workshop?
The Learning Partnerships program was created to provide a space within which teachers could learn with and from (rather than just about) young people. Initiated by the author in 2003 as part of her PhD research, the workshops were initially provided at the University of Melbourne for pre-service teachers in a core subject of the Graduate Diploma of Education, taught by the author, and throughout the medical curriculum for University of Melbourne students of medicine completing their training. From 2010 these workshops were provided to all primary and secondary pre-service teachers in the context of a pre-service teacher education elective titled Promoting Student Well-being, and from 2013 were additionally provided within the clinical teaching practicum in the secondary Master of Teaching.

In a typical Learning Partnerships workshop in pre-service teacher education, a class of around twenty-five school students participate with a class of approximately thirty pre-service teachers.
Workshops are between 1.5 and 2 hours in length. Various paired sharing and small group tasks are used to provide the students and pre-service teachers with opportunities to exchange stories about the characteristics of their most appreciated and influential teachers and the qualities and behaviour displayed by these noteworthy teachers. In a subsequent phase, participants work in small mixed groups, and students describe some of the experiences that they believe should not happen at school but do. The groups select one of these problems and prepare an embodied image or ‘frozen moment’ that encapsulates this experience and makes it evident. Common problems include experiences of peer bullying, problems with meeting submission dates for tasks because of personal problems, teacher use of unfair or belittling behaviour management strategies and teacher failure to provide engaging or well-structured learning tasks. Observers interpret the images as they are presented, discussing first the impact on the student, and then providing advice and demonstration about what the teacher can do to help in this situation.

Following this initial sharing, the scenes are brought to life, and subsequent role-plays and replays provide opportunity for students to act as advisers—suggesting or demonstrating the sort of action that can help and noting those that hinder. Sometimes students step into the teacher role to demonstrate what they mean, and sometimes they coach a teacher, giving formative feedback during a series of rehearsals until they feel that a suitable response has been fashioned and enacted. Later the participants work in pairs and examine a situation in which a teacher observes a student in need of help with school work, or a friendship or family problem. As pairs perform their role-plays, additional strategies are used to have students articulate the ‘hidden thoughts’ and emotions of the characters involved in the scenes. The responses provided via the ‘hidden thoughts’ of the characters commonly reveal the feelings of fear and shame that function as barriers to help-seeking on the part of the student, and the anxieties that are experienced by the teacher in relation to what constitutes an effective response to the student. This data is consistent with research which identifies that students experiencing problems related to bullying, mental health, drugs or sexuality problems face significant barriers in seeking help, and are more likely to
turn to friends for advice than to use teachers or other adults as a source of help (Rickwood et al. 2005). Following revelation of these barriers to help-seeking, their consistent advice is that teachers should initiate helping conversations, rather than presume that those in need will approach their teacher.

At the end of the workshop the students stand across the front of the room, in the space typically reserved for the teacher. In turn they each offer a piece of advice, delivering messages such as: be fair; treat students with respect; focus on their different needs as learners; have the courage to be yourself; smile; be firm but be friendly; get to know your students; make learning interesting; don’t yell—stay in charge of yourself; never give up on your students; have passion for what you are teaching. As is evident in this data, the students most typically address the importance of positive teacher–student relationships.

**Learning in the levelled space**

The research into the influence of the Learning Partnerships program reveals that both teachers and students find themselves restricted by the segregated and hierarchical roles that they play in the school setting. In the workshop, however, they experience a temporary relief from this divide. The workshop provides a space within which to step outside this divide to explore the relational domain of their professional responsibilities—one that is harder to focus on when in the practicum domain, during which their attention is caught up with issues of pedagogy and content delivery, rather than on the development of relationship skills. As one pre-service teacher involved in the program said: ‘I think it was the best session we’ve had so far—hands down. Because when you’re teaching, building rapport isn’t your main focus so it was great getting a chance to focus on that’ (Deirdre, teacher, Study 2).

Both teachers and students find the workshop encounter to be a ‘humanising’ experience, in that it helps to dislodge the role-based divide of teacher and student. For example, Julia, another teacher involved in the program, said the levelling experience allows participants to work together outside the usual power relationship: ‘It is a great leveller, because it is not a power relationship that is set up ... It kind of humanised both the role of the teacher and the role of the
student. And that can tend to be dehumanised in institutions because you are so busy with your agenda’ (Julia, teacher, Study 1).

Similarly, when freed from her confining role as disciplinarian, Liz found a more honest exchange was possible:

I thought it was really the best thing I did all year. I thought it was fantastic. I think because I was just really conscious of the fact that every interaction that you have with students you are in this role as the teacher and to some degree or another you’re a disciplinarian, and then to be able to meet and interact with them as people instead … I got a lot out of it in terms of being able to talk to them on equal footing and find out what their point of view was. (Liz, teacher, Study 1)

This release from the authoritarian role helps the teachers to reread the students. Another teacher, Jane, described the transformative effect of the dialogic contact in the workshops, suggesting the contact enabled her to see the person, previously she saw the scary mob: ‘I liked the speaking to the students because it gave you a chance to meet them as a person, and see them, not this scary group of students … On rounds I used to go in and they were just this mob of people who I was scared of, basically’ (Jane, teacher, Study 1).

The students also noted this phenomenon of being equal, describing their release from confining hierarchical roles as generating a shift in the sense of self and as enabling their contribution. Matthew, for example, found the workshops offered an opportunity to actually work ‘with’ teachers:

I think it was good because we got to be interactive, and we both—the teacher and the student—got to be able to work together. Cos like, when you think of being at school, you don’t really think of working with your teacher. You think of them being your ‘teacher’. But in the workshop you feel like you’re actually working with them. (Matthew, student, Study 2)
It is clear from this data that despite the fact that teachers and students work together all the time, the students do not necessarily experience a sense of alignment or partnership, but rather one of divide.

Creating a new story
The workshop generates not only a humanising and equalising sense of connection but also a reimagining of the other. Katrina describes the way in which interaction causes her to rethink who young people are: ‘I saw a whole different side to students, and I was amazed by their maturity. I think if anything out of that class I’ve got a real appreciation for the individual student’ (Katrina, teacher, Study 1).

In reconstructing ‘student’, Katrina becomes an appreciating teacher. That means she too is changed. Such rethinking about what was possible in her relationship with students was created in response to the depth and insight of the student contributions: ‘The students we had were so insightful. Like, we’d do an activity and then open it up for discussion, and I just think some of the insights from them were quite astounding’ (Leon, teacher, Study 2).

The students also found that the interaction caused them to create new interpretive ‘stories’ about teachers. Krissy, for example, described a shift in the assumptions that students use to interpret the stance of the teacher: ‘You see kind of the teachers whingeing, and the student just thinks that the teacher doesn’t care, you know … whereas the teacher is worrying about it on the other side’ (Krissy, student, Study 1).

Krissy suggests here that an explanatory default is made whereby students ascribe negative motive to teachers. This default is informed by the cultural storyline about who teachers and students ‘are’. The assumption that the teacher is whingeing, rather than worried, arises from a discourse that demonises teachers. Given this assumption, the behaviour the teacher exhibits is likely to be interpreted by students as evidence of that which is already assumed to be so. A teacher complaining about overdue work will be read as whingeing or not caring rather than as worrying.

This shift in mindset can also be heard in Natalie’s response. She describes how she reconceptualises the teacher, making a shift from seeing the teacher as the enemy to the teacher as tolerant:
I guess in a school environment you don't normally think about, you know, the teachers’ perspectives; it is just they're the enemy and I'm right. And, you know, it is kind of teaching you to see the other side of the story in a way. [We saw] how tolerant they could be to certain stuff, whereas we don’t see that side of it prior because we just assume that they're not. (Natalie, student, Study 1)

Natalie thus reframes and reinterprets teacher behaviour. Her previous story about teachers and students as working in opposition had prevented her from seeing the ‘tolerance’ of teachers.

The process of classification is integral to the formation of identity (Foucault 1980). A process of reclassification or a shift in mindset is therefore necessary if people are to create a new position or a new storyline. Inside an appreciative story people are more likely to perceive evidence of effort, regard and persistence, whereas inside a story about victims and perpetrators, people are more likely to see opposition, suffering, blame or justification. This reclassification of the other facilitated by the Learning Partnerships process is integral to the value of the experience, and is strongly noted by both parties.

A new shape for learning
The participants were asked to comment on what they thought enabled their learning. In response, many described the way in which the relational platform made it possible for a unique sort of learning to occur. They found their learning was supported both by the nature of the learning tasks and the gathering of the stakeholders. Had they been simply gathered and left to talk, the same sort of dialogue might not have occurred. Some of the teachers were able to articulate the way in which the selected pedagogical processes assisted the participants to collaborate, consult and critique. Marcus, for example, described the way in which their learning was enabled by the ‘shape’ of the social interaction:

What helped interaction was that the sessions did not resemble a classroom in that there wasn't a front of class and a back of class. We were all in circles. It was equal input to each other. And I think your process of getting people up
and just mixing around and forcing that social integration upon us helped to break down any preconceptions of who these kids were, and in their case, who these adults were ...

So that prompted a social interaction as well as the fact that we were interacting with students that we wouldn’t normally walk up to. (Marcus, teacher, Study 1)

The segregation is in part overcome via the participatory nature of the tasks. Luke, for example, said he valued the role of authentic data, which is created via the opportunity for question and response, generating a first-hand enquiry: ‘It provides a platform for an ongoing enquiry—we ask the students, we asked them. We just didn’t make it up out of our heads or read books. We actually heard their voices or had the opportunity to’ (Luke, teacher, Study 1).

Luke found that the investigatory nature of the shared enquiry contributed to an authentic set of data against which he could consider his ‘book’ learning and personal theories. The dialogic process therefore drives both the relational and the critical thinking domains of the work. Sasha also valued the contribution of this ‘authentic’ data: ‘It was great to have the actual kid to talk to, not just us pretending to be students!’ (Sasha, teacher, Study 2).

The immediacy and authenticity of the students’ contributions also provided a level of relevance and credibility: ‘It was the first time I felt that what I’m learning about in this subject is exactly what the school students are looking for in their teachers’ (Patricia, teacher, Study 2).

Pre-service teachers had learnt about the importance of positive relationships within the academic space, but here in the third space, the messaging is more powerful because it comes from the students themselves.

Rehearsal and formative feedback
The ‘third space’ of the workshop also provided opportunity for rehearsal and feedback, as well as more generic advice. Gino found the applied exercises conducted with students to be particularly valuable because they provided a chance to use as well as to elicit formative feedback: ‘The reflection on the role-play was also really very useful. After the first feedback, they said I had a lot to work on
and then we had a second go, and second feedback and this was so valuable! To have two “goes” at practicing it; I was really able to improve’ (Gino, teacher, Study 2).

Jane found that the embodied and experiential learning provided via the role-plays helped her to join the gap between theory and practice and to experience the challenge of enactment: ‘I think you needed to do the role-play because a lot of times you can talk and talk about something but until you actually see it or feel yourself in that situation you don’t have an understanding of it’ (Jane, teacher, Study 1).

The students also suggested that participating in role-play prompts insight as well as skill. Stuart, for example, said that being ‘in the character’ of the teacher helped him to appreciate and ‘become familiar with the teacher’: ‘We considered the ideas of what the teacher was feeling when we were acting as the teacher. You could kind of appreciate how teachers think more and why they are getting angry because a student isn’t handing in work and that kind of stuff’ (Stuart, Student, Study 1).

Patricia said that the technique of role-reversal helped her to see the teacher as human and as someone to be respected:

The whole role-reversal ... It’s just, like, you sort of step into the other person’s shoes and you get a feel for what is going on ... It was sort of good to get perspective, to actually see real people and that teachers are sort of being human and we should maybe have a little bit of respect for them as well. (Patricia, student, Study 1)

In addition, both teachers and students valued the way in which role-play provides an opportunity for them to learn through experiment. One student, Justin, used the metaphor of the laboratory to describe the way in which the teachers learn via experimentation (working in role) and asking questions (eliciting feedback): ‘They get to experiment with things sort of on us, like they get to try out different things and they get to ask questions. It builds confidence ... they are a lot more confident at the end—like you can tell by the way they talk’ (Justin, student, Study 1).
Another student, Clare, found that the quality of the listening that is given to her helped to call forth her response as adviser: ‘You didn’t feel like the teacher, you didn’t feel like a student, you felt like everything was equal. [What helps us to talk like this is] people listening—actually wanting to hear what you have to say about a more important issue’ (Clare, student, Study 1). The listening that is provided thus shaped Clare as a speaker. Another student, Peter, also explained the impact of this appreciative form of listening: ‘When you feel as if you’re being appreciated, I guess that does make you think and then you mature. As time goes on your ideas go deeper, that is—you know—your ideas change, and everything changes about you’ (Peter, student, Study 1).

Inside the appreciative listening space, Peter found he could think more deeply. His ideas emerged, changed and deepened. Peter perceived that the way in which he was ‘listened’ moderated the ways in which he could think. The quality of the listening provided therefore had a transformative effect. He felt it changed who he was ‘everything changes about you’.

**Summary**

Data from both studies suggest the encounter in the levelled, dialogic and embodied playing space prompted a rethinking of each other on the part of teachers and students. The teachers created new stories that enabled them to overwrite the existing limiting storylines about the students. Jane reframed the students as ‘people’ rather than ‘some scary mob’. Katrina discovered ‘a whole different side to students’. Julia found that the process ‘humanised both the role of the teacher and the role of the student’. These new stories disrupt the discourse in which teacher/student or are located as binaries and cast in opposition to each other. In the new stories the characters are relocated to share a common humanity and hence communication between them seems more possible and desirable.

In appraising what contributed to this learning, Marcus pointed to the participatory process: ‘We were all in circles. It was equal input to each other.’ Julia pointed to the importance of a shift in the power dynamic: ‘It is not a power relationship that is set up.’ Luke valued the first-hand data ‘we ask the students ... We actually heard their
voices.’ Gino learnt from the rehearsal and feedback: ‘They said I had a lot to work on and then we had a second go, and second feedback and this was so valuable!’

The pedagogical design of this third space for learning bridges the strands of research, theory and practice that commonly inform teacher education. This third space is an integrative learning space in which theory and practice is brought together in a meaningful way. It is a research-rich space, in that it functions like a large focus group in which key informants are consulted about their concerns and views. It is saturated with authentic data and formative feedback encountered in the embodied and collective exchange. It is skills-oriented space in that it provides for the cycle of rehearsal, feedback and corrective action. It is a theoretically informed and socially critical space in that it presumes that the teacher–student relationship will be informed and shaped by the discourses and social norms that influence the expectations that students and teachers hold about who each other are or can be. It is a transformative space because the shift in these presumptions enables people to reimagine what is possible in the teacher–student relationship.

**Pedagogical implications for third-space learning in teacher education**

The third space for learning provided within the Learning Partnerships program opens a new territory within which to foster the capacities of teachers and students to communicate effectively about matters of shared concern. The key pedagogical features generating the productivity of this third space include:

- **Positioning**—when participants are positioned as co-investigators, a new space is opened for learning through partnership.
- **Partnership**—partnerships are effective when used to create something that is not possible without the contribution of both parties. In learning through partnership, people learn also about the possibility of partnership.
- **Participation**—interactions occur chiefly between participants, rather than predominantly between facilitator and class. Relationship skills and possibilities are fostered through participation.
• Performance—the embodied, experiential and enquiry-based drama-based pedagogies provide applied learning tasks and the opportunity for participants to rehearse and learn through personalised feedback.

• Personalisation—the learning happens between people. Authentic data is generated within an exchange which humanises the roles of teacher and student.

The Learning Partnerships methodology is not designed to replace other forms of learning in pre-service teacher education. Rather, it is proposed as an additional component. Given the shift towards disembodied communicative practices propelled by the proliferation of web-based communication and the concomitant rise in social distress associated with the effort to separate the ‘normal’ from hyper-reality, there will be an increasing need in the coming decade to equip the teachers for the embodied relational challenges and opportunities of their chosen profession.

Sociologists and psychologists alike point to the rise in social distress associated with learning the world through the edited versions of reality posted on social media (Kemmis and McTaggart 2005) and an emerging preference that people have for using web-based rather than face-to-face methods for dealing with challenging interactions (Joinson 2004). Reliance on use of disembodied modes of social interaction could mean that young teachers come to the profession having had fewer opportunities to develop the skills and confidence needed for the embodied communication that is an integral part of school life. In the face of this trend in social communications, there is arguably a greater need than ever to provide pre-service teachers with a humanising learning space and with the opportunity to dismantle limiting stereotypes held about the teacher–student relationship. Given the mutual benefits to be gained by including the student perspective in teacher education, and the evidence that provision of a third space for learning helps to grow the relational capacities and mindsets of teachers, it is timely to integrate this methodology into pre-service teacher education courses.
Biography

Associate Professor Helen Cahill is deputy director of the Youth Research Centre in the Graduate School of Education at the University of Melbourne. She leads teaching and research in the use of participatory and embodied methods to enhance student well-being and teacher effectiveness.

Note

1 More detail about the instruments and the data collected is available elsewhere (Cahill 2005, Cahill and Coffey 2013, Cahill et al. 2016, Cahill, Coffey and Sanci 2015).

2 More detailed accounts of the workshop methodology are described elsewhere (Cahill 2005, 2008, 2012; Cahill and Coffey 2013; Cahill, Coffey and Sanci 2015).
In this chapter we argue that teachers of young children commencing school are responsible for enriching their students’ oral language skills (speaking and understanding) and developing their literacy skills (reading and writing). This is an uncontroversial statement, given the central place that language, literature and literacy have within the Australian English Curriculum (ACARA 2012). Yet historically, oral language skills have been overlooked as developmental precursors to reading and writing skills (Snow 1991), and determinants of longer-term academic outcomes, as well as social and emotional well-being. Language skills are particularly central to student achievement as they are both a predictor of future learning and the primary tool by which learning takes place, making ‘verbal abilities … the currency of education’ (National Institute of Child Health and Development [NICHD] 2005).
For teachers to teach language skills successfully, they must first understand evidence of the fundamental role of oral language skills in later educational outcomes. Second, they need to develop and consolidate their knowledge of oral language concepts. Third, they must be able to explicitly teach strategies that support oral language skill development in the classroom. Evidence shows, however, that there are significant limitations and variability in teacher knowledge of key concepts about oral language (Stark et al. 2016, Tetley and Jones 2014) and their ability to transfer knowledge into classroom instructional practice. In this chapter we will draw on current research to discuss these three key principles: language as a foundation for learning, teacher knowledge of language, and teacher professional learning in language. Although it is not within the scope of this chapter to discuss the teaching of reading or writing specifically, we emphasise that language and literacy are interdependent and that evidence pertaining to the importance of teachers explicitly teaching oral language skills also applies to the teaching of reading.

**Language foundations for learning and educational success**

Oral language is a complex set of skills that encompass the comprehension (understanding) and expression (speaking) of phonology (the sound system); semantics (vocabulary); morphology (knowledge of word structures); syntax (the grammar system); and pragmatics (the social and contextual aspects of communication). Both the comprehension and expression of language are equally important to achieving oral language competence.

Language skills emerge during the first year of life, characterised by rapid periods of growth and consistent sequences of acquisition, although with wide individual variability. Like other areas of development, language is influenced by biological and environmental factors, and significant portions of the variability in children’s language abilities by four years can be accounted for by both (Reilly et al. 2010). By school entry, oral language skills have been shown to be key determinants of children’s early success with literacy, later educational outcomes (Catts et al. 2008; Johnson, Beitchman and Brownlie 2010), their ability to establish social networks (Conti-Ramsden et al. 2013), and their behaviour in and outside the classroom (Law and Stringer 2014). Oral language
competencies (e.g. vocabulary, narrative skills, pragmatic skills) are central to social and emotional well-being, as they are the basis of relationship formation and maintenance throughout the lifespan and are closely related to social cognition and mental health (Cohen 2001). Consequently, there has been much interest in the enduring impact throughout the lifespan of small differences in language abilities in the preschool years.

**Evidence from longitudinal studies of language development**

Longitudinal studies that have tracked children’s developmental pathways in language have been undertaken in the United Kingdom, North America, Canada and Australia. Most of these studies report on language skills from the preschool years and document the educational, occupational and psychosocial outcomes of their participants through to adolescence and early adulthood. In the few studies that have commenced at earlier ages, language delay in 2-year-olds has been found to be common, affecting almost 20 per cent of study cohorts (Zubrick et al. 2007). Many of these late-talking toddlers recover to have typical language skills by preschool, but others will continue to have difficulties with language as they enter school. Persistent language impairment is one of the most common childhood disabilities, with prevalence rates estimated at 15 to 20 per cent of children aged between 4 and 7 (Reilly et al. 2010).

Without exception, longitudinal studies have documented that children with persistent language impairments have poorer outcomes in multiple domains. The Ottawa Language Study found significantly higher rates of difficulties with reading, spelling and mathematics in adolescents with a history of speech and language impairments at 5 years compared to matched controls (Johnson, Beitchman and Brownlie 2010). Adult mental health outcomes are poorer for those with a history of compromised early oral language skills compared to typical adults (Schoon et al. 2010). Language impairment at 5 years has been shown to have a direct effect on late adolescent delinquency, and prevalence studies indicate that 50–60 per cent of high-risk adolescents (i.e. those within the youth justice system) have language impairments (Snow and Powell 2011).
Although diagnosed language impairments among children and adolescents are common, it is also the case that 8.5 per cent of Australian children at school entry have communication skills that categorise them as developmentally vulnerable, according to the Australian Early Development Census (AEDC) (Australian Government 2016). One of the key mediators of developmental vulnerability is socio-economic disadvantage. For example, in the most disadvantaged communities, vulnerability of communication skills rises to 14.8 per cent, in remote communities and among indigenous children vulnerability is 21.8 per cent and 19.3 per cent respectively. On entering school, children from low socioeconomic status (SES) families are more vulnerable with respect to receptive and expressive language skills, and remain so, with data indicating that initial developmental gaps widen over time as academic demands increase (Roy and Chiat 2013). Hence, early years classroom experiences and teacher instructional practices have a critical role to play in facilitating and enriching all children’s language skills. In fact, it has recently been observed that early language interventions and classroom experiences for children from low SES backgrounds need not only to support but also to accelerate their progress relative to their peers (Roy and Chiat 2013).

Despite the evidence that children need strong oral language skills to underpin their future learning, strategies for classroom language instruction often lack a strong evidence base and are inconsistently implemented. Research that has considered teachers’ time allocation to specific skills within the language arts curriculum (Spear-Swerling and Zibulsky 2013) confirms what intuitively makes common sense: teachers spend time teaching what they know. As a consequence, if teachers’ knowledge about language concepts is poor, we should not expect that they will spend time teaching language concepts to their students. This leads to the critical question: what language concepts and skills do all teachers, pre-service and in-service, need to know?

Models linking language and literacy
Twenty-five years ago, Catherine Snow (1991) wrote a landmark article on the theoretical links between language and literacy. Snow proposed a four-domain model: conversational language skills,
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decontextualised oral language skills, print skills and emergent literacy skills. Snow described the variety of language purposes in each domain and ways in which specific domain skills relate to literacy, such as the connections between decontextualized oral language and reading comprehension in the middle primary years. Snow’s model marked the beginning of a shift that had huge implications for our understanding of how language capability supports the acquisition of literacy—a shift that has yet to be properly reflected in education policy, in initial teacher education programs or in the practice of schools and teachers. Over time, other models have emerged, including the Strands of Early Literacy Development (otherwise known as the Reading Rope) where Language Comprehension skills (i.e. concepts, vocabulary, language structures, verbal reasoning and literacy knowledge) are ‘woven’ with Word Recognition skills (i.e. phonological awareness (PA), decoding and sight recognition) to make reading increasingly strategic and automatic (Scarborough 2001).

Contemporary research has used longitudinal data sets and statistical models to develop an understanding of which oral language skills affect literacy achievement most, for example the contribution of vocabulary and grammar to later reading comprehension outcomes (NICHD 2005, Snowling and Hulme 2011). This research clearly suggests that investments in teaching oral language skills have significant and positive downstream consequences for students’ participation in classroom learning, the acquisition of reading, school engagement, educational success, and social and emotional well-being. However, ensuring consistent implementation by teachers who are skilled instructors in all oral language domains remains a significant challenge. This challenge needs to be directly addressed in policy, practice and research over the next decade. In order to do so, we need clearly to understand the place of oral language in our existing curriculum, assessment and professional learning programs.

**Language concepts and skills within the Australian English Curriculum**

The Australian Curriculum provides a set of national achievement standards with content descriptions clearly delineated and
sequenced to improve learning outcomes for all school students. Content within the English Curriculum (VCAA 2010): ‘Aims to ensure that students learn to listen to, read, view, speak, write, create and reflect on increasingly complex and sophisticated spoken, written and multimodal texts across a growing range of contexts with accuracy, fluency and purpose’ (p. 1).

The English Curriculum is structured into three Language Modes: Reading and Viewing; Writing; and Speaking and Listening. The Language Modes are, in turn, structured and sequenced into three strands: Language, Literature and Literacy. Within the curriculum, it is acknowledged that content and learning in one mode and/or strand can be interrelated, in effect either supporting or extending the learning in other modes and substrands. This is clearly the case with respect to language and literacy.

**Oral language embedded within the English Curriculum**

Within the English Curriculum, content has been scoped and sequenced for skills relating to: (1) language use for social interactions, (2) expressing and developing ideas through knowledge of vocabulary, word-level grammar, sentence and clause-level grammar and spelling, (3) understanding the structure and organisation of different types of text, including punctuation and concepts of print, and (4) knowledge of sounds and letters, including phonemic awareness.

The English Curriculum reflects a functional model of language whereby knowledge of language and/or grammar is seen as the primary resource for making meaning (Derewianka 2012). The learning area of English (and oral language more specifically) has a unique place within student learning, both predicting later learning outcomes and being the primary medium through which learning takes place. In addition, oral language skills extend broadly across all areas of the curriculum. Oral language skills are of central importance for young people to acquire numeracy concepts such as addition and subtraction, and later, volume and measurement, or the enriched vocabulary required in a unit of learning in science. These demands increase steadily as students progress from the foundation year through to middle primary, and again with the transition to secondary school. When the pedagogical focus shifts around grade
4 from learning to read to reading to learn, students with poor comprehension skills and/or limited vocabularies are particularly vulnerable to falling further behind, in a process described by Stanovich (1986) as the ‘Matthew Effect’. This is a biblical reference to the notion that poor readers become poorer over time, as a consequence of accessing less curriculum content, relative to strong readers, who become linguistically richer by reading more.

The research evidence presented in this chapter speaks to the critical importance of students’ oral language skills to all other subsequent learning, development and well-being. The fundamental question then is: how can curriculum and evidence of what works bring about change to the practices of teachers to ensure a systematic and enriched acquisition of oral language and literacy for all students over the next decade? The articulation of national standards for the teaching of oral language across all year levels within the English Curriculum is important; however, meeting these teaching standards will place substantial demands on teachers’ own knowledge of grammar and how to teach it (Jones and Chen 2012). Therefore examining the understanding and knowledge of teachers regarding oral language concepts and skills and their teaching practice is critical.

Teacher knowledge about oral language skills
Teachers are in a unique position to foster a curiosity for language in their students. However, in order to teach oral language skills effectively, teachers must have a strong knowledge of language concepts. Teachers with high levels of explicit knowledge are able to impart clear, accurate and organised information about sounds, words, sentences and discourse (Moats 2009). While many teachers possess a high level of experience and education, and might have a relatively high standard of personal oral language, it is important to highlight the difference between being a competent communicator and being equipped with the necessary specialist knowledge explicitly to teach oral language concepts.

Theory and research suggest that there are two types of linguistic knowledge: implicit and explicit. Implicit knowledge is the knowledge of what is and is not correct English, and the application of this knowledge (e.g. the ability to identify and correct a
grammatical error). Explicit knowledge is the ability to understand and explain English-language constructs and conventions according to the agreed rules (e.g. explaining what a phoneme is, or the difference between inflectional and derivational suffixes). Being equipped with implicit knowledge does not necessarily translate to an ability explicitly to teach the rules and idiosyncrasies of the English language (McCutchen et al. 2002).

We argue that teachers require broad-ranging explicit linguistic knowledge in order to be able to provide their students with the necessary oral language exposure, content and knowledge that is needed to support their learning and acquisition of later literacy skills. This is particularly important when teaching children from disadvantaged backgrounds, whose language exposure at home might be quantitatively and qualitatively at odds with the kind of language experience that children from more linguistically enriched environments can call on. Indeed, as we argued earlier, on school entry, children from the most disadvantaged backgrounds in the population are significantly more vulnerable, compared to the least disadvantaged (Australian Government 2016).

Since the 1990s, researchers have consistently demonstrated poor levels of language and literacy knowledge among educators. An influential study by Moats (1994) found that teachers displayed marked weaknesses in the areas of phonics knowledge, phonemic and morphemic awareness. These findings have been replicated by Joshi, Washburn, Binks-Cantrell and colleagues, who have published studies that measure knowledge of language and literacy constructs in pre-service and in-service teachers, as well as in university academics in the United States (Binks-Cantrell, Joshi and Washburn 2012). These findings indicate that pre-service teachers typically display implicit skills related to some basic language constructs but fail to demonstrate explicit knowledge. In other research, Joshi et al. (2009) found that many university academics who deliver courses in reading and literacy also have limited explicit knowledge of basic language constructs. Indeed, limited explicit knowledge of language is not only an issue in the teaching profession. Spencer, Schuele, Guillot and Lee (2008) found that speech pathologists, like classroom teachers, had concerning limitations in their explicit linguistic knowledge.
Australian research has shown that the linguistic knowledge of teachers, both in-service and pre-service, is limited and highly variable, suggesting limitations in their ability to teach oral language skills effectively (Stark et al., 2016; Tetley and Jones 2014). Fielding-Barnsley and Purdie (2005) found that although many pre-service teachers in Queensland had poor language knowledge, they held positive attitudes about the importance of language constructs, such as phonics and phonological awareness, in early years classrooms.

An interesting and important addendum to what is known about pre-service and in-service teachers’ language knowledge, with strong implications for professional practice, is a body of research investigating teachers’ self-rated ability and confidence in their knowledge. Teachers are often unable to accurately measure or calibrate their knowledge and typically overestimate it with respect to language (Cunningham et al. 2004, Stark et al. 2016). Cunningham et al. (2004) have shown that despite the fact that teachers might rate their knowledge of children’s literature, phonemic awareness and phonics as ‘high’, the majority of these teachers, when tested, were found to have limited knowledge about these constructs themselves. This accumulation of evidence points to deep differences between the knowledge and skills that are required to identify and develop children’s language competence in ways that most benefit their subsequent learning and development, and the assumptions of teachers about what matters most in these areas of practice.

As a result, the evidence suggests a clear misalignment between the content of the Australian Curriculum for English, particularly in the Speaking and Listening Mode and Language Strand, and current teacher knowledge and practice. The consequence of this misalignment is much wider and deeper than what is required for the satisfactory delivery of this mandatory component of the curriculum. This casts doubt on the ability of teachers and the school system to establish the foundations of successful learning for all young people. We therefore need to determine systematically how best to improve the linguistic knowledge and skills of Australian teachers in order to meet the needs of all students, particularly those with oral language vulnerabilities.
**Bringing about change**

**Teacher professional learning in language**

Efforts to bring about change must provide for broader and deeper knowledge in language and literacy teaching strategies for initial teacher education and in-service teacher professional learning. This change could be driven by closer alignment of the achievement standards for oral language in the Australian Curriculum for English to the Australian Professional Standards for Teachers and associated initial teacher education accreditation standards.

The outcome most required in the next decade is to equip all teachers with the knowledge and instructional skills to be experts in teaching oral language skills in the classroom. Such an outcome presumes that there will be equity of access to high-quality teaching practice, evidence-based education programs and high expectations for all students, including those entering school developmentally vulnerable owing to socioeconomic disadvantage, Indigenous background and/or learning English as an additional language. Bringing about effective change requires a clear vision of the sort of initial teacher education programs and teacher skill sets to which we aspire in the future, because change is difficult: it requires political will and sustained vigilance. Successful change needs teachers, academics and governing bodies (e.g. university accrediting boards, professional registration programs) to be in agreement about the end goal. Some evidence already exists regarding effective professional learning in oral language for preschool and early years teachers, but this evidence base must grow, be replicated and be embedded in teaching practice and initial teacher education curricula. The remainder of this chapter examines the dimensions that such a change program should have, and what factors would help to bring about the shift that is necessary.

**Improving teacher knowledge of oral language**

Professional learning programs that are sustained, designed to meet the specific needs of teachers or groups of teachers, and delivered within the school environment are most successful at increasing knowledge and improving instructional practice (Carlisle and Berebitsky 2011). Content that is developed and delivered within the context of everyday teaching is also critical to changing instructional
practice. Individual coaching of teachers has been shown to be more effective than professional learning courses, for both changing teacher instructional practice and for student literacy outcomes (Neuman and Wright 2010).

Professional learning programs designed to increase teacher knowledge and improve instructional approaches for oral language in the classroom are relatively rare, and there are few published evaluations of these programs. There are more studies that target specific language skills through shorter interventions, rather than focusing on broader curriculum knowledge over a sustained period. However, despite these limitations, there is growing evidence demonstrating that it is possible to effect change in teacher practice and in student language and literacy outcomes using sustained professional learning programs integrated within individual school contexts. Evidence within preschool education, related to teachers’ conversational responsivity and preschoolers’ language productivity and complexity, attests to this (Domitrovich et al. 2008, Piasta et al. 2012).

Results vary between studies, but consistently demonstrate improvements in children’s vocabulary, increases in teacher–child conversations, and teachers’ use of communication-facilitating strategies. Wasik and Hindman (2011) conducted a randomised controlled trial (RCT) to evaluate the impact of a comprehensive teacher professional development program on the vocabulary and pre-literacy skills of at-risk preschoolers. The professional development program utilised the Exceptional Coaching for Language and Literacy (ExCELL) framework, which incorporates intensive and continuing professional learning, in-class modelling and observation by coaches, as well as curriculum resources and lesson plans. At follow-up after one academic year, objective measures of the classroom environment and teaching practice indicated higher-quality teacher input (e.g. scaffolding language, increased enriched language input), and student outcomes (e.g. vocabulary, phonemic awareness and alphabet knowledge) showed significant gains for preschoolers working with the ExCELL program teachers.

Evaluations of teacher professional learning programs focused on oral language curriculum in the early years of formal schooling are rare. Carson, Gillon and Boustead (2013) demonstrated the
effectiveness of a whole-of-classroom approach to teaching PA skills to students in the first year of formal schooling. A short intensive period of PA instruction was delivered by teachers following approximately 8 hours of professional learning and integrated with classroom curriculum topics and resources. Students who received PA instruction from teachers who had undergone professional learning had significantly better literacy outcomes than students who received the usual literacy curriculum at the end of the school year.

Jones and Chen (2012) investigated teacher knowledge and the opportunities to undertake professional learning in grammar, specifically linked to the Australian English curriculum, among primary and secondary teachers. Results indicated the lack of a coherent body of grammatical knowledge among the approximately fifty teachers who completed the survey, with many also reporting a lack of opportunities to develop linguistic knowledge. Some younger teachers reported never having been taught grammar, either during their own schooling or in initial teacher education. The picture emerging was of a professional landscape that offered few opportunities and largely ineffective professional learning in English grammar to teachers.

The pilot cluster RCT of the Oral Language Supports Early Literacy (OLSEL) program (Snow et al. 2014) is a unique example of oral language curriculum goals being embedded in teacher professional learning. Evaluation of OLSEL examined the impact of an oral language teacher professional learning program on students’ comprehension and expressive language skills and early reading outcomes. OLSEL was an integrated six-day professional learning program, implemented during an eighteen-month period, in schools with high numbers of disadvantaged students. OLSEL content included a detailed model of teaching oral language (Munro 2011), as well as specific teaching strategies to facilitate students’ phonemic and phonological awareness, vocabulary development, story grammar and use of more complex grammar. Embedded school-based support for oral language teaching initiatives was provided during the eighteen-month period. Students in the first two years of schooling showed significantly greater gains from pre- to post-intervention on standardised scores of language (e.g. syntactic
understanding and vocabulary) and reading (e.g. aspects of phonemic awareness) when their teachers had participated in OLSEL.

Findings suggest that it is possible to effect change in teacher practice and in student language and literacy outcomes with a sustained professional learning program integrated within individual school contexts. Further research is underway to attempt to replicate OLSEL findings using a modified professional learning package, the Classroom Promotion of Oral Language (CPOL) (Goldfeld 2014). Equally important is the longitudinal measurement of student outcomes to quantify the enduring influence of such programs as OLSEL throughout the primary school years.

**Embedding oral language knowledge and instructional practice in initial teacher education programs**

For many years, in Australia and similar Western nations, education faculties have given short shrift to the study of linguistics and language acquisition (Moats 2009). This has occurred in spite of overwhelming evidence about the importance of language to learning and later academic outcomes and the documentation of inadequate teacher knowledge and effective instructional practices regarding oral language. Fillmore and Snow (2000) discussed the need for teachers to be ‘educational linguists’ and provided a comprehensive list of the subject content teachers needed in order to meet the needs of diverse students. The list proposed linguistic topics such as language structure, basic linguistic analysis, and language development, sociolinguistics, including cultural and linguistic diversity, academic discourse, and text analysis.

Seventeen years on, the literature would suggest that there has been very little uptake of linguistic topics or subjects into initial teacher education and, with the exception of linguistic diversity, few if any are reflected in the Australian professional standards for teachers (AITSL 2014). More recently, with the introduction of the Australian English curriculum, other authors (Derewianka 2012, Jones and Chen 2012) have discussed the need to investigate pedagogical approaches to the teaching of grammar. The challenge will be to bring together university faculties, education sectors, curriculum agencies at Commonwealth and state levels, and the governing
bodies of teacher registration and initial teacher education program accreditation to align the explicit linguistic knowledge and pedagogic expertise required to ensure that a set of fundamental skills in oral language is taught to all students, thereby ensuring development and learning across the curriculum and supporting positive social outcomes and emotional well-being.

This challenge of ensuring explicit knowledge and skills among candidates in initial teacher education programs and among those who educate teacher candidates puts the recent moves in Australian initial teacher education to assess the personal literacy and numeracy skills of candidates in an interesting light. The federal government’s requirement that teacher graduates will have literacy and numeracy skills within the top 30 per cent of the Australian population is important for ensuring that all teachers possess basic skills. However, as we have discussed, research indicates that having a relatively high standard of literacy or numeracy skills is not enough on its own, to ensure high levels of explicit knowledge, or to result in the implementation of effective instructional strategies that improve student outcomes. Literacy and numeracy testing might reinforce the widely held but unsupported assumption that having a high degree of personal literacy translates into capacity for effective and explicit teaching.

The focus therefore needs to remain unambiguously on closing the knowledge gap between personal language and literacy skills and the content and pedagogical knowledge required to teach fundamental oral language skills in the classroom to students of varying backgrounds and abilities. Education faculties must provide leadership in recognising the critical importance of oral language skills to long-term academic outcomes and personal well-being, and incorporate into their programs the curriculum content that addresses the acquisition of explicit linguistic knowledge and evidence-based teaching strategies for all teacher graduates. Further, there needs to be careful scrutiny of the alignment between the teaching standards graduates are expected to demonstrate at the level of program accreditation and the student achievement standards that are expected within the Australian English curriculum.
Conclusion
The challenge for the decade ahead is to ensure the alignment and implementation of the English curriculum with high-quality oral language instructional practices in all Australian schools. Achieving this goal necessitates evidence-driven professional learning for in-service teachers and the integration of evidence, knowledge and teaching strategies regarding oral language into the content of initial teacher education programs. We also need a robust and widespread discussion about the importance of oral language acquisition for the subsequent learning of all students and the role of different practices in influencing oral language skills for the better. This crucial shift must be grounded in both research evidence and professional practice. Understanding the importance of knowledge in language and literacy learning from early childhood throughout the school years will be critical to engaging families, school communities, policymakers, teacher educators and, most importantly, teachers in changing the perceptions and assumptions about what matters in the teaching of oral language and what constitutes competence in it.

Biography
Patricia Eadie is Associate Professor and Program Coordinator of Early Childhood Education at the Melbourne Graduate School of Education at the University of Melbourne. Her research focuses on the developmental pathways and vulnerabilities in learning language and literacy, as well as early childhood pedagogies that provide instructional support for language and literacy learning in classrooms. Her research has been funded by NHMRC Project Grants and ARC Linkage and Discovery grants.

Hannah Stark is a research fellow and PhD candidate in the Melbourne Graduate School of Education at the University of Melbourne. Her research interests centre on optimising collaboration between teachers and speech pathologists to benefit all children. Hannah is an experienced clinical speech pathologist, and has worked in the health and education sectors.

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**Note**
1. The Australian Early Development Census (AEDC), formerly the Australia Early Development Index (AEDI), is a population measure of children's development as they enter school.
2. The Australian Curriculum is produced by the Commonwealth Government of Australia; however, states and territories have adapted it in different and distinct ways.
Recent curriculum reforms in Australia represent a major professional, public and personal investment at all levels of the education system. The implementation of the curriculum has a major influence on the entitlements of students to knowledge, understanding and opportunity, the professional identity of teachers in planning and executing instruction, and the aspirations of governments and communities. In turn, these outcomes are shaped by the alignment between the formal specification of the curriculum, teaching and learning practices, and assessment. Developing and aligning curriculum is a time-intensive process, complicated by the implementation of the Australian Curriculum (2013) and subsequent iterations at the state level through, for example, AusVELS (2013–16) and the Victorian Curriculum (2017).

In a coherent and robust education system, there should be alignment between what is to be taught and how this is interpreted in planning documents at the school level (intended curriculum), what is actually taught (enacted curriculum) and assessment practices at all levels of the schooling system (assessed curriculum) (Porter 2002, Webb, Webb and Herman 2006). Successfully implementing a mandated curriculum requires alignment of elements
such as content, cognitive demand, range of knowledge represented, values and attitudes into a complex system. ‘How’ the curriculum is implemented through teaching and learning is also important. The process of curriculum interpretation, connecting the intended curriculum documents to the enactment of the curriculum in the classroom, is central to establishing the integrity and impact of the education system.

Assessment is highly influential in communicating the knowledge and skills that are valued. Assessment practices mediate classroom practice and have a significant impact on the enacted curriculum (Clarke 1992). Indeed ‘all elements of a school system should work together to give consistent messages to teachers, parents, students, and the wider community about what is being valued’ (Barnes, Clarke and Stephens 2000, 265).

In this chapter, we examine the models and approaches through which alignment has been measured, and their relationship to performance expectations, or cognitive demands within the curriculum. We argue that aligning what is intended with what is enacted and how they are assessed are critically important for education. Doing so effectively requires a more dynamic approach to understanding alignment, in which opportunities to communicate, interpret, develop and assess specific learning practices are used as opportunities for professional and organisational development at all levels of the education system.

**Curriculum alignment models**

Various metrics and criteria have been designed to measure levels of curriculum alignment. The target of alignment can vary; for example, it can be determined by analysing standardised assessments against the mandated curriculum standards, or ‘achievement standards’, which are used by both the Australian Curriculum, Assessment and Reporting Authority (ACARA) and the Victorian Curriculum and Assessment Authority (VCAA) to outline the knowledge, skills and attributes that all students are expected to meet at a particular stage of their learning.

Basic alignment metrics typically utilise a rating scale to indicate the degree of alignment between a test item and a corresponding standard, ranging from ‘no match at all’ to ‘matches exactly’. More
complex methods such as the Surveys of Enacted Curriculum method, measure the alignment of standards, instruction and assessment (Porter 2002). In this model, the degree of alignment is analysed through two dimensions: content topic and cognitive demand. Webb’s (1997) Alignment Method uses five major categories: content focus; articulation across grades and ages; equity and fairness; pedagogical implications; and system applicability. All of these models treat alignment as being static, using a snapshot of practice, based on a lesson or unit that has been undertaken to measure for alignment. Static approaches rely on historical data, by definition looking backwards. Since a teacher is unlikely to repeat the lesson or unit in the same way with the same group of students, their value for judging or guiding practice is very limited.

Teachers get messages about what should be taught from various sources, including the school’s organisational hierarchy (in the form of school standards, curriculum materials, assessments and professional development), stakeholders (including students, parents and other teachers), school curriculum developers and school leaders, and the teacher’s own experience as a student and during training (Porter 2002). Hence there are multiple influences on the planning of the ‘locally intended’ curriculum that frame, afford and constrain the practices occurring in the classroom, the complex social setting in which the curriculum is enacted.

In addressing this wider range of influences, we therefore need to consider a broader a set of criteria for alignment. The following three concepts are particularly important: scope of practice, curriculum authorship and performance types, discussed below.

**Scope of practice**
The ‘scope of practice’ is defined as the teaching practices that are possible within the context of a particular schooling system and within a particular school. The scope of practice is constrained by both organisational and curricular conditions, as well as by community expectations, teacher expertise and student capabilities. Teaching practices, include planning, instruction and assessment practices, can be thought of as the body of accepted practice, as locally understood.
Curriculum authorship
The idea that the intended curriculum is enshrined in a single document, such as a national curriculum, misrepresents the chain of interactive interpretation and reconstruction that, in practice, determines what is taught and learned. Curriculum authorship is therefore an important influence on the scope of practice, and on alignment, as the national curriculum is interpreted and re-presented for state or regional use, and as these documents are further interpreted and reconstructed in turn for use at school and classroom level.

At each stage in this iterative, interpretive process, an individual or group is responsible for authoring the latest representation of the curriculum. At the state level, the VCAA is responsible for publication of the Victorian Curriculum. At the school level, documents such as the Scope and Sequence charts, unit plans and weekly plans are created. We argue that the product of each of these rewritings is a newly authored curriculum and that it is important to investigate this iterative authoring process and the status and expertise of those authoring curriculum materials at each level.

Performance types
The enacted curriculum is represented by those practices that, taken together, constitute classroom teaching practice. The types of performances required of students, both during instruction and in assessment, are fundamental to learning outcomes. For example, when learning two-digit multiplication, students might practise the procedure. The content is ‘two-digit multiplication’, and the performance type in this case would be ‘performing a procedure’. Just as the intended curriculum will advocate and specify particular types of student performance, both assessment and classroom instruction also require students to engage in various performance types, which might or might not align with what it is intended in formal curriculum documents.

To show how these elements might be aligned through a dynamic process, and why this matters, we draw on empirical findings from data generated in schools and classrooms from the Alignment Project. This large-scale, cross-cultural, international project undertaken by David Clarke and colleagues investigates
Aligning curriculum, instruction and assessment in mathematics and science classrooms. The Alignment Project has been undertaken at sites in Melbourne, Beijing, Helsinki and Tel Aviv. In this chapter we focus specifically on performance types, assessment and curriculum authorship in the Australian education system.

**Determining alignment of performance types**

Our study focused on alignment of ‘performance types’ in science and mathematics that are applicable in Australian schools and in other countries and made possible by the documented scope of practice. The performance type categories were developed after a comprehensive review of Porter’s Cognitive Categories (Porter 2007), Webb’s Criteria for Alignment (Webb 1997), TIMSS Performance Categories (Garden 1997), PISA Key Competencies (2009) and Bloom’s Revised Taxonomy (Krathwohl 2002). Table 17.1 summarises how the mathematics performance types for the Alignment Project compare to other models.

Table 17.1: Performance type categories for mathematics

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing</td>
<td>Remember</td>
<td>Memorise facts, definitions, formulas</td>
<td>Level 1 Recall and Reproduction</td>
<td>Reproduction, definitions and computations</td>
<td>Knowing</td>
</tr>
<tr>
<td>Performing</td>
<td>Apply</td>
<td>Perform procedures</td>
<td>Level 2 Skills &amp; Concepts</td>
<td>Routine procedures</td>
<td></td>
</tr>
<tr>
<td>Communicating</td>
<td>Understand</td>
<td>Demonstrate understanding</td>
<td></td>
<td></td>
<td>Communicating</td>
</tr>
<tr>
<td>Mathematical Reasoning</td>
<td>Analyse</td>
<td>Conjecture, analyse, prove</td>
<td>Level 3 Strategic Thinking</td>
<td>Mathematisation, mathematical thinking, generalisation and insight</td>
<td>Justifying and proving</td>
</tr>
<tr>
<td>Non-routine problem-solving</td>
<td>Creating</td>
<td>Solve non-routine problems, make connections</td>
<td>Level 4 Extended Thinking</td>
<td></td>
<td>Solving problems</td>
</tr>
<tr>
<td>Making connections</td>
<td></td>
<td></td>
<td>Connections and integration for problem-solving</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aligning curriculum, instruction and assessment  261
All of the performance types used in the Alignment Project are evident in the intended curriculum at both national and state levels. The breadth and depth of cognitive demand expectations represented in these performance types are thereby valued in the mandated curriculum. Table 17.2 provides brief definitions of each performance type. Using classroom data from the Alignment Project, more comprehensive definitions of each performance type, with examples of classroom practice, were developed. In this way, the performance types evident in the data were progressively added to the descriptions, enabling the construction of a more complete description of each category, which in turn helped to improve the reliability of data-coding. This is one illustration of a dynamic process contributing to curriculum alignment.

Table 17.2: Performance type categories

<table>
<thead>
<tr>
<th>Performance type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing</td>
<td>The ‘knowing’ category is based on declarative knowledge. The performance of ‘knowing’ specifically pertains to the recall and recognition of content knowledge. The emphasis of this performance type is on the ‘reproduction’ of content taught previously in verbal or non-verbal forms.</td>
</tr>
<tr>
<td>Performing Procedures</td>
<td>Similar to knowing, this performance type is also about reproduction, but of methods or procedures taught previously. ‘Students demonstrate fluency with basic skills by using these skills accurately and automatically, and demonstrate practical competence with other skills by using them effectively to accomplish a task’ (Porter et al. 2007, 37).</td>
</tr>
<tr>
<td>Communicating</td>
<td>Communicating refers to activities where the performance expectation requires students to describe, discuss and represent concepts. This includes the use of models and diagrams to represent mathematical concepts.</td>
</tr>
<tr>
<td>Reasoning</td>
<td>Reasoning involves forming inferences, framing, testing and refuting hypotheses, making judgments, developing generalisations or drawing conclusions.</td>
</tr>
<tr>
<td>Non-routine problem-solving</td>
<td>Non-routine problem-solving involves making decisions and developing logical strategies for solving unfamiliar problems.</td>
</tr>
<tr>
<td>Making connections</td>
<td>Making connections requires students to connect and integrate knowledge from different areas or sources. This includes the ability to apply knowledge to contexts outside the subject area or classroom.</td>
</tr>
</tbody>
</table>
Assessment shaping classroom practice

How does assessment influence curriculum alignment and interact with the curriculum that is mandated and intended? We examined performance types from the Alignment Project that were evident in the mandated curriculum, in order to determine the vertical alignment of assessment practices at the national, state, school and classroom levels. Since 2008, Australia has implemented a National Assessment Program—Literacy and Numeracy (NAPLAN). Its purpose is to determine the foundational literacy and numeracy skills of young Australians and to provide information at a systemic level to evaluate education programs and policies. Our analysis of the performance types in NAPLAN mathematics tests showed that they predominantly involve ‘performing procedures’, ‘knowing’ and, to a lesser extent, ‘mathematical reasoning’. These results were consistent across years 3, 5, 7 and 9.

A system in which the national standardised testing program does not incorporate all of the performance types that are valued in the mandated curriculum could have significant implications for classroom practice, especially if teachers were to use the test as a basis to planning the classroom curriculum. In one interview, a leading teacher explained how past NAPLAN tests were administered to students, their results analysed by the leading teacher and then the classroom curriculum planned in order to target content areas that the students found challenging. This was a time-intensive task, but a valued part of curriculum and assessment in that school. We are not asserting that the intention of the NAPLAN test is to determine curriculum at the school level, but its role in some schools as a perceived source of authority in planning classroom curriculum activities should be acknowledged.

Two primary schools in the study used a different assessment framework—Progressive Achievement Tests in Mathematics (PAT-M)—as diagnostic tests. At the classroom level, the teacher-designed pre- and post-tests are consistent with school- and national-level testing, focusing predominantly on ‘knowing’ and ‘performing procedures’ as shown in figure 17.1.

By contrast, the performance types used for assessment in the science domain were more varied. In Australia, there is currently no national standardised testing program to the scale of NAPLAN (or
diagnostic test utilised at the school level) for science. Our study found significant differences in results between primary and secondary science. For example, in two secondary classrooms, performance types identified in assessment items focused on students’ recall of scientific facts and definitions and their use of scientific formulae to do computations. Other performance types were less evident. Very few items emphasised ‘communicating’ and complex cognitive performance types such as ‘scientific reasoning’.

![Figure 17.1: Performance types evident in the grade 5 VELS mathematics curriculum and test items in NAPLAN, PAT-M and school-based testing](image)

By contrast, science assessments at primary classroom level did not involve the use of tests, but instead reflected a more investigative science curriculum being used at the school level. Students were encouraged to consider and record what they already know about the subject and asked to pose questions about topics they would like to study. This meant a broader range of performance types could be addressed, including communicating, reasoning and non-routine problem-solving. This is a strikingly different approach to that used to deliver the primary mathematics curriculum. Both primary mathematics classrooms used pre-tests at the beginning of the units, and students did not have the opportunity to pose questions for further investigation.
Scope of practice at the classroom level

As we pointed out above, at the classroom level, the performance types documented by the project for mathematics corresponded to those required by assessment instruments (both NAPLAN and PAT-M). The key performance types evident in classroom practice were 'knowing' and 'performing procedures'. Interviews and planning documents showed that teachers also valued other performance types of 'non-routine problem-solving' and 'reasoning', which are also identified in the VELS curriculum and the Australian curriculum. But these more sophisticated performances were seldom evident in the classrooms studied.

At one school, the yearly planner designed by a curriculum consultant contained a statement highlighting that these performance types need to be embedded in all areas of mathematics. However, they were not evident during the unit that was studied. Another school dedicated one week at the end of the term to 'Working Mathematically'. However, these performance types were not embedded across all areas. As a part of the COAG National Reform Agenda, Recommendation 3 of the National Numeracy Review Report (2008) states: ‘That from the earliest years, greater emphasis be given to providing students with frequent exposure to higher-level mathematical problems rather than routine procedural tasks, in contexts of relevance to them, with increased opportunities for students to discuss alternative solutions and explain their thinking’ (COAG 2008, 31).

Extending students’ experiences in mathematics beyond ‘knowing’ and ‘performing procedures’ is consistently advocated throughout the mandated curriculum documents, but it is not reflected in the NAPLAN mathematics test.

The results for secondary science classroom instruction show similar patterns. Figure 17.2 compares performance types found in one classroom and in the curriculum. There is close alignment between performance types in the year 9 classroom instruction and those identified in local assessment instruments. The school’s instructional objectives for the topic to be taught also showed performance types that are closely aligned. This suggests that teachers do not align their practice to national or state curricula (the form of alignment commonly prioritised by researchers), but instead achieve
local alignment by teaching to school-approved resources or guidelines (Polikoff, Porter and Smithson 2011). We think that once the alignment process has been enacted at the level of the school to generate instructional (or topic) objectives and assessment instruments for local use, teachers feel little obligation to reference their instructional practice to the state (or national) standards.

Figure 17.2: Comparison of performance types in Rose Secondary School and those from assessment instrument, instructional objectives and state content standards (where 'state content standards' = the new 'Australian Curriculum: Science')

The study found that textbooks are a major resource for secondary school science instruction planning. Handout exercises for year 9 science were found to be questions from textbooks, and the performance types from those textbook questions emphasised only development of factual knowledge and procedural skills. Large-scale research studies (e.g. Cao 2014) have shown that the exercises and tasks provided in the most commonly used textbooks emphasize factual knowledge and basic procedural skills. Hence, textbooks are unlikely to assist teachers in planning instruction involving performance types that are well-aligned with the expectations of the
mandated curriculum standards. By comparison, the investigative nature of the primary science curriculum addressed a broader range of performance types.

Why should the performance types be more limited in the domains of secondary science and primary and secondary mathematics, but more extensive in the primary science classrooms that we studied? In order to find an explanation, we looked beyond the curriculum units filmed as part of the study and investigated the planning processes and systems used at each school, and the influences influencing curriculum alignment at the school level and beyond.

The significant role of curriculum authorship
One of our interviewees, a key curriculum and assessment stakeholder, highlighted the gap between the formal curriculum framework and actual classroom activity:

[From] prep to 10 there is a documented curriculum framework that defines the learning areas that all schools are required to provide. It sits somewhere between the detailed syllabus and a very pared-back framework ... That’s the space, the distinct space in Victoria I think, because we do have this framework that sits in the grey space between the syllabus and very loose guidelines. But there is some substantial gap between that and what the classroom program looks like.

The actual ‘gap’ is not a void as such, but a complex process of curriculum interpretation that is influenced by several factors beyond the individual teacher and the mandated curriculum. These factors can be usefully identified by asking: ‘to what or to whom does the teacher accord authority?’

This dynamic, interpretive process is ‘curriculum authorship’. Our analysis of organisational practices reveals that schools employ different patterns of curriculum interpretation, reflecting differences in their organisation. Below we illustrate four organisational structures from our data and show how the planning (and consequent implementation) for mathematics and science curricula might vary between schools.
(a) Planning with expert assistance/advice
Acacia Primary utilised the services of a curriculum consultant to interpret the mathematics curriculum and construct a yearly planner covering the key topics to be addressed.

(b) Planning by a year-level team (mathematics) and planning based on an external program (science)
At Banksia Primary, a leading teacher interpreted the mandated mathematics curriculum and constructed a planning document (a ‘planner’) detailing key content to be covered during the term. The teachers did not plan the science curriculum at Banksia Primary, opting to implement the PrimaryConnections science program instead.

(c) Planning by a year-level team
In contrast, at Crowea Primary, the year-level team planned the curriculum. At the end of the school term, the teaching team would meet for a planning day to discuss the curriculum for the following term. Working from previous planners, the teachers modified and adapted the units.

Figure 17.3: Planning structures for mathematics at Acacia Primary School

Figure 17.4: Planning structures for mathematics at Banksia Primary School

(c) Planning by a year-level team
In contrast, at Crowea Primary, the year-level team planned the curriculum. At the end of the school term, the teaching team would meet for a planning day to discuss the curriculum for the following term. Working from previous planners, the teachers modified and adapted the units.
(d) Planning based on a standard textbook
At Rose Secondary School, planning for the science curriculum involved a top-down approach from the curriculum committee to the science coordinator to teacher teams (see figure 17.5). The curriculum committee generated a yearly course handbook covering all the subjects with the prescribed topics and content listed for each grade level. The science coordinator (leading teacher of the science domain) was responsible for the construction of a science outline detailing key content to be covered during each term along with topic assessment schedules. As in (c) above, the year-level teachers worked together as a team to plan the topic outline, lesson activities and assessment.

According to the teacher, authorship at the teacher-team level involves selection of the standardised textbook ‘which then guides the development of the science outline’. The teachers also selected lesson activities drawn mainly from the set textbook. In fact, the teacher explicitly described the textbook as a key reference for their assessment planning. ‘Authoring the assessment is generally done by the person who is organising the topic … a lot of time it’s drawn from the … textbooks which they have [for] the year’ (teacher, Rose Secondary School, pre-topic interview).

(e) Planning based on teacher-developed resources (ground-up approach)
At Tulip Secondary School, we found that planning for the science curriculum involved a ground-up approach where teacher-developed resources were encouraged (see figure 17.6).
In this example, the curriculum committee generated an overarching framework and scope and sequence document. The key documents included a curriculum map outlining intended learning progress across each grade level and a curriculum guide listing the content objectives, skills and general learning attributes. Within the science faculty, year-level teachers worked together (with the science coordinator) to construct a science outline detailing the topics to be covered during each term and set common assessment for their respective grade level. For instance, ‘all year 7 science teachers will be part of the subject learning team … there will be two leaders in each team’, and the leaders would have a discussion with the teachers regarding the planning of core assessment tasks.

Individual teachers were responsible for both the topic and weekly planning. The planning involved designing their own instructional activities. However, teacher planning was not ‘tightly coupled’ with any standardised resources, which encouraged a ground-up approach in terms of resource development.

I could draw upon … our school intranet [and] there is a whole bank of activities … that other people developed … [but] I don’t use that … I tend to do the discussion [with colleagues] and then ask [for] a copy [of the resource] … The library has … every single textbook that is suitable for the curriculum. So I might borrow that and get some ideas from that and see [if] … there is an activity that sounds really fun, then how could I include it in [my lesson] … sometimes it would just be a random idea that I had, like I
might be watching something on TV and there is a particular show that just makes me think about a topic in a different way, and so I’ll bring that into my class, and use it somehow ... (Teacher, Tulip Secondary School, pre-topic interview)

It is evident that curriculum authorship responsibilities varied greatly between schools and between the domains of mathematics and science. The processes of interpreting the curriculum across school sites, the documents and resources used to inform curriculum planning were equally diverse. The following example summarises the various ‘sources of authority’ that were consulted in the planning stages of the curriculum (mathematics).

![Figure 17.7: Acacia Primary mathematics—sources of authority](image)

**Aligning assessment**

Clarke (1992) argued that ‘it is through our assessment that we communicate most clearly to students which activities and learning outcomes we value’ (p. 157). Our analysis of the scope of practice in mathematics and science suggests that monitoring programs, such as NAPLAN, inevitably influence classroom practice. We are not arguing that ‘teaching to the test’ is a bad thing; in fact it makes sense
to structure the curriculum in a way that ensures students will do well on assessment tasks. The key issue is whether it is a ‘good’ test. Does it reflect the range of performance expectations that are valued in the curriculum and, if not, how much teaching time should be dedicated to it? The answer to this question varies greatly depending on the value placed on the test by the school community, leadership teams and teachers. These debates are particularly visible in the media during NAPLAN testing in May, but they extend much deeper, to the heart of teaching and learning. When asked to what extent NAPLAN influenced curriculum and assessment at the classroom level, a teacher provided the following response:

Unfortunately, I think it has way too much … It’s a reality of life that more and more pressure is being put on schools … The fact that the government publishes school results and parents go on to websites and compare and principals are held accountable for what their school does. It’s all pressure … Our planner has been directly related to having [students] in the best possible place for NAPLAN since the beginning of the year … While we have been teaching our maths unit planners, all this term, we have revised everything … I got as many past NAPLAN and AIM examples as I could and I put them into groups, so that they could revise the concepts. For us it’s a timing issue. We look at what we can specifically do in these eight weeks that we have the children for. There was not a lot of anxiety because they felt prepared.

It is such a narrow assessment; it is one hour on one day … We’re putting much more effort into trying to prepare the children in a very structured way than we used to … We try and do whatever we can, and I think that’s just the way of the world … [A]t least we can feel that we have done the best that we can. (2016)

The NAPLAN tests were originally designed to measure achievement levels based on the Statements of Learning for Mathematics produced by Australian education jurisdictions. In 2016, the tests were aligned with the Australian Curriculum for the first time (ACARA
The advice from ACARA states that ‘the best preparation for NAPLAN is to continue focusing on teaching the curriculum’ (ACARA 2013). The current format of the tests and the purpose for which they were used at the classroom level can result in the narrowing of curriculum goals. Au’s (2007) qualitative meta-synthesis of forty-nine studies found that ‘high-stakes testing exerts significant amounts of control over content, knowledge forms, and pedagogies at the classroom level’ (p. 264). In the case of NAPLAN, this distorts the curriculum, producing an impoverished set of learning outcomes for students. McGaw (2012) asserts that NAPLAN is not a high-stakes test, but concedes that if teachers are modelling the enacted curriculum based on the test, then the students are being ‘poorly served’. In fact, although NAPLAN might not be high stakes at the level of the individual student, it has become so at the level of the school. A national standardised testing program is always likely to influence classroom practice whenever the results are used publicly to characterise either the student or the school. This would be less of a concern if the testing program actually embodied the intended goals of the mandated curriculum. As Barnes, Clarke and Stephens (2000) have demonstrated, high-stakes assessment can be the engine of curriculum reform, but this becomes a constructive force only where the assessment accurately and comprehensively models the performances valued by the curriculum.

The curriculum planning process
In essence, curricular alignment involves a complex network of human, physical and teaching resources and activities. While planning processes are quite diverse, there is always an iterative process that can be traced through planning documentation requirements determined by individual schools. It is also clear that this iterative work constitutes a substantial part of Australian teachers’ professional activity. There are also ‘sources of authority’ that significantly influence this process, such as the use of textbooks or programs and critically located individuals. If teachers are expected to engage in curriculum and assessment design, through the interpretation of standards, the selection of tasks and activities and constructing assessment tasks, then it is reasonable to expect that they will be offered professional learning and support in this area. The extent to
which pre-service and in-service teachers receive support and guidance in curriculum design requires further attention and targeted research. Furthermore, the resources used as sources of authority should be aligned with the curriculum (both content and performance type expectations), supported by research on content and pedagogy and based on current theories of learning. Without these credentials, curriculum will be driven by unquestioned conventional wisdom and beliefs (Masters 2013) and is unlikely to align with its intent, its potential or its formal mandate.

**Future directions**

For education systems to achieve greater value and impact, there must be greater alignment between the expectations of particular performance types valued in curriculum documents and those represented in the mandated testing program, to ensure consistency of purpose at the national level. By limiting the enacted and assessed curriculum to performance types such as knowing and performing procedures, the opportunities for developing skills that are valued in the curriculum such critical thinking, creativity and problem-solving are compromised. Ensuring that formal assessment addresses the broader range of performance types, so that they can be aligned with classroom practice, is therefore an urgent challenge.

Our overall approach to ‘alignment’ also needs to change. Previous alignment research has employed ‘alignment’ as a means of describing a static state, treating curriculum at all levels as a *fait accompli* and ignoring the significant agency effected at all levels of the school system by those responsible for its interpretation and enactment. Yet leaving agency or responsibility primarily with the individual schools or teams of teachers is also inadequate. As we have seen, teachers are as likely to enact only those performance types that are easily visible or directly assessed. We therefore have to consider the ‘sources of authority’ being used by teachers to plan their local curriculum.

By exploring curriculum authorship, we show that significant new insights can be obtained into both the alignment process and the nature of the performative realisation of standards-based curriculum in school and classroom settings.
Taking a dynamic perspective on curriculum alignment acknowledges the significant agency accorded to these sources of authority, many of which can be used intentionally to pursue priority objectives for education systems and groups of schools, and to leverage more purposefully targeted support for teachers and schools.

By understanding how schools actually adapt the official curriculum, we should be able to tease out good practices that support schools aspiring towards a richer and more balanced performative curriculum for their students and education agencies seeking a more meaningful and cost-effective implementation of their curriculum frameworks and requirements.

Biographies

Dr Natasha Ziebell is a lecturer at the Melbourne Graduate School of Education at the University of Melbourne. For the past ten years, Dr Ziebell has worked in initial teacher education programs. Before this, she worked as a teacher in early childhood education and primary schools. Her research focuses on curricular alignment and curriculum authorship, with a particular focus on the intended, enacted and assessed curriculum.

Dr Aloysius Ong is a research fellow at the Natural Sciences and Science Education academic group at the National Institute of Education, Singapore. He received his PhD from the University of Melbourne, and his current work focuses on classroom research, with a particular interest in science instruction. He is also keen on curriculum alignment and activity theory. Before his PhD research, he worked as a science teacher in Singapore secondary schools.

Professor David Clarke is Director of the International Centre for Classroom Research (ICCR) at the University of Melbourne. Since the 1990s, his research activity has centred on capturing the complexity of classroom practice through a program of international video-based classroom research in more than twenty countries. His major interests are the social nature of learning, teacher professional learning, and assessment. Professor Clarke has published around 200 book chapters, journal articles and conference proceedings papers.
Note
1 Leading teachers have responsibility for leadership and management roles in schools. See www.education.vic.gov for further information regarding roles in the Victorian teaching service.
Part 4
Challenges of system reform
Chapter 17

Hard-to-staff Australian schools

How can we ensure that all students have access to quality teachers?

Suzanne Rice, Paul W. Richardson, Helen M.G. Watt

How can we ensure that all children have access to an effective teacher, regardless of their sector, home location or educational trajectory? This chapter will make the case for attracting and retaining effective teachers, outline the challenges facing Australia in doing so, and consider some potential policy responses.

While there has been some concern about recent declines in Australian students’ performance in international testing programs, the nation’s performance nevertheless remains high by international standards (Thompson, de Bortoli and Buckley, 2013). The overall level of student achievement matters because it has a strong influence on societal outcomes that are important for all of us, chiefly economic productivity and social cohesion (Dinis da Costa et al. 2014, Shomos and Forbes 2014). The gap between our weakest and strongest students also matters, and the low achievement of some student groups has flow-on effects for both individuals and society. Low achievement is associated with a higher likelihood of dropping out of school (Rumberger 2011), poorer health (Berkman et al. 2011), lower levels of social trust and less civic engagement (Dinis da Costa...
et. al. 2014), and weaker labour market outcomes (Shomos and Forbes 2014).

Low achievement in Australia, as elsewhere, is disproportionately concentrated among students from low-income backgrounds, those in rural and remote settings, and Indigenous groups (Thompson, de Bortoli and Buckley 2013). These groups are predominantly located in schools that have the most difficulty attracting and retaining teaching staff: low socioeconomic status (SES) metropolitan schools, and rural and remote schools (Steering Committee for the Review of Government Service Provision 2010). If Australia is to increase the achievement of its weakest students and reduce the gap between those students and our high achievers, an important policy question is how to attract and retain the highest quality teachers to hard-to-staff schools. These issues are not unique to Australia but play out in various forms across the globe.

Education systems shape staffing policy with varying degrees of attention to four policy concerns. We conceptualise these forming a hierarchy of system staffing needs, as outlined in figure 18.1. The notion of a hierarchy of needs is taken from Maslow’s (1943) famous hierarchy of human needs.

At the lowest level is the need for systems to attract a teacher, any teacher, to a difficult-to-staff school to ensure that students receive some education (regardless of the quality of that experience). This is the level that generates the most pressing political pressure for governments (and, to a lesser degree, Catholic schools). Any failure on the part of an educational system to manage this requirement is obvious and carries with it the potential for considerable political fallout in the form of media reports of classes without teachers. For this reason, education systems tend to focus on overall teacher supply numbers as the first priority. In times of teacher shortages, policy responses include advertising to increase recruitment, student scholarships and other employment incentives such as university fees debt cancellation (Lonsdale and Ingvarson 2003). Common school-level responses to supply issues include requiring teachers to teach out-of-field (i.e. teaching subjects for which they do not hold qualifications) and restricting the subjects offered.

At the next level is the requirement to create in schools stability and trust by fostering teacher retention at a site. However, excessive
turnover at the school level, while influencing student education and staff morale, creates less of a political imperative, and subsequently might receive less attention in policy formation. Finally, if systems focus too much policy energy on these first two needs, quality and equity issues might be neglected because there is no attempt to focus on the top levels of teacher quality and its distribution throughout the system. If this happens, systems will fail to address the poorer student attainment evident in many hard-to-staff schools. Indeed, staffing policies might even serve to reinforce inequities if systems focus only on attracting and retaining teachers (regardless of quality) in hard-to-staff schools.

A note of caution; Although the terms ‘quality’ and ‘effective teachers’ are invoked in everyday discourse and in the media, there is much debate among researchers about how to define and identify teacher quality. Further, the degree to which teacher effectiveness is constant across the professional lifetime, or even across different locations, is not clear. Although we discuss questions of teacher quality and its distribution across systems, we also acknowledge that defining, measuring and tracking teacher quality is a problematic that has yet to be satisfactorily resolved.

Figure 18.1: Hierarchy of staffing policy needs
The current situation in Australia

The first policy concern is overall staffing supply. In Australia there is a reasonable balance between the number of teaching vacancies and the number of teachers seeking work, although population shifts will see an increase in demand for teachers over the next 10 years (Weldon 2015). However, this overall balance conceals areas of surplus and shortage, with primary teachers being in oversupply in most states and staffing shortages apparent in some key secondary subject specialties (notably mathematics and science) (Weldon 2015). In addition, there are noted shortages by geography, with rural and remote schools reporting continuing staffing issues, as well as persistent problems with out-of-field teaching (Weldon 2015). The heaviest impact of undersupply is likely to be felt in hard-to-staff schools, which already report struggling to identify appropriate staff. Oversupply, in contrast, might affect system quality overall: where government systems employ graduates on a first-come-first-served basis, talented graduates might decide to seek a position elsewhere (whether in a non-government school or outside teaching altogether) rather than wait years for a position.

The second policy concern, retention, presents a more mixed picture: overall retention within the teaching profession is relatively high (Productivity Commission 2012) but retention within schools is a different question. Schools might be able to employ enough staff, but if those staff leave frequently and need to be replaced, there are detrimental consequences for the schools and their students (Ronfeldt et al. 2011). While there is relatively little empirical research on levels of turnover in Australian schools, overseas research finds that teacher turnover is highest in schools that are already more likely to have problems attracting staff—low SES, rural and remote schools—and that high teacher turnover tends to have the strongest negative consequences for low SES schools (Ronfeldt et al. 2011). In Australia, principal reports of difficulties in retaining staff are greatest in disadvantaged schools, particularly in remote schools (Productivity Commission 2012).

The third policy concern, overall teacher quality, is largely dealt with by Australian education systems through regulations requiring
relevant tertiary qualifications for entry to the profession, and through professional learning following entry. Teacher workforce entry requirements in Australia are relatively high by international standards. Of the teachers in the National Teaching Workforce Dataset, 84.78 per cent had a bachelor degree and 9.32 per cent had a postgraduate degree (Willett, Segal and Walford 2014), and in comparison with many overseas jurisdictions, there is minimal employment of unqualified teachers in Australian schools (McKenzie et al. 2014). However, entry into teaching courses varies greatly by teacher education provider. For example, some universities and regional campuses accept students into teacher education with low ATAR scores, or no ATAR at all. The large number of government enquiries into teacher education since the 1990s (Dinham 2013) reflects ongoing concern about whether those who graduate from teaching courses are adequately equipped to teach effectively. Despite the findings and recommendations stemming from these reviews, teacher quality remains a persistent political and public issue in Australia as elsewhere. We also know little about whether teachers are matched to their individual schools, especially where appointment occurs at a system level and there is no opportunity for local selection of staff. From a career development perspective, there is a need for further knowledge about how teachers develop across the life course, how they progress from beginning to mid-career to veteran, and the impact this has on their effectiveness over time. The development of the Australian Institute for Teaching and School Leadership (AITSL) national standards for teachers and school leaders has been one policy response to align teacher education and development across the career to a set of agreed standards as a lever to increase quality.

The fourth policy concern, distribution of teacher quality among schools, is a different matter. Overseas studies, mostly in the United States, have used teacher value-add measures in the form of relative increases in student test scores to examine teacher quality throughout systems and concluded that teacher quality tends to be poorest in hard-to-staff schools. However, differences in the staffing practices of the United States mean that it is difficult to apply the findings of these studies to the Australian situation. There is little research on the distribution of teacher quality among Australian
schools, but the challenges some schools face in identifying and keeping teachers suggest that these schools are likely to have less choice in regard to their staff, and might need to make do with a less capable or more poorly qualified teacher in order to provide requisite programs.

This lack of knowledge is partly due to the relatively slow development in Australia of comprehensive national datasets on teachers and teacher movement within the profession, although the recent establishment of the National Teaching Workforce Dataset (DET 2014) is a step in the right direction. There is also less of a tradition in Australia of government providing researchers with access to deidentified data for analysis, a well-established practice in some overseas jurisdictions. The paucity of large-scale research on teacher populations points to the need for governments to work more closely with researchers to determine patterns of teacher retention, movement and attrition, together with the factors driving these phenomena. Individual longitudinal studies, such as the Factors Influencing Teaching Choice program of research (FIT-Choice; www.fitchoice.org) are important in providing insights into who chooses teaching and why (Richardson and Watt 2006) and how these initial career motivations play out over time with regard to teaching style, career effort and persistence, leadership and professional learning aspirations, as well as personal well-being and health (Richardson and Watt 2014, Watt and Richardson 2008). Without studies of this type, policymakers run the risk of instituting initiatives to improve the supply of quality teachers that do little to alter patterns of recruitment, retention and attrition.

Responding to policy concerns
To what extent, then, do the staffing policies of Australian school systems address each of these levels of need: teacher attraction, teacher retention, teacher quality and equity of distribution? School systems throughout Australia have responded to these staffing concerns in diverse ways. This discussion will outline current policy levers designed to address each of these concerns across Australia. We focus on government education systems, as it is the responsibility of state and territory governments to provide access to education for all students in all contexts who seek to enrol. As a consequence, these
All but one of the government education systems (the Australian Capital Territory) use a range of incentives to attract teachers to hard-to-staff schools, and some also have incentives to retain them. Mostly, these incentive schemes focus on remote and rural schools, but some also provide teachers with inducements to take up or remain in a position in hard-to-staff metropolitan schools (e.g. Western Australia).

Transfer benefits are the most widely used form of incentive, and generally allow for transfer to a preferred location after a set period of service in a less desirable school setting. New South Wales, South Australia, Queensland, Tasmania and Western Australia use a weighted system, whereby service in different types of schools is allocated different weights (with more weight for a stipulated period of service in the least-favoured settings), and weights count towards allocation of subsequent appointments. Weighted systems mean that teachers in hard-to-staff schools greatly increase their chances of gaining an appointment in a highly favoured setting after a set period of service. Some systems have also structured their weights systems to encourage teachers to remain in a rural or remote school, giving greater weight to lengthier periods of service (e.g. Queensland).

Housing benefits are common in states with a large number of very remote schools (i.e. Queensland, Western Australia, South Australia, New South Wales and the Northern Territory). Some systems provide housing for teachers in remote locations, while others provide rent subsidies of up to 100 per cent. Most of these states also cover teachers’ relocation expenses should they accept a position in a remote school, although payment might depend on completion of a minimum period of service. The Northern Territory, Western Australia and South Australia also pay for the travel costs of teachers and their families back to a major centre between one and three times per year for those in remote schools.

Additional leave is provided as an incentive for teachers in remote settings (e.g. in Queensland, South Australia, New South Wales, the Northern Territory and Western Australia). This is usually after several years in a remote school, to encourage retention. Some additional leave benefits are minor and require no minimum period...
of service; they are in place to allow teachers to travel back to major centres for business or medical reasons. More generous leave is often provided as additional paid study leave of one term after a minimum period of service, in recognition of the difficulty teachers in these settings face in availing themselves of professional development opportunities.

Cash incentives are very commonly used to encourage teachers to accept remote positions and to offset the additional costs of living there. In some states, cash incentives are structured to rise with years of continuous service, to encourage teacher retention. Other benefits might include induction programs and support networks, and immediate permanency in the teaching service. Scholarship schemes aimed at trainee teachers and linked to appointments in hard-to-staff schools are another mechanism used by some education systems to fill vacancies in these schools, and usually involve staggered payments during training, immediate permanency in the teaching service, and some additional payments in the first few years of service. Queensland’s Step into STEM Teaching and New South Wales’ Teach Rural scholarships are good examples. Such scholarships are also often targeted to specific subjects with shortages, such as mathematics and science.

Two state government education departments—Queensland and Tasmania—also have an element of compulsion in staffing policy. In both states, teachers with permanency agree to teach throughout the state, and in Tasmania teachers are required to complete some service in a non-urban school. While obviously personal circumstances are taken into account by staffing personnel, teachers seeking employment with either body know that they will be required to accept a posting in a hard-to-staff school at some point in their career.

In addition, a number of systems have recruitment mechanisms aimed at increasing the quality of those entering teaching. Victoria, the Australian Capital Territory, Western Australia and the Northern Territory are partners in the Teach for Australia program, which recruits high-achieving graduates to work in disadvantaged settings. New South Wales runs a cadetship program that seeks to attract high achievers through a paid placement during teacher training and guaranteed permanency on completion. Scholarships
for high-achieving trainee teachers (e.g. Queensland’s Step into STEM Teaching) are used by a number of states, offering financial support while training and sometimes bonuses on commencing teaching. Finally, some systems run ‘taster’ programs that offer trainee teacher candidates or teachers in metropolitan settings the chance to have a teacher exchange year, or teaching practicum in a rural or remote location, in the hope that they will enjoy the experience and elect to transfer.

**How do staffing policies measure up?**
The policies summarised above tend to place the strongest emphasis on attracting teachers into a system and/or to a specific location. Incentives such as immediate permanency might work to draw teachers towards schools, but are likely to have little influence in holding them there. Policy incentives such as permanency are designed to attract new graduates, who have the fewest professional resources to cope with the challenges they might face in such settings. Depending on the design, weighted transfer systems might provide some capacity to retain teachers at a site if bonus weightings are applied to remaining in a school beyond a given minimum period.

Introducing a compulsion clause to teacher contracts in theory resolves some attraction issues. However, in practice the fact that teachers who have completed rural or remote service are usually excused from a period of further service could provide an incentive for young beginning teachers to get remote teaching ‘out of the way’ quickly after graduation before family considerations (especially the education of their own children) complicate career decisions. Introducing compulsion is also problematic in that government schools do not operate in a vacuum. The government teachers best placed in the teaching job market—well-qualified, highly effective staff who have taught for some years—might be tempted to seek employment in non-government schools if they fear a forced transfer.

Cash incentives might work to attract and retain teachers, and staggering benefits to increase with each year of continuous service might assist retention, although these incentives do not address issues of teacher quality. However, the higher costs associated with goods and services, particularly in remote locations, could erode the incentive provided by salary bonuses. Housing benefits both attract
and retain, given that they provide teachers with savings on rent or mortgage costs, although again they are unlikely to differentiate in appeal to higher or lower quality teachers. Additional leave for professional development or for business or medical reasons might or might not act as an incentive, but is likely to be largely compensatory for fewer professional development opportunities and business facilities in more remote settings. Induction programs, mentoring and support networks for new staff are also used in some states and territories. Although such measures probably do not increase attraction to these sites, evidence indicates that they increase in-school teacher retention and reduce attrition from the teaching workforce (Ingersoll and Strong 2012). For this reason, they should form an essential element of staffing policies throughout Australia, if they are substantial in nature and appropriately funded. Benefits such as housing, relocation costs, and additional leave and salary for staff in remote settings are clearly compensatory, and are essential if suitably qualified people are to be attracted to more remote areas.

Programs aimed at attracting higher quality candidates into teaching to work in challenging settings (such as Teach for Australia) have some capacity to shape quality distribution throughout the system. This will depend on those entering the profession remaining in teaching and in challenging schools for long enough to exert an influence. Some researchers have found that teacher retention (both in hard-to-staff schools and in teaching) in overseas equivalents such as Teach for America has not been strong (Boyd et al. 2005), but the Australian initiatives are relatively new and distinct from overseas versions, so the degree of long-term retention in hard-to-staff Australian schools is not yet fully known.

Overall, it is clear that the imperative to provide hard-to-staff schools with qualified staff members tends to dominate current policies, with less attention paid to teacher retention in these schools and the least focus on the distribution of teacher quality. The need to improve student learning by drawing highly effective teachers to hard-to-staff settings does not feature strongly. In this respect, the research suggests some useful policy directions that could begin to tackle issues of distribution of staff quality. To do this, the policy initiatives that might attract and hold quality teachers in hard-to-staff schools need to be considered.
What does the research suggest might work?
Research into the school preferences of teachers with higher and lower self-efficacy points to some possible policy responses systems might consider. There is some evidence that teachers who perceive themselves to be efficacious express a stronger interest in taking on roles of leadership and responsibility within schools, and are more likely to transfer schools to take up such positions (Rice 2010, 2014). Differentiated staff funding models that provide for additional staff leadership roles in hard-to-staff schools could be one potential policy response with which to shape the distribution of teacher quality. Provided these positions are regarded as genuine by teachers, giving them real power and transferable skills, this might be one important means of attracting and retaining effective teachers in these schools. Another study, which looked at different types of beginning teachers, found one group that was high on altruistic motivations to be a teacher, planned to put in a lot of effort and to undertake professional development, and were highly satisfied with their choice of teaching. This profile of beginning teacher was also characterised by a desire to leave teaching within five years, and aspiring to leadership positions (Watt and Richardson 2008). The authors concluded that if these people's ambition to seek leadership roles could be realised, it might be possible for their plans to leave teaching within five years to be postponed or abandoned.

Research suggests that teachers with high self-efficacy place a high priority on opportunities for formal and informal professional learning (Rice 2010, 2014). While a number of systems currently offer additional leave for professional development to teachers in remote schools, often there are lengthy qualifying periods before becoming eligible (e.g. four years of continuous service in a remote school in the Northern Territory), meaning that few teachers serving in these schools eventually enjoy the benefits. Shorter qualifying periods could be necessary if strong teachers are to be drawn to, and kept at, these sites.

School-level measures to increase teachers' voice in determining the professional development to which they have access are important. Principals need to ensure that they consult with staff rather than announce the school’s professional development program for the year as a fait accompli. System-wide measures to
consult teachers about their professional development requirements are similarly needed. Providing professional development that is high quality, relevant, sustained, intensive and engages with teachers’ current practices and knowledge is important for the overall growth of the teaching profession, but is also vital to reducing staffing inequities. System policies to foster collaboration in professional learning at the local level through professional learning teams and local school networks are another means of fostering growth and building teacher retention.

Access to professional learning opportunities was in the past seen as a major disincentive for teachers to take up a position in a rural or remote setting as such learning was generally face to face (e.g. Human Rights and Equal Opportunity Commission 2000). Fortunately, the movement of both university education providers and departments of education into the online space has a real capacity to address this issue. To support attraction to and retention within less-favoured schools, systems might wish to consider providing targeted financial sponsorship for staff in these schools to access formal learning options (e.g. to obtain a masters degree). Targeted financial support to allow groups of staff in hard-to-staff schools to enrol in courses is another policy option to improve teacher capacity and retention.

School leadership is also an important consideration in improving the staffing and outcomes of hard-to-staff schools. Beteille, Kalogrides and Loeb (2009) note the capacity of effective principals to attract and retain higher quality staff.

This aligns with the work of Rice (2014), who found teachers with high self-efficacy were more likely to cite lack of support from the school’s principal as a reason to leave a school. Clearly, policies to attract and retain good teachers in hard-to-staff schools will be most effective when combined with policies designed to attract, retain and develop quality school leaders in these settings.

Are there things to avoid?
In addition to policy actions that support the attraction and retention of effective teachers to less favoured settings, are there policy actions that could worsen the situation, or be costly but ineffectual?
There are a number of aspects to consider in addressing this question.

First, Rice’s (2014) research found that less efficacious teachers gave greater importance to increased class-free time as a way to keep them in a school. In contrast, more effective teachers were positive about the time they spent with students. For this reason, increasing staff allocations to reduce teacher time in front of classes in less-favoured sites is a policy option that should be approached cautiously, as it might attract and retain those who are less capable in the classroom. A better form of differential treatment could be to provide higher levels of support staff to these schools—for example, in the form of teachers’ aides who can reduce some of the administrative load that teachers shoulder. This would acknowledge the additional stressors placed on teachers in more challenging settings, without acting as a force to attract the least effective. By freeing up teachers to focus on time with their students, such an initiative might also act to attract and retain more effective teachers in these settings.

Second, there is now sound evidence that professional conditions within schools influence teachers’ decisions to move towards or away from a school (Ingersoll 2007). The capacity to exercise professional autonomy and judgement are important in attracting and holding teachers within a school, and this capacity appears to be particularly important for more effective teachers (Rice 2010, 2014). In the US context, the decision of minority teachers to leave one school for another, or to leave teaching altogether, was heavily influenced by the level of collective decision-making in the school and the degree of individual instructional classroom autonomy (Ingersoll and May 2011). Initiatives that reduce teacher autonomy and voice could be detrimental. Achinstein, Ogawa and Speiglman (2004) in the United States found that the use of prescriptive curricula allowing little room for teacher judgement occurred much more frequently in hard-to-staff Californian schools, where funding benefits were used to push ‘teacher-proof’ programs. A desperate need for resources in these circumstances might mean that the schools have little option but to employ the programs. Although some accountability is essential, the more governments and systems dictate when, how and what teachers teach, the more likely they are to drive from schools those
teachers most essential to students’ success. Further, if restrictions are applied differentially to groups of schools according to student achievement level, then effective teachers might follow their professional freedom, to the detriment of the students who need them most.

We need to take seriously the complex and multidimensional nature of teacher motivation. A robust body of research is increasingly helping us understand that people who choose teaching as a career do so because they perceive themselves to have the ability to be a teacher. They want a career that allows them to work with people, especially children and adolescents, and they want to make a difference by contributing to a better future in a more equitable society. They are aware at the point of choosing the career that the demands are high and that the rewards of salary and prestige are modest. Empirical research since the mid-2000s on initial teacher motivation as well as motivation among practising teachers has demonstrated that teacher motivation matters because it affects professional engagement, relational expectations, instructional practices, and student engagement and learning (Richardson and Watt 2014). If teacher motivation that involves establishing positive relationships with students to improve their life chances cannot be realised in particular school contexts, then it is likely that teachers will become dissatisfied with their work. If at the classroom level teachers are faced with difficult behaviour, managing constant interruptions, large classes, rule violations, failure to achieve goals, and sometimes verbal or even physical assaults, then it is little wonder that their motivations are challenged and work satisfaction undermined, potentially leading to leaving the profession (OECD 2005).

In public debates on school staffing, additional pay for teachers in hard-to-staff schools resurfaces with regularity as a blunt policy instrument. But the capacity of additional pay to increase the attraction and retention of quality teachers in hard-to-staff sites is far from proven. Haycock and Hanushek (2010) in the United States note that although there is some evidence that increasing teacher pay generally works to attract and retain more highly qualified teachers in the teaching profession, ‘some districts have found that even large financial incentives, in the absence of better working conditions, fail to attract and retain strong teachers in high-need schools’ (p. 51).
Finally, at a broader level, there is the issue of the stratification of schools. Australian school funding policies since the 1990s have encouraged the establishment of more non-government schools, which operate within different regulatory frameworks from government schools, and often have a much greater capacity to select which students they will enrol. As a result, Australia has witnessed the migration of middle-class students away from government schools and the consequent residualisation of the government sector (Watson and Ryan 2010). Increasing stratification narrows the student mix in schools, and some research suggests that this is reflected in Australian teachers’ preferences to work in independent—and to a lesser degree, Catholic—schools, as opposed to government schools (Rice 2008). Skewing of teacher preferences for schools is likely to exacerbate the staffing challenges faced by hard-to-staff schools, which predominantly sit within the government sector; these schools are likely to be forced to choose from an increasingly small pool of applicants for positions. One policy response could be to shape regulatory frameworks to level the playing field between government and non-government schools by requiring all schools receiving government funding to enrol a certain percentage of students from disadvantaged backgrounds, including those with poor achievement or behaviour. There could be other actions that will also support the attraction and retention of effective staff in hard-to-staff schools. Teacher training courses do not always cater for the variety of students that teachers must teach. A useful strategy might be to support teacher candidates specifically to understand and work effectively in disadvantaged settings. The National Exceptional Teaching for Disadvantaged Schools program (founded by the Queensland University of Technology and now in four other universities) is a good step forward in this regard.

In summary, research evidence provides some indications as to how systems might best attract and retain quality teachers in hard-to-staff settings. Current policies have the strongest focus on attracting teachers to hard-to-staff schools, with a lesser emphasis on retaining them; but, overall, policies could be inadvertently reinforcing traditional staffing choices in which new teachers commence their careers in a remote, rural or urban disadvantaged school, only
to move towards more affluent suburban schools as they become more experienced.

**Recommendations**
We propose that if systems are to support hard-to-staff schools to attract and retain effective teachers, they need to build approaches to recruitment, retention and career development that have mutually reinforcing effects, in particular by:

- identifying teacher candidates who have the motivation and capability to exert a strong influence working with disadvantaged students, and providing them with the educational experiences that allow them to flourish in challenging schools
- building structures for professional learning and mutual support in hard-to-staff settings
- providing additional opportunities for effective teachers to access leadership roles and sustain career development
- ensuring that professional environments in hard-to-staff schools support teacher autonomy and voice
- providing specific support and incentives for hard-to-staff schools to work together through partnerships structures, and
- regulating and financing schools in all sectors in ways that more adequately reflect the relative challenge of the student populations they serve, to work against further stratification of schooling.

Ensuring that students in hard-to-staff settings have the same access to experienced and highly effective teachers as their peers in other schools is a continuous challenge for Australian policy-makers. However, it is a challenge that must be met. Consistently high-quality staffing provides strong benefits for the students who are most dependent upon school for positive educational and life outcomes, and provides flow-on benefits for us all.

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Collaboration has become an overt priority in schooling and education reform since the mid-2000s in many countries, including Australia (Munby and Fullan 2016). Education practitioners, policymakers and system leaders now routinely use the language of collaboration and set goals for learning and improvement, which cannot be achieved without collaboration. This growing emphasis reflects deep and broad changes in the economic and social structures surrounding schools, driven by digital technology, accompanied by a growing focus on the networked or ‘sharing’ economy, and growing demand for collaborative skills and problem-solving abilities in our societies.

This chapter examines the implications of this shift for education in Australia, by discussing what is driving it, exploring the key dimensions of practice and organisation required to use collaboration better, and considering what barriers might stand in the way of collaboration exerting a significant influence on educational attainment. We argue that while the idea of using collaboration to support learning, teaching and educational improvement has become widely accepted, collaboration is still largely treated in the field of education as an ‘intangible’ good, not susceptible to structured practices,
accurate measurement or dedicated investment. One reason for this is that collaborative practices, at various levels of scale, challenge many established structures, routines and measures, which have built up cumulatively in education systems over decades. Identifying and resolving these conflicts and adjusting the organisational and professional parameters of collaboration, are vital to achieving greater progress in student achievement and system learning over the next decade.

**Why collaboration?**

Leaders of education systems are under pressure, not just to refine established twentieth-century ‘industrial’ models of education but also to intensify effort towards improving learning outcomes in ways that are faster, cheaper and more sustainable. Alongside emphasis on the individual school and teacher as units of ‘effectiveness’, focus has grown on two other units through which outcomes can be achieved and measured:

- improving individual student learning
- collaborative systemic formations and operations (between groups of individuals and organisations) that enhance efficiency and enhance student outcomes.

Students leave our schools today to enter a workplace where collaborative skills are critical to many careers. New ways to access, share and coordinate information and support are evolving through social and electronic networks. Our economies demand more people with the skills to participate successfully in collaborative environments. Value and profit are created through innovation and differentiation. Skills increasingly prized include working together through projects, integrating and applying information in complex environments, and using interpersonal skills to engage, persuade, coordinate and negotiate with others. Expectation is growing that schooling will develop these skills and capabilities in students (Bentley and Seltzer 1999, Griffin et al., chapter 2 of this volume).

In pursuing more effective teaching and learning, and seeking to extend or accelerate educational innovation and improvement, collaboration is increasingly referred to as an important part of the repertoire required by our young people and in our schools. In many
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educational policies and reform agendas, this desire for collaboration is being pursued at several levels of scale simultaneously, in part to counter the perceived negative effects of competition and organisational fragmentation, both within and between schools.

At the same time, the growing focus on the learning outcomes, needs and progression of each student represents an important shift towards measuring the effect of our collective political, economic and educative efforts in contributing to growth for individuals. This is particularly relevant to the work of the key change agents in young people’s lives, their teachers, a theme explored in several other chapters in this volume (e.g. Eadie, Griffin, McLean Davies et al., Rice et al.). Our focus in this chapter is on that other unit by which we could choose to measure the effectiveness and efficiency of our education systems: collaborative effort between organisations and groups of individuals.

Collaboration is the sharing of effort, knowledge and resources to pursue shared goals. We argue that it offers three key benefits that help to explain its growing appeal. First, collaboration can support the efficient coordination and scaling of shared activities, including learning, communication and knowledge transfer, where large numbers of participants share in the same set of activities (e.g. a curriculum, effective teaching practices, or a common approach to organisational development) while also tailoring their activities to reflect their specific needs, preferences, interests and locations.

Second, collaboration can generate authentic engagement and trusting relationships, built through voluntary and reciprocal action. These actions may create important forms of value and enable relationships that go beyond those driven by competitive market exchange, command-and-control or compliance-based relationships. For example, community-based partnerships offering volunteering and mutual support opportunities, or membership-based networks structured around issues of shared interest, offer scope for mutual and reciprocal support not found in arenas dominated by competitive or instrumental exchange.

Third, collaboration offers a way to connect and integrate forms of knowledge and information that are increasingly complex and specialised, enabling the application of different forms of knowledge to the achievement of shared goals, or solving of problems, for
example through the growing range of ‘innovation’ partnerships and organisational collectives being created to pool and share expertise. In a network-based, information-rich society and economy, more and more work is performed by teams, with effective collaboration at their core (Castells 2010, Benkler 2006, Leadbeater 2009).

A generation of school improvement and effectiveness literature has reinforced the idea that the individual teacher in the classroom is the basic unit of teaching and learning and the individual school the fundamental organisational unit of schooling. Certainly, primary and secondary schools have been very resilient in their scale and form. However, as education systems have pursued systemic growth in outcomes, they have increasingly turned to collaboration to overcome some of the fragmenting effects of competition.

These effects are caused both by the professional isolation of classroom and subject-based silos, and by entrenching competitive incentives and inequalities of resourcing between individual schools. The growing emphasis on ‘collaborative improvement and innovation’ to address this organisational fragmentation also dovetails with a longstanding emphasis on professional collaboration by advocates of teacher professionalism. This body of work promotes ethics, knowledge-sharing and solving ‘problems of practice’ as a route towards achieving creating high-performing schools and systems (Hopkins 2011).

In Victoria, this emphasis is currently evident in the state government’s ‘Education State’ reform agenda, which through the Framework for Improving Student Outcomes (Department of Education and Training 2016b) seeks to use collaboration, primarily through a structured ‘Communities of Practice’ an ‘Professional Learning Communities’ approaches, as a means to achieving improvement across a broad and ambitious range of outcomes (Department of Education and Training 2016a).

**Dilemmas on the ground**

Successfully growing and scaling collaboration, however, presents real dilemmas to educational practitioners and policy-makers. Three key challenges are:

- learner agency
- teacher professional identity
systems and structures, created by policy and politics, that generate disincentives to collaborate between professionals and between schools.

Learner agency, in this context, refers to the empowerment of learners within the community (in the classroom and beyond) and their ability to act independently and interdependently in a varied range of learning environments (Bentley 1998). In Victoria, and in classroom environments internationally, there can be found the beginnings of efforts to embed skills to enhance learner agency within the curriculum. The Victorian Curriculum for example, which began implementation in 2015, contains a ‘capability’ strand that requires students from Foundation to Year 10 (ages 5–16) to demonstrate developmentally appropriate skills in ‘flexible and adventurous thinking’ grounded in ‘understanding thinking processes and an ability to manage and apply these intentionally’ (VCAA 2016).

Collaboration in the classroom, however, requires students and teachers to operate in fundamentally different ways from the status quo. In a collaborative classroom students move from being recipients of learning to co-constructors of learning. Teachers move from delivery agents of content in the subject area to experts who craft content to fit the learning intentions established with or by students. This presents existential and practical challenges to teachers, who have to reimagine their role, and for students who have to learn new ways of operating as learners.

At the level of the classroom, for example, a collaborative approach means that students will be gathered together debating and determining a focus for their learning, making decisions and designing a project that will result in an artefact that has meaning to them and others, then collaborating on the work: sharing ideas, testing each others’ hypotheses, acting on agreements, editing and building on each other’s learning. These ideas and approaches to student learning have a long history in education; in this context it is particularly important to recognise that they are applied and developed through collaborative group work, emphasising the students’ role a ‘co-constructors’ of their learning.

This requires the support of a teacher/guide and facilitator. To arrive at this point the teacher must have taught the students the
requisite basic content knowledge so that misconceptions are avoided rather than amplified in the collaboration and, most critically, must have taught students *how to collaborate*. This involves teaching how to listen, establish shared norms, negotiate and ask questions, synthesise information, prioritise and, finally, how to make decisions. We can all relate to times we have had to do these things in our professional lives. If we can develop a next generation of skilful collaborators, we are sure to see positive economic and social results, but to teach collaboration to the point of mastery will take iterative opportunities for students to practice.

When a school, faculty or teacher creates an open space for student co-construction of learning, supporting scaffolds must be provided for both teachers and students. Schools that are developing student agency in the curriculum must:

- actively teach students the skills of independent thinking, problem-solving, negotiation and persistence
- support teachers to investigate and design inquiry-based tasks, and
- invest in architectures, such as learning materials, assessment protocols and organisational checklists, that help to guide and structure effort around tasks and learning activities.

The practical tension for schools and teachers interested in building student agency in learning is to find an entry point that is purposeful and will result in sustainable curriculum and teacher workload. Too much detailed prescription will create overload, while too little explicit structure will see learner agency marginalised by other routine pressures. Many primary schools use the science curriculum to create tasks involving genuine inquiry within a sustainable and bounded curriculum.

An additional challenge for secondary schools arises from assessment regimes geared towards tertiary entry ranking, which create incentives to revert to simplistic scope and sequence activities, tracing the assessment requirements of year 12 back to year 7. Although meeting the requirements of senior secondary certificates is important work, it is not the only, or even the major, work on which educators should be focused. In Victoria, secondary schools have been given a lever from the year 12 curriculum itself, in the form of
the subject Extended Investigation, in which students ‘explore a chosen area of investigation in depth’ using independent research to pursue a rigorous research question of their own design. The brilliance of this subject is that it can be applied to any discipline. Similarly, it can be taught by a teacher of any discipline so long as they can attend to research methodology and ethics in their teaching of the subject.

Learner agency is also evident in Victoria in structured collaboration projects beyond the classroom, through learning engagements and relationships fostered by schools, and supported by professional teachers, but directed by the students as they learn in their community. Examples of this kind of approach include the City School projects, which many Victorian secondary schools use as a mechanism to provide a week-long immersive experience, typically for year 9 students, to explore and investigate questions about the city through collaborative, self-organising teams. Many schools use camps for similar team challenges and learning opportunities, and the Victorian Government funds the operation of the Alpine School for Student Leadership, engaging teams of students in term-long, wilderness-based experiences in which the students live away from home and lead the development and creation of their own community-based project.

Further, where schools connect with a broad network of co-curricular and voluntary learning opportunities including sport, arts, music and clubs, they may uncover opportunities for learning in the community (Bentley 1998). One local example that the authors have both experienced in Melbourne is the Young Changemakers Program operating between two schools and the Inner North Community Foundation. This project takes a group of 15–16-year-olds, allocates them $15 000 and asks them to meet with a range of community organisations and then determine how they will allocate the money to support community-building initiatives. Students learn how to collaborate with each other in a meaningful situation that has a real impact on the community. The potential spin-off learning is also great. In 2015 one student was asked to speak at the annual general meeting of a major banking group as a result of the project.

The potential for this type of learning environment to enhance the collaborative capacities of children is vast, but in our current
operational environments of schooling it is incredibly difficult to bring to scale across a system or jurisdiction in more than tokenistic ways. This is because the current timetables, staffing models, curriculum coverage requirements and workforce models of schooling all revolve around a standard, campus-based school week. Although the technology, skills, the curriculum flexibility and the interest among learners exist to scale up such opportunities much further, the operational barriers to doing so are real. This is a clear challenge.

The second challenge to scaling and growing collaboration within and between our schools is teacher professional identity. While identity reflects various factors peculiar to the individual and their setting, there are some widely recognised influences, including the degree to which teacher practice is conducted privately in the confines of the classroom and without external professional gaze, and the degree to which teacher and learner are seen as interdependent and dynamic units in the classroom. Again, the official and public ‘narrative’ about the nature of teaching has shifted visibly in recent years, to emphasise the importance of team-based work by teachers, and of highly engaged interaction with students, focused on ‘visible learning’ and meaningful feedback (Hattie 2009). Many schools, including primary schools in Victoria, have begun to shift to team-based teaching, working with student groups bigger than the standard class size, who are then grouped more flexibly for different learning tasks and purposes.

But this shift is exposing the reality that, for many practising teachers, the tendencies towards teaching practice determined by the individual teacher, and delivered in a pre-planned way without recourse to student engagement or feedback, are norms that have dominated professional practice for decades, and continue to exert a very strong hold. Making private practice public necessarily involves a challenge to self-identity and exposure to risk and scrutiny for which many teachers still feel unprepared.

How are communities and policy-makers to create the conditions in which teachers’ professional identity can be bound together with collaboration (on a professional and classroom level) to create learning environments that build collaboration and enable students to have such agency that they can leave school empowered for a world that requires collaborative skills?
Teachers operate in a profoundly public arena but in ways that can be profoundly private. Professional collaboration between teachers in relation to curriculum design within a school is commonplace. The fundamental economic driver of this collaboration is in the division of labour. This does, however, require trust in colleagues—that the curriculum a teacher designs is of a standard that their colleagues will accept. Professional learning teams, curriculum design teams and year-level teams are all common structures that facilitate collaboration between teachers within the school. In Victoria there are also some formally structured arrangements between teachers offering ‘small studies’ in the final or certification year of schooling around moderation of student assessment items whereby teachers pool and jointly mark work from groups of students among schools.

Beyond this, however, there is generally an absence of formally structured professional cooperation between teachers outside marginal professional subject associations (which have small active memberships but nonetheless produce excellent resources and advocacy for their subject areas) and limited subsidised professional learning.

Within a school, several other factors limit professional collaboration beyond curriculum design. Classrooms are generally built around locating twenty-five to thirty student bodies and one teacher in the space. In government schools, industrial arrangements around maximum class size translate into school budgets that set a cost ratio of teacher to student. Principals who might seek to create space to grow new or organic cooperative classroom spaces and arrangements must manage these operational constraints and risks as part of their effort to develop teaching and learning. Establishing a shared rationale for change and accepted parameters for collaboration and learning can be difficult in practice. Unions and professional associations are not always engaged as partners in this kind of effort, and standard methods of consultation and negotiation can also present a further barrier to deepening collaboration.

The third and final challenge is perhaps the most critical in shaping the environments in which learner agency and teacher professional identity can develop: how policy and politics create
Collaboration in pursuit of learning

incentives or disincentives to collaborate at all levels, from the classroom through to system and nation-wide partnerships.

Taking Victoria as an example, we can identify policy-level factors that act to provide disincentives to collaboration on a system level. Victoria is one of the more highly devolved systems internationally (Barber 2010, 265). Principals have high degrees of autonomy and wider spans of authority than in many other jurisdictions (Butler 2014, 21). Alongside devolution of authority to schools is an historical emphasis on the primacy of parental school choice as a driver of system improvement through competition. In this environment, competition for enrolments is a potentially significant barrier to collaboration between schools. Reforms since the 1990s mean that students moving between public (i.e. state) schools take with them a package of funding and can enrol in any school that chooses to take them. Students are guaranteed entry to their local school, but can then choose to ‘shop’ elsewhere with many schools, particularly in urban centres, offering special entry programs based in part, on results of testing. In reality, ‘choice’ is highly constrained for many parents, other than those with the means to move into local areas close to popular schools, or the skills and knowledge to secure selective entry for their children. These factors, combined with principal and school pride, which both tend to increase with enrolments to an individual school, generate an environment in which competition between schools for the ‘best’ students, results and public profile acts as a strong disincentive to collaboration.

In a context where standardised testing results and final-year results are public and used to quantify school quality, the size and make-up of the student cohort are often critical in crudely measured ‘success’. A 2014 study of system leadership in Victoria (Butler 2014) interviewed leaders from throughout Victoria who consistently identified these factors as the dominant hindrance to cooperation and collaboration in the system. Advancing the rhetoric of collaboration while ignoring the concrete impact of these systemic factors will marginalise the benefits and scaleable practices that collaboration offers. The Bracks Review of School Funding recently recognised these factors and clearly identified the importance of supporting and incentivising collaboration between schools as a means to lift
student achievement and the more efficient use of financial resources throughout the school system (Bracks 2015).

Competition will always play some role in schooling. But in all complex organisational systems, competition and collaboration always coexist. The key question here is whether they can operate in complementary ways towards an overall goal. If the balance between them is distorted and one dominates, or there are conflicting goals at play, then the capacity of the whole system to produce outcomes to which it is nominally committed is undermined. It is both necessary and legitimate to ask whether the existing competitive dynamics and the measures of success that drive them can be improved upon, and to experiment with arrangements that could lead to better educational outcomes.

**How to grow collaboration**

In contemporary education systems, there are several drivers acting to move the practices of schools towards greater collaboration. At the policy level, most jurisdictions now have some kind of school-to-school networking or collaboration structures and incentives, and offer principals and teachers some opportunities to participate in shared work. A growing number of specialised voluntary and community non-profit organisations are also active in the education sector, offering ‘service support’ for collaboration that could help schools to meet their organisational needs and support their attainment and improvement objectives. Digitally based service providers are entering the fray, often global in scope, offering digital services and infrastructure to networks of teachers, schools and systems. Teachers are also increasingly able to ‘self-organise’ using these various options, in addition to their own local initiatives—but how and whether they do so in relation to their core work and learning routines is an open question.

So there is a rich and growing seam of experience and evidence that can be used to learn how to grow collaboration. One powerful example is the partnership formed between Dandenong West public school and St Anthony’s, Noble Park, two neighbouring primary schools from different sectors on the south-eastern fringe of metropolitan Melbourne. These schools pursued a shared approach to developing community relationships and capabilities, framed by a
shared commitment to the educational achievement of their students, generating a wide range of activities and shared work. The schools have jointly employed specialist workers tasked with developing these activities and relationships further, extended family and community learning activities on their sites to foster language and social skills among parents and support school-readiness for children, collaborated with health, employment and library service providers throughout the wider local government area, and built extensive knowledge-sharing activities among teaching professionals.

A recent study examining this and other Australian examples found a several features of practice and organisation that may help (Bentley and Cazaly 2015), including:

- strong shared commitment to student learning as an organising principle, not just for classroom-based teaching but for all relationships and activities around the school and its community
- combining highly experienced, long-serving teachers effectively with younger, newer staff through effective team structures and induction processes
- a distinctive approach to leadership, whereby principals intentionally and explicitly pursue the development of collaborative goals and wider community partnerships, and develop the capability of staff, students and parents to further them
- investing significant time and energy in building both professional trust and wider community trust, developed through networks of ‘social capital’
- sustained focus on building the professional skills and effectiveness of staff, including by looking outwards to find specialist expertise and ideas from which they can learn.

In combining these characteristics, these schools are able to maintain ‘permeable boundaries’: with clear and consistent routines and coherent organisational structures that do not prevent them from also sharing time, funds, physical resources or knowledge. The schools also prioritise both the academic attainment of students and their social and emotional well-being, investing time and resources in welfare support teams, family–school partnerships, interpersonal skills and resilience alongside subject-based learning content.
Online tools for collaboration offer another key way to grow collaboration. Internationally, schools and systems are already working on a variety of platforms to share and pool information. Independent firms are establishing new business models to provide education services such as edmodo, edutopia and a plethora of others. Simple electronic solutions such as a single student identity number (in Victoria this is the Victorian Student Number (VSN)) should allow educators to track and support learners when they transition between schools. Solutions like this require investment and regulation. In Victoria, in the absence of a systemic approach to capitalising on this opportunity to collect, migrate and share information that travels with the student, the existence of the VSN has yet to exert an influence on schools’ and teachers’ knowledge about their students.

Critically, however, in order to create the conditions for broad, systematic collaboration, we need clear and unified ‘system objectives’ that are legitimate and applicable in schools and that can be shared by all communities. This is not to say that all communities need to follow a single program. On the contrary, schools and communities will need to adapt and evolve system objectives flexibly to suit local needs. A government might, for example, build consensus around an objective to deepen primary school children’s exposure to science, and within that objective enable schools, with appropriate support, to seize opportunities and make partnerships in their local communities. When system objectives are clear enough, schools and communities have foci to work on together.

External drivers of change will have limited sustainability without the buy-in of school communities. However, it is also the role of government to create the environments in which meaningful change can be achieved. To support collaboration within school systems, governments and policy-makers should consider establishing and boosting the role of ‘purposeful cooperative structures … between schools and leaders [as they] undertake or achieve system functions or purposes’ (Butler 2014, 299). This might necessitate ‘policy by network’ approaches that facilitate greater penetration of ideas from the front line into the bureaucratic system, in an environment that consciously empowers local communities to adapt policy to local circumstances.
Collaboration needs to impinge on core routines

Ultimately, we also need to address how a whole system takes advantage of the power of collaboration. At the level of systems, education is a ‘non-rival’ good. Its consumption does not prevent another person also consuming it. While credentials gained from education are ‘rival’, education and learning themselves are not. This helps to explain why we want collaboration between schools and between systems, because we want all our schools to be at the peak of their performance and learning from each other. Yochai Benkler (2006, 46) describes how businesses use learning networks to ensure that they are ‘at the state of the art’ and in a position to capitalise on ‘first mover advantage’. Benkler’s cogent discussion of open and limited-access commons provides insight into why collaboration between schools can help to improve the economic output of education.

In systems we want to see schools working together to pool resources (physical, capital, human and ideas), and share actions with demonstrable impacts on student learning, engagement and well-being. This implies an agenda for system reform that intentionally seeks to scale and connect different efforts and build shared institutional capabilities. This agenda should be built around five, mutually reinforcing priorities that can work simultaneously at the levels of practice and policy.

Priority 1: Identify learning need and grow collaboration as an economically efficient solution to those needs

Through their annual planning cycles, education departments and regions should identify the learning goals that are high priority, and make them highly visible and public to encourage collaboration and exchange of lessons and solutions. System, local and regional leaders should continuously articulate, model and communicate these learning goals, supported by system architecture and data policies (see Priority 4).

Priority 2: Build platforms for professional collaboration

Professional learning should dramatically increase the opportunities for collaboration, empowering teachers to work together across different locations, and professionals from different fields to work together to solve common problems across education, health,
business, families and community development (Meiers and Ingvarson 2005). This includes crafting appropriate use of school-to-school and area-based networks supporting student transitions, clearly identified objectives for student learning impact, and shared service goals.

**Priority 3: Grow community voice**
Attitudes, relationships and decisions in the wider community also have a powerful influence on what students receive from their educational experience and which resources schools have access to. Building stronger relationships with the communities that surround schools leads to higher student achievement. Trialling and spreading the use of community engagement, dialogue and enquiry models to increase the commitment and participation of their surrounding communities is essential. Funding dedicated cross-school community workers, whose roles intentionally span the boundaries of individual schools and encourage a shared approach to community development, is a potentially effective approach. Strengthening student voice in community dialogue and decision-making, as outlined above, is also essential.

**Priority 4: Sharing pools of data**
Collaboration relies on shared, trusted information. Systematic support for collaboration requires a revolution in sharing and using educational data. Teachers within schools and a wide range of partners working together around schools need data to support collaborative action, building robust and widely shared data tools and repositories, is an important priority (Nesta 2015).

**Priority 5: Restructure governance around shared responsibilities for student learning**
Finally, education systems need to reshape their own accountability structures and relationships to focus more strongly on learning outcomes and to build shared capability for learning at a systemic level. This means moving further away from the vertical, functional structures that have dominated historically, and moving towards a new combination of network and place-based structures and
processes that hold schools to account to each other and their communities. Such structures will include transparent public performance frameworks reporting on student progress and services in specific geographical areas, challenge-based funding to focus and incentivise collaborative innovation and opportunities for new forms of system leadership, such as local federations of schools, to flourish.

The renowned philosopher Hilary Putnam, who died in 2016, created a thought experiment that helps to illuminate why we need to construct this collaborative agenda for education. Putnam discussed how he could not personally distinguish between an elm and a beech tree, but that when he used the term ‘elm’ people understood it to be different from a beech, because somewhere in the community of knowledge there are people who can speak knowledgeably about the difference (Putnam 1973, 704). We, humans, rely on collaborations such as this to frame our efforts at learning and knowing. We now need institutional structures and systems to help us intentionally, coherently and with humility, enhance collaboration in the field of education so that our children and our society prosper.

Biography
Tom Bentley is a writer and policy adviser based in Melbourne. He is Principal Adviser to the Vice Chancellor at RMIT University and Honorary Senior Fellow at the University of Melbourne’s MGSE. From 2007–13 he was Deputy Chief of Staff and senior policy adviser to Julia Gillard, Prime Minister of Australia 2010–13 and Education Minister 2007–2010. From 1999-2006 he was Director of Demos, an independent think tank based in London. His publications include Learning beyond the classroom: education for a changing world (Routledge, 1998), The Creative Age: knowledge and skills for a new economy (Demos, 1999) and ‘Innovation and diffusion as a method of change’, in the Second International Handbook of Educational Change (Springer, 2010), The shared work of learning: using collaboration to lift educational achievement (with Ciannon Cazaly, Mitchell Institute, 2015) and ‘Time for a new consensus: fostering Australia’s comparative advantages’ (with Jonathan West, Griffith Review 2016).
Sean Butler is Acting Director of the Implementation Branch in the Victorian Department of Education and Training, and is substantively a member of the Principal team at Northcote High School in Melbourne. His PhD examining system leadership in the Victorian education system was published in 2014 and addresses the means and mechanisms by which public policy is translated into practice and vice versa. As well as being an educator and school leader, his current research interest lies in the economics and politics of collaboration, with a focus on structures, systems and cultures that assist communities to enhance student outcomes.
Chapter 19

Aligning student ability with learning opportunity

How can measures of senior school achievement support better selection for higher education?

Emmaline Bexley

Measures of achievement in the senior years of secondary schooling are still closely tied to the selection needs of the old, elite-era models of schooling and higher education; that is, to identifying very high achievers for allocation to scarce university places. This function no longer meets the needs of students, teachers, education institutions or our society. In the contemporary setting, it is widely accepted that a significant proportion of young people should take part in tertiary education and that those people should come from a diverse set of backgrounds. This is very different from the era in which less than ten per cent of young people took part in higher education, and those few themselves came from a narrow set of extremely privileged schools. Similarly, while the Australian Tertiary Admission Rank (ATAR) seeks to measure ‘merit’ based on school achievement, it has little correlation to success at university. We need a system that offers clear pathways between school and further study, which can be readily understood by teachers, students and their families, and which can be tracked and researched by school and tertiary education researchers and policy-makers.
This chapter focuses on new possibilities for more useful alignments between students' interests and skills, and tertiary institutions’ distinctive missions and strengths, and asks how senior school outcomes might be better used to direct students to courses suitable to their interests and abilities in the contemporary ‘uncapped’ higher education landscape. It also identifies major implications for policy and practice over the next decade.

**Background**

The central principle of the primary selection mechanism for school-leavers—the ATAR—makes clear its purpose of sorting students by ‘merit’. The ATAR is a rank that establishes a ‘queue’ of aspiring higher education students, ordered by scholarly achievement. Yet higher education is no longer an elite activity for elite minority. Close to 40 per cent of the relevant age cohort go on to tertiary education, and university places have been uncapped since 2012 (the government no longer specifies and limits the number of university places that will be supported). In short, the primary measure of senior school achievement is out of step with the needs of much of the school-graduating cohort, as well as the needs of tertiary education institutions.

The ATAR has a number of well-known weaknesses as a selection mechanism. For example, it is biased toward high SES students, it is a poor predictor of university success and retention below the top quintile of ranks, it can promote unthinking course choices for high achievers (see for example Teese 2014, 2007; Dobson and Skuja 2005). Despite these challenges, it has generally been seen as somewhat of ‘the best of a bad lot’ of possible selection measures (James, Bexley and Shearer 2009).

Yet there is a fundamental unresolved issue with the general nexus between senior school completion and tertiary education, of which problems with the ATAR are but a symptom: at present, there is a ‘singularity point’ between school and tertiary study in teaching, assessment and research. I use the term ‘singularity point’ to reference what physics tells us about black holes. Classical mechanics tells us that information about the component states of a physical system at one time can be used to deduce the state of the system at a future time. But information and energy entering a black hole is
corrupted and lost, including, at the quantum level, states of probability.

A comparable lack of cohesion exists in the relationship between scholarship and research on student achievement at the school level, and scholarship and research on achievement in tertiary education. The ATAR is a perfect indicator of this. Although ATAR seeks to measure ‘merit’ on the basis of school achievement, it has little correlation to success at university. Schools worry about getting students through to year 12; universities worry about addressing the needs of sometimes under-prepared first-year students; and the ATAR sits in the middle serving little purpose to either side. It is as if there is an unbreachable wall between research, policy and practice related to schooling on the one hand and to tertiary education success on the other. What is needed is a system that offers coherent pathways between school and further study, and can be tracked and researched by both school and tertiary education researchers and policy-makers.

Where have we come from?
To understand how our education sectors have become so fractured, we might consider that just three decades ago (see figure 19.1), only around 40 per cent of young people completed high school (41 per cent in 1983; 46 per cent in 1985, for example). Today, close to the same proportion complete a university degree.

In the mid-1980s, a series of inquiries and reviews addressed high levels of youth unemployment and low levels of secondary school completion, culminating in Prime Minister Hawke’s ‘Clever Country’ speech in 1990 (e.g. the ‘Quality of Education Review’ in 1985; Minister Dawkins’ ‘Strengthening Australia’s Schools’ statement in 1988; and the agreement by the Commonwealth, state and territory governments on the Common and Agreed National Goals for Schooling—the ‘Hobart Declaration’—in 1989, all cited in Walsh 1999).

Ostensibly, these policies were designed to shift the economy from a reliance on primary industries to the knowledge-intensive industries of the tertiary sector of the economy, yet the impact of joblessness among youth of the time was likely a bigger driver (see also Ryan and Watson 2004), compounded by the recession of 1990
(James, Karmel and Bexley 2013), which is also visible in figure 19.1 in the sharp peak in participation that occurs at that time. Whatever the causal mix, policy and social reality aligned to facilitate a massive jump in high school completion: from 46 per cent of students in 1985 to 77 per cent in 1992 (ABS 2001).

![Figure 19.1: Apparent retention rates for Australian high school students, years 10 to 12, by school type, 1986–2014](image)

Source data: ABS, ‘Schools, Australia, 2013.’ Cat. 4221.0 2014.

Policy documents from the late 1980s—when completion of high school had only recently become the norm, rather than an activity for elite high-achievers—illustrates the beginning of the disconnect between school and tertiary education (particularly university education). Completion of year 12 was seen as a desirable credential in itself, but one that, to be achieved, seemed to require a broadening of the curriculum beyond preparation for university entrance.

For example, a research briefing prepared for the Australian parliament in 1990 documented the changes to state curricula that had taken place during the late 1980s, as schools sought to provide
learning experiences suitable to the new cohort of students who wished to complete high school but had neither the ‘ability nor the desire’ to go on to university study:

Until the 1970s, students completing Year 12 were a very homogeneous group. Overwhelmingly middle class and Anglo-Saxon, the majority hoped to go on to tertiary study. To this end they tended to select academic, core subjects and to aim for high grades in the HSC (or its equivalent) on which university and college selection was based.

Increasing retention rates have changed all this. Students now completing Year 12 come from very varied backgrounds and have a wide range of abilities and career aspirations. Fewer than half of them proceed from school to tertiary studies. Many are unable or unwilling to attempt the rigorous academic study traditionally associated with preparation for the HSC. Others see it as irrelevant to their chosen careers. Given that the HSC was developed primarily as a selection tool for higher educational institutions, especially universities, its relevance and usefulness are being increasingly questioned …

Changes to the curriculum in Years 11 and 12 are both a cause and an effect of increasing retention rates. On the one hand the changes represent a deliberate attempt to make the curriculum more interesting and more relevant and thus to persuade even more 16–18-year-olds to remain at school. On the other hand, the changes can be seen as a response to the needs of a larger and more diverse post-compulsory school population, many of whom have neither the ability nor the desire to undertake tertiary studies. Much of the debate therefore centres around the need to develop a curriculum which meets the needs of this group while maintaining intellectual content and standards in subjects required for tertiary entrance … (Lindsay 1990, 14, 6)

Here, we see a transition taking place from senior schooling being seen as a pathway to university to being seen as a credential in
itself—replacing the old ‘Leaving Certificates’ and similar of year 10 (formerly Fourth Form). Yet high school completion still remained the primary pathway to university, thereby creating dual roles and accompanying confusion about the purpose of the senior secondary curriculum.

Such ambiguity about the structure and purpose of senior school curricula has flowed over into university curricula and the purpose of higher education itself. For example, when very few complete high school, and these few are most likely drawn from the highest socioeconomic categories, university participation will be elite by definition. With many more students—and many more disadvantaged students—completing high school, the preconditions were in place for a greatly expanded and more diverse university student cohort. For example, figure 19.2 shows the remarkable increase in participation in higher education, especially by young people, over the three decades to 2010.

![Figure 19.2: Higher education students by broad age group, 1980–2010](image)

'Data source: education selected statistics, various years

While participation rates of students from low socioeconomic backgrounds in higher education have been remarkably static during
this period of rapid expansion, it is true that ‘a rising tide lifts all
ships’. Low SES participation has hovered between 15 and 18 per cent
since the early 1990s, against a population-defined average of 25 per
cent. However, vastly greater numbers of low SES students now
participate. It is plausible that the small number of participants in
higher education who came from disadvantaged backgrounds during
the period where participation overall was much lower were generally
very high achievers, whereas in the present era of very high overall
participation, students from disadvantaged backgrounds might be
more representative of the levels of educational disadvantage experi-
enced by this group. However, quantitative evidence supporting such
a contention is difficult to acquire. In any case, it is apparent that
today’s university students have a much broader range of levels of
educational preparedness than was the case in the elite era.

Contemporary higher education equity research has in recent
years been strongly focused on the need for universities to provide
curricula, teaching and learning practices suitable to a more diverse
student cohort than had been the case in the past. Echoing argu-
ments about senior school curricula twenty-five years ago, the 2008
Bradley Review of higher education asserted: ‘In this diverse and
complex environment, providing all students with a stimulating and
rewarding higher education experience is a significant challenge’
(Bradley et al. 2008, 69). Similarly, increased participation from non-
traditional, non-elite groups can require more support in the form of
academic support units, counselling and financial aid services. ‘As a
result’, the Bradley report concludes, ‘the cost of educating a student
from a low socio-economic background with little family experience
of higher education is higher than for a higher socio-economic status
student’ (Bradley et al. 2008, 42).

In short, rapid growth in participation in senior secondary
schooling during the late 1980s laid the foundations for the greater
participation in higher education that has occurred since that time,
and increased participation in higher education has resulted in
greater proportions of underprepared students entering university.

Looking back at this revolution in senior school teaching and
learning from a present in which a bachelor-level degree has become
an entry-level qualification for professional work roles, it seems
ironic that the very changes to the curriculum and to senior school
assessment that were seen as necessary to accommodate increased senior-school participation have had the unintended effect of making selection for the tertiary study such participation enables more difficult.

The claim in the 1990 research briefing that ‘changes [in senior school curricula] can be seen as a response to the needs of a larger and more diverse post-compulsory school population’ was aimed at retaining young people seen as having ‘neither the ability nor the desire to undertake tertiary studies’ (Lindsay 1990, 6). Many of these students now have the desire to undertake tertiary study but have not been adequately prepared to do so.

A study by Tranter (2012) demonstrates quite starkly how the diversification of senior school curricula has entrenched class disadvantage and streamed students from disadvantaged backgrounds into pathways that do not prepare them for university. Tranter shows how schools with high levels of participation in Vocational Education and Training (VET) in schools, which integrates VET units into years 11 and 12, tend to be located in disadvantaged areas. In turn, VET units do not lead to higher education pathways (Tranter 2012, 912). Tranter also found a more subtle, systemic streaming taking place in the three disadvantaged schools her study focused on. In South Australia, where her study was undertaken, schools offer subjects under three assessment rubrics: publicly examined (PES), publicly assessed and moderated (PAS) and wholly school assessed (SAS) (Tranter 2012, 904). Subjects are then accorded a higher education selection status: Higher Education Selection Subject (HESS) general, incorporating both PES and PAS subjects, and HESS restricted, incorporating the SAS subjects and some approved vocational studies subjects. To qualify for university entry, students must take a study combination in which at least four of their five subjects are drawn from the HESS general group (Tranter 2012, 904). In her case study schools, Tranter found that schools offering the high-status HESS combinations were ill-equipped to support the learning of students with little educational capital (教育ally experienced and functionally supportive family and social structures, for example) in these courses, resulting in high attritions. Conversely, those schools offering the more vocational, HESS restricted combinations left students effectively unable to enter university.
The post-school destinations of young people support Tranter’s findings. In a study of the participation choices made by students from different backgrounds, Gale and Parker (2014) found that only 26 per cent of students from a non-selective government school in a relatively disadvantaged area (Hoppers Crossing Secondary College) went on to university after finishing their secondary education. This compared to 92 per cent of students from each of a high-fee non-government school (Presbyterian Ladies College) or selective government school (Melbourne High School). 42 per cent of the non-selective government school students went on to TAFE/VET compared to 4 per cent and one per cent respectively from the private and government selective schools. 20 per cent of the disadvantaged school students went on to employment, but only 1 per cent from each of the two affluent schools (Gale and Parker 2014, 8).

Similarly, low SES students are over-represented in VET. In 2013, 23.2 per cent of VET students were drawn from the most disadvantaged quintile of society and 22.5 per cent from the second most disadvantaged quintile. Together, this represents 55.7 per cent of VET students at disadvantage compared to a 40 per cent defined population rate. Many of these students are in subdegree courses (certificate levels). Wheelahan (2010) shows that only a very few low SES students, perhaps under 10 per cent, are enrolled in diploma-level courses—the courses that constitute the main pathway into higher education for disadvantaged students.

This history, and the case studies and statistics I have cited, illustrate how the senior school curriculum over the past quarter century has evolved, in part, as a holding place for young people to year 12, but without necessarily developing the skills to undertake university-level study. The ongoing role of the ATAR system helps to hold this ‘choke-point’ in place, by sorting senior secondary students into higher education places according to criteria that strongly reinforce the socioeconomic inequality of the secondary schooling system.

This is at odds with the Australian Qualifications Framework, which regulates national qualifications. For example, since 2011 the AQF has been structured around hierarchies of qualifications from Certificate I to the doctorate, such that each qualification level (bar the doctorate) must provide the knowledge and skills students need
to progress to the next level of qualification in the field. Wheelahan and colleagues (2012) contend that this requirement will have implications for ‘competency-based’ qualifications like VET. To comply with the AQF, these qualifications must now demonstrate educational as well as vocational outcomes, enabling students’ continued educational pathways. However, the senior school curriculum seems not to meet the post-2011 requirements. Arguably, a year 11/12 study sequence that is not structured in a way that would be compatible with the generation of an ATAR could be said to be tracking a VET rather than higher education pathway, but this would be against the intent of the AQF.

The senior school curriculum needs to be reconsidered and reformed to ensure that all students completing year 12 are equipped with the knowledge and skills to move into higher education if they wish to do so, and that the credential they receive is seen as a valid passport to doing so.

The challenge here is very great. It requires lifting academic standards in outdated study areas. As I argue below, it also requires us to build assessment systems and credentials that reflect student achievement and the range of pathways now available. The momentum for undertaking such change is already present, however, because educational progression is now mandated by the AQF.

**Year 12 credentials also rely on elite-era thinking**

So far in this chapter, I have examined the ways in which the school curriculum has evolved from a set of needs and structures that were not geared towards the current levels of higher education participation. One major effect of the decisions of the past is the creation of systemic barriers to higher education for disadvantaged students, who still find it much harder to gain access to the curriculum options, teaching and school-based pathways needed to prepare them effectively for university. This problem is reinforced by the manifest flaws in the certification of senior school completion, which also fails to meet the requirements of the contemporary educational landscape.

On completion of year 12, Australian students receive a senior secondary certificate from the relevant statutory body in their state. All states other than Queensland also use the Australian Tertiary Admissions Rank (ATAR), while Queensland uses an Overall Position
<table>
<thead>
<tr>
<th>State</th>
<th>Qualification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>Victorian Certificate of Education (VCE)</td>
<td>Satisfactory completion of an approved study pattern. A statement of results shows satisfactory or non-satisfactory completion of each unit and a letter grade for three assessments in each unit at year 12 level. A study score for each unit out of 50</td>
</tr>
<tr>
<td>New South Wales</td>
<td>Higher School Certificate (HSC)</td>
<td>Satisfactory completion of an approved study pattern. Achievement for each course is indicated as falling within one of six performance bands, where the highest achievement is Band 6 (90–100 marks) and where the minimum standard expected is 50 marks</td>
</tr>
<tr>
<td>South Australia</td>
<td>South Australian Certificate of Education (SACE)</td>
<td>Satisfactory completion of approved studies over set credit points with an average of C/C- or better. Subjects graded A+ to E/E-</td>
</tr>
<tr>
<td>Tasmania</td>
<td>Tasmanian Certificate of Education (TCE)</td>
<td>Students must meet standards in everyday adult reading, writing and communication; everyday adult mathematics; everyday adult use of computers and the Internet; participation and achievement in education and training; pathway planning</td>
</tr>
<tr>
<td>Western Australia</td>
<td>Western Australian Certificate of Education (WACE)</td>
<td>After completing approved studies, students receive a testamur as well as a portfolio that contains a record of achievement, including study grades and community service. Student may also sit an ATAR course examination, and if they do so receive a record of marks and scores, including statewide distributions</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>ACT Senior School Certificate</td>
<td>The certificate details study achievements. To achieve an ATAR, students’ studies must comply with detailed patterns of subject types, which exclude over-use of ‘V course’ that are competency based; students also sit a ‘scaling test’ that allows ranking of achievement in academically oriented subjects</td>
</tr>
<tr>
<td>Queensland</td>
<td>Queensland Certificate of Education</td>
<td>Satisfactory completion of an approved study string is required. Also, a Senior Statement, showing results; a Tertiary Entrance Statement, showing Overall Position ranked against other students in broad achievement and by field (Queensland does not use the ATAR)</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>Northern Territory Certificate of Education and Training (NTCET)</td>
<td>Satisfactory completion of an approved study pattern comprising units in which students achieve a grade of at least C (A to E)</td>
</tr>
</tbody>
</table>

Sources: state tertiary admissions centres
system (which is convertible with the ATAR). States also have vocational education and training (VET) programs, which generally do not contribute to the ATAR (as discussed above in the Tranter study).

As table 19.1 shows, the states offer little in terms of a graded credential, so that the ATAR is the most readily understandable element common across states. Portfolios, achievement statements and pass-only testamurs do not give a snapshot of levels of genuine scholarly achievement, and are in many ways merely ornamental. What of those students who do complete year 12, and manage a study string leading to an ATAR? How does the ATAR serve them as a snapshot of their achievement?

First, the ATAR is no level playing field. The strong correlation between the ATAR and socioeconomic status has been well documented. Teese (2007), in particular, has shown how students from low SES backgrounds are distributed towards the lower ATAR bands, while university participation, and, importantly, the opportunity to participate in preferred courses, attaches to the high bands. Yet despite the significance attached to the ATAR by students and their families, and particularly by elite schools, it is poorly understood at a general level.

Any number of articles appear in the media each year when tertiary offers are made, lamenting the ‘low ATARs’ that can gain a young person entry to higher education. For example, a recent and rather hyperbolically titled *Financial Review* article, ‘Low ATAR students flood universities’, laments:

Since 2012, when the demand-driven system began which removed the caps from the university enrolments, the proportion of university offers to school-leavers which went to students with ATARs of 50 or less has nearly doubled from 3.0 per cent to 5.8 per cent. In 2011 the proportion was only 2.1 per cent.

The proportion of offers to school-leavers in the 50–60 ATAR band has also risen, from 8.0 per cent in 2011 to 10.1 per cent in 2015.

At the same time the proportion of students offered places who have high ATARs is falling. In 2011, 52.7 per cent of school leaving students offered places have ATARs
of 80 or more. In 2015 the proportion was 49.4 per cent. (Dodd 2015)

The article captures perfectly a common misunderstanding of the system. ATAR is not a grade but a rank. It is computed for tertiary selection purposes from the subject scores awarded to students during their senior school studies (and derived from Overall Position for students from Queensland applying to institutions interstate). It was never designed to ‘stand alone’ as a signifier of objective achievement. Only allocated to students who successfully complete high school, any ATAR indicates a ‘pass’.

Even taking into consideration the very small proportions of supposedly ‘low ATAR’ students actually entering university, this Financial Review article suggests that an ATAR of 50 to 60 is a near fail. As a rank, however, it demonstrates that the student receiving such an ATAR is at around the median level of achievement for their year. Reinforcing elitist thinking, it further suggests that the average high school graduate should not enter university—a supposition widely at odds with the demand-driven, uncapped system of higher education instituted in Australia after the Bradley Review, in which any applicant deemed eligible by a university receives Commonwealth funding to study.

On the one hand, ATAR has ‘face validity’ as a measure of merit (James, Bexley and Shearer 2009). While the mathematics used to calculate the ATAR are a source of confusion for students and parents, the basic concept is easy to grasp: the higher the ATAR, the higher a student’s achievement relative to others, and therefore the more deserving they are of their choice of university and course. However, this apparent face validity is also a weakness. It suggests that those with a ‘low ATAR’ are less deserving and, at some point (a rank of 50 to 60, implies the Financial Review article), undeserving.

When the ATAR was introduced (or rather its predecessors, like the TER, or Tertiary Entrance Rank, in Victoria in the early 1990s), it represented a rational system of ‘queuing’ for limited university places in an environment where there was unmet demand. Rank-based selection provided a comparatively objective way of allocating a prized resource. Yet even in a capped environment, the underlying subjectivity and limits to the precision of ATAR were largely
overlooked (James, Bexley and Shearer 2009). Derived from an aggregate of many assessment judgements made by teachers and examiners, it has always been a mistake to assume that the ATAR could represent definitive grounds for selection decisions, especially for high-demand courses where students’ ATARs are clustered within a narrow range. For example, the *Good Universities Guide* publishes the ‘cut-offs’ for the ‘toughest 10’ institutions in Arts, Business and Science, aptly demonstrating such clustering. At the top of the 2015 selection, entry is extremely competitive (see table 19.2).

**Table 19.2: ATAR cut-offs for ‘toughest 10’ courses, 2015**

<table>
<thead>
<tr>
<th>University</th>
<th>Course</th>
<th>ATAR cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of New South Wales</td>
<td>Business</td>
<td>96</td>
</tr>
<tr>
<td>University of Sydney</td>
<td>Business</td>
<td>95</td>
</tr>
<tr>
<td>University of Melbourne</td>
<td>Business</td>
<td>93</td>
</tr>
<tr>
<td>University of Technology, Sydney</td>
<td>Business</td>
<td>90</td>
</tr>
<tr>
<td>University of Queensland</td>
<td>Business</td>
<td>89</td>
</tr>
<tr>
<td>University of Melbourne</td>
<td>Arts</td>
<td>85</td>
</tr>
<tr>
<td>University of Melbourne</td>
<td>Science</td>
<td>85</td>
</tr>
<tr>
<td>Queensland University of Technology</td>
<td>Business</td>
<td>84</td>
</tr>
<tr>
<td>University of New South Wales</td>
<td>Science</td>
<td>84</td>
</tr>
<tr>
<td>Monash University</td>
<td>Science</td>
<td>84</td>
</tr>
<tr>
<td>University of Sydney</td>
<td>Science</td>
<td>83</td>
</tr>
<tr>
<td>University of New South Wales</td>
<td>Arts</td>
<td>82</td>
</tr>
<tr>
<td>University of Sydney</td>
<td>Arts</td>
<td>82</td>
</tr>
<tr>
<td>Australian National University</td>
<td>Business</td>
<td>82</td>
</tr>
<tr>
<td>Monash University</td>
<td>Arts</td>
<td>80</td>
</tr>
<tr>
<td>Australian National University</td>
<td>Arts</td>
<td>80</td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Arts</td>
<td>80</td>
</tr>
<tr>
<td>Monash University</td>
<td>Business</td>
<td>80</td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Business</td>
<td>80</td>
</tr>
<tr>
<td>Macquarie University</td>
<td>Business</td>
<td>80</td>
</tr>
<tr>
<td>Australian National University</td>
<td>Science</td>
<td>80</td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Science</td>
<td>80</td>
</tr>
</tbody>
</table>

*Source: Good Universities Guide*
It would be difficult to argue that a student achieving an ATAR of 94.75 is simply unworthy of their choice of studying Business at the University of Sydney. The ATAR is not fine-grained enough for high-stakes selection decisions in highly competitive courses, as well as being unfairly biased against those from disadvantaged social backgrounds, and out of date in an uncapped, demand-driven higher education system. So ATAR is an obsolete and blunt instrument for determining entry to university courses—and a poor predictor of which students will actually succeed once they enter tertiary education.

There is a further issue of quality and standards underlying concerns about low ATARs: the faith we have in the quality of qualifications offered by our schools. If people are concerned that an ATAR below, say, 50 means that someone does not have the intellectual capacity for further study, then there are serious questions to ask about the perceived rigor of the year 12 curriculum.

Ways forward
The uncapping of university places in 2012 has opened the door to a new conversation about how modes of assessment in senior schooling might provide a more coherent nexus between secondary and tertiary education. For example, the greater use of portfolios (common in many places, such as the United States), early admission and generic skills testing all present new options for more rigorous and useful forms of assessment (James, Bexley and Shearer 2009, Bexley and James 2010). More recent work has highlighted the need for better matching of students and courses in higher education (Bexley et al. 2013) and vocational education (Moodie et al. 2013).

In this chapter I have argued that the ‘unbreachable wall’ between senior secondary and tertiary education is held in place by two, mutually reinforcing problems, both artefacts of the elite era of education. First, senior school curricula are not fit for purpose—which is unsurprising, given they were not designed for the purposes they now serve. Current offerings are an artefact from a history of curricula designed to allow high-fliers to continue on to university while also educating a new cohort that would stay to year 12 but not proceed to higher education. This is no longer the case, and the
presence of study units and grading practices that cut students off from progression to higher levels of education is no longer tenable. Indeed, they cannot be accommodated within the AQF. Second, the qualifications awarded to those who complete high school are inconsistent between and within states, and do not provide a readily understandable picture of overall school achievement.

The ATAR, which has come to be a default ‘grade’ representing senior school achievement, is outdated and misunderstood. It belongs to a time when demand for tertiary education places exceeded supply, and remains a blunt instrument even in very competitive courses.

So, what might a better future look like?

First, better integration between the school and tertiary—especially university—sectors is needed. At present a singularity point exists between two very different educational worlds. The aspirations, abilities and achievements of students in school do not lead via clear pathways to future tertiary and higher education. Research, policy and practice at the school and university levels have no clear or even comprehensible nexus, making student choices ill-informed and ill-supported.

Second, universities must take a more nuanced approach to selection. To a great extent this is already happening, with many institutions offering alternative entry pathways, early entry schemes, portfolio-based selection and school-university partnerships. Yet this approach has been university-led and needs more input from state-based school authorities. This need not mean state or national control over these processes, but rather some degree of coordination to ensure that students do not end up replicating multiple applications between institutions in the set of preferred courses.

Fundamental to providing more transparent and rigorous bases for selection would be a redesign of the senior school curriculum to ensure that every student who completes a year 12 qualification is adequately prepared to go on to further formal study of some kind, should they wish to do so. Implementing such an approach would also be to comply with the existing requirements of the Australian Qualification Framework.

Finally, a less ad hoc selection system requires an assessment regime at year 12 that is fit for purpose. The contemporary school
and higher education sectors are no longer well served by a system of queuing. Although selection to highly competitive courses will always be based on a proxy for merit, this can still be accommodated within a ‘hurdle-based’ rather than ‘rank-based’ system, in which students receive credit for evidence-based completion of specific units of learning, rather than being scored only in relation to each other.

The ATAR is seen as a grade, despite constant attempts by tertiary admissions centres and educators to explain it. This might well be because students, parents and teachers would be better served by a grading system that allows institutions to set minimum entry criteria based on actual performance in subject areas rather than blunt ranks against all-comers.

**Biography**

Emmaline Bexley is a Senior Lecturer in Higher Education at the Centre for the Study of Higher Education, at the University of Melbourne. Her research interests include equity and participation in higher education, national and international higher education policy and funding practices, and the nature of academic work.
Since before Federation, the public funding of schools has been a political faultline, reflecting Australia’s diverse cultural, religious and institutional origins and marking crucial moments in our evolution as a nation.

The deep politics of school funding remain unresolved. Periodic bouts of intense debate and conflict regularly resurface. The political conflict signals a crucial ambiguity in Australian society over whether the public funding framework for schools should (and will) contribute to the divergence and stratification of educational opportunities and life chances throughout the Australian population, or alternatively towards their convergence around a common set of standards and definitions that include shared norms of fairness and equality. Most Australians would readily agree to the principle that public funding of education should support social mobility and equality of opportunity. But the reality of the funding arrangements has evolved in a way that exacerbates inequality and inflames competition between sectional interests.

The most recent effort to create a long-term national settlement, begun with the announcement of the Gonski Review of School
Funding in 2010, remains incomplete. Although a range of governments and stakeholders remain committed to the ‘Gonski model’, necessary conditions for its implementation were significantly unpicked by Commonwealth government decisions between 2013 and 2015. However, essential parts of the architecture for determining and implementing a national school funding model that can address the diverse and complex circumstances of Australian schooling, including the legislation of a Schooling Resource Standard and transparent reporting arrangements for every school, have survived. The politics of school funding, and growing concern about the entrenchment of inequality, will not go away. As a result, the need for a national settlement will remain the focus of policy debate for the foreseeable future.

This chapter examines recent advances in the design of school funding systems and puts them into the context of broader economic, social and demographic changes that are reshaping who gains access to which educational opportunities in contemporary Australia. It argues that further progress towards an equitable and cost-effective school funding system is both necessary and possible during the next decade, despite mounting inequity and policy stalemate.

The technical details of school funding are extremely complex, in part because of a unique mix of Australian characteristics including federalism, the public funding of non-government schools alongside state schools, a geography that includes dense networks of urban schooling, regional towns and widespread remote communities, Indigenous Australian identities and educational needs, religious pluralism and ethnic and cultural diversity.

When combined with the febrile everyday conditions of contemporary political and media debate, these factors can appear as a tangled thicket of barriers to meaningful reform, impeding the possibility of a policy settlement or consensus that would contribute to better long-term educational outcomes and be regarded by most Australians as fair.

Yet school funding plays a crucial, formative role in Australia’s identity, governance and future prospects. And the core questions and principles at the heart of school funding policy are compellingly simple, even if they are difficult to resolve. What are the minimum
standards of resourcing necessary for each student to gain access to an excellent education, across the diverse life circumstances of today’s children? What part of this resourcing should be guaranteed by the state? How much should funding vary in response to the socioeconomic circumstances and private contributions of families and communities? How much should private and religious choices be publicly subsidised? Who should control the allocation and distribution of educational funding? And what should be the respective contributions of national and state governments, parents and philanthropy?

**The school funding challenge**
The challenge of school funding is not just to identify the right *amounts* of money and distribute them fairly but also to link them to the uses and activities that do most to advance the learning of students. This creates another layer of complexity as we grapple with what the evidence shows about effective practices, the kinds of resources they require, and the challenge of ensuring that fund provided by the public purse are applied to those uses.

This must be done, not from a blank slate, but from a status quo of huge complexity, created cumulatively by overlapping and contradictory settings, interests and historical decisions that combine to impede equity and efficiency in the allocation of funding to students or schools.

The status quo can be summarised thus: state governments carry constitutional responsibility for the provision of schooling, but since the early 1970s the federal government has acquired an essential, if lopsided, role, whereby it provides some limited contribution to the recurrent funding of state schools via state governments, while also funding non-government schools in a way that now delivers around two-thirds of their overall public funding.

All state and territory governments also fund non-government schools (which include single, independent schools, Catholic systems, other religious institutions such as Lutheran schools and Islamic colleges, and secular systems such as Steiner or Waldorf schools. Each state and territory government sets its own per-student resourcing benchmark, and decides its own method for distributing resources according to variation in student need. Different states and
territories, for example New South Wales, Western Australia, Tasmania and South Australia, have per-student funding levels that reflect their particular geography, population distribution, industrial politics and history of public administration reform.

The funding contribution of the federal government to non-government schools adds further to this picture, by being allocated according to the number of students enrolled in different schools, according to a formula that partly reflects the socioeconomic status, and therefore the likely educational needs, of each student. This role for the Commonwealth Government was substantially acquired after the Whitlam government recognised the unmet needs of families who sent their children to Catholic schools, which were largely unfunded by the state through the first seven decades of the twentieth century, and caught up in the bitter ideological divisions of the post-war period. Forty years later, the role of the Commonwealth in funding non-government schools expanded again, the result of a policy crafted by Liberal Prime Minister John Howard and his Education Minister David Kemp, which set out specifically to amplify the drift in enrolments from public to non-government schools and to bolster the public funding status of the latter.

The twisted genius of the Howard–Kemp policy; the so-called ‘SES’ funding system, was that it grounded its justification in the choices of parents, and was ‘needs-based’ in the sense that it varied with SES status of the family but did not reflect the other resources or revenue of the school in determining its funding allocation. The policy applied available census information about students and their family circumstances, and applied the funding formula unilaterally, regardless of other sources of income for the receiving school. But although the policy was explained with reference to individual family choices and circumstances, it was constructed and geared explicitly with reference to the per-student levels of state school funding.

The SES formula made a complex statistical calculation of the ‘Average Government School Recurrent Cost’ (AGSRC), and used this as the benchmark for the annual increase in per-student funding. So as state and territory governments increased per student costs, which they did significantly during the 1990s and 2000s, per-student public funding for non-government school students increased relentlessly, creating compound growth in revenue for non-government schools.
as they simultaneously increased enrolments aggressively and lifted their own fees by well-above inflation every year, regardless of other economic circumstances. When introducing this system, the Howard government also promised that schools whose existing funding levels were above what the SES system would allocate them would continue to receive at least what they got before.

**The funding reform challenge**

This structural shift provoked, and still provokes, intense differences of view among stakeholders, policy-makers and commentators. For some advocates of schooling ‘free’ from state control, it does not go far enough in providing strings-free taxpayer support for non-government schools. For many Catholic education stakeholders, it fails to achieve their long-standing goal of achieving per-student funding ‘parity’ with public schools, and keeps in place a deeply flawed system in which the funding levels received by various Catholic schools remain permanently out of kilter with the levels that prescribed by the strict application of a consistent resourcing standard. For supporters of public education, it contributes to a situation in which many non-government schools enjoy levels of per-student resourcing that are far higher than their state school peers, when all sources of income are included, where disadvantaged students are being concentrated disproportionately into particular public schools, and where inequity overall is increasing. The SES system is now history, having been replaced in 2013 by the Gillard government’s Schooling Resource Standard (see below). Yet the funding distribution that it created still dominates the politics of school funding.

Whatever perspective one brings to this discussion, the evolution of school funding during the first decade of the twenty-first century confirmed a central fact about the nature of schooling in Australia. Despite the fact that Australian schooling is characterised by diversity, competition and fragmentation of governance, with separate schools and systems operating side by side, funded by both levels of government through separate channels, the combined impact of school funding and school behaviour is deeply interconnected and interdependent, even when they are governed separately. The recurrent funding levels of public schools affect the way the
recurrent funding levels of Catholic systemic schools are perceived. In turn, the enrolment practices of local Catholic schools influence the demographic mix of students enrolled in their neighbouring state schools. The marketing and competition for students of independent schools, whatever their quality, in turn influences the pressures and incentives experienced by local state schools.

In other words, changes in resourcing, enrolment and behaviour in individual schools or sectors will affect not just each school but also on each other.

For each of the major institutional stakeholders representing a different school sector—such as the Australian Education Union, the Independent Schools Council of Australia or the Catholic Education Commission, therefore, ‘disadvantaged’ actually means something different from the way the concept is mostly used in education policy discussion. It means to be relatively disadvantaged in relation to the status quo, or to one of the other school sectors with whom each set of stakeholders feel they must compete for enrolments, government funding and political priority.

In a post–global financial crisis world, the challenge for reform of school funding is to design and move towards a system that applies scarce public dollars to this diverse, complex and contested landscape in ways that direct them towards the greatest educational needs while also respecting the universal claims of every Australian student and the particular claims of specific institutional interests.

Over the last decade, acceptance has grown that this task must involve both equity and efficiency in public funding and that the evidence shows that a number of factors influence educational achievement for particular students, including socioeconomic status, parental education, geographical location, cultural geography (the effects of culture, aspiration and social networks), language status, indigeneity and disability.

**Concentrate, stratify, marginalise**

This task is made more urgent by the direction of broader change in Australian society. Since 2001, school funding policies in Australia have interacted with other economic, demographic and geographical patterns of change to deepen the concentration and stratification of students according to socioeconomic status, sorting them into
schools across all sectors that increasingly serve to separate students of different socioeconomic backgrounds from each other.

During the 2000s the SES funding model helped to drive enrolment shifts towards non-government schools and coincided with a period of rapid income growth and consumer choice for most Australians, and of rising inequality of wealth and income.

House prices and patterns of urban settlement also play a major role, with popular and well-regarded schools boosting house prices while overall changes in private housing costs are creating new population distributions, clustering higher-income families in the inner suburbs of major Australian cities. Enrolments in government secondary schools in high SES neighbourhoods have grown faster than average in recent years, creating ever-shrinking catchment areas for those schools, while the real cost of living in those areas continues to rise faster than the average family income. The prevalence of competitive academic selection to many schools of all sector in Australia adds further to this effect.

For example, 71 per cent of students at Melbourne High School (one of the most popular and highest achieving state schools in Victoria) come from the best-off quarter of the Australian population. Increasingly, differences in the wealth and background students at different schools also magnify inequalities in their resourcing. For example, compare the voluntary fundraising experiences of two neighbouring primary schools in Melbourne. At Clifton Hill Primary School, the My School website shows that 77 per cent of students come from families in the best-off quarter of the Australian population. This school raised more than $108 000 at its 2014 fete. Just 1.1 km south is St Joseph's Catholic Primary School, where 70 per cent of families are in the lowest quarter of socioeconomic advantage. They held a fete and made $14.36 profit (Bentley and Cazaly 2015).

A third of Australian students are in schools with socioeconomically disadvantaged students (i.e. schools where the average SES of the students is below the average SES of the nation). This is well above the OECD average (Nous Group 2011, 20). Nearly 60 per cent of the most disadvantaged students are concentrated in schools with disadvantaged socioeconomic status, substantially higher than in any comparable OECD country. Only a third of all Australian students are in schools with average or mixed SES.
These differences feed broader, self-reinforcing dynamics of educational and socioeconomic inequality, confirmed by analysis of the ‘concentration effects’ of students of similar socioeconomic backgrounds being grouped into the same schools. For example, a New South Wales Education Department analysis of these effects showed:

The performance of students with low SES scores will, on average, be lower if they also attend a school with a large number of other low SES students. Conversely, the performance of students with high SES scores will, on average, be higher if they attend a school with a large number of other high SES students. Irrespective of a student’s SES, their performance will, on average, improve if they attend higher SES schools. (NSW Department of Education and Communities 2011)

A major recent study found that, in a regression analysis of the factors contributing to explained variance in the achievement of 15-year-old Australians, socioeconomic status contributed 70 per cent of the explained variance in maths, 74 per cent of the variance in science and 57 per cent of the variance in reading. Indigenous status contributed almost 20 per cent of explained variance in all three domains (Lamb et al. 2015).

These continuing trends have a cumulative impact—they influence the opportunities of individual students and the relative resourcing of different schools, and over time they help to shape the society in which educational institutions function and in which political decisions are made. In that sense, school funding policies are directly connected to the wider debates over inequality that have broken out around the world since the global financial crisis of 2008.

**The Gonski Review: towards a Schooling Resource Standard**

This was the context for the Gonski Review, established in 2010 by Julia Gillard, federal Education Minister and Deputy Prime Minister. The review sought to construct a framework for national consensus, outside any one institutional or sectoral interest. Its panel was composted of eminent, expert members who were able to reflect the
perspectives of independent, Catholic and government schooling while also determining an independent, community-wide view of the issues. The review supported the principle that ‘new funding arrangements for schooling school aim to ensure that differences in educational outcomes are not the result of differences in wealth, income, power or possessions’ (Gonski et al. 2001). The question was how this could be achieved.

The central component of the review’s answer is a ‘Schooling Resource Standard’, creating a per student level of public funding by combining a ‘base’ amount with ‘loadings’ to reflect specific barriers to educational achievement: socioeconomic status, indigeneity, language, school size, location and disability. The SRS would be fully publicly funded for public schools, while the calculation of the SRS for non-government schools would reflect the capacity of that school’s parents to contribute to school resources. The application of such a model can be varied in countless ways, so whether it achieves equity and effectiveness can only be judged in specific context.

A resource standard is attractive precisely because it offers the prospect of applying a consistent standard to all students, which can be derived independently of past funding allocations and varied to reflect student and community circumstances. The shift towards such a model, adopted separately by states including Victoria and New South Wales, and endorsed by the Gonski Review as the centrepiece of a national policy framework for school funding, reflects a continuing shift in school funding policy towards a focus on efficiency, effectiveness and equity as policy objectives.

A resource standard as its central design principle also offers a way to overcome the difficult problems of simultaneous Commonwealth and state funding of three different school sectors. As I noted above, Australian school funding has evolved in ways that make all three sectors highly interdependent. There is no effective funding solution to be achieved by pulling separately only one of the major levers available to different levels of government, and hoping that it will have the desired effect. For example, if state governments were dramatically to increase funding to state schools, non-government school stakeholders would cry foul. If federal governments created dedicated equity funding for schools of all sectors, some state governments would reduce their commitment in those areas of
funding. If advocates from a specific sector point to a disproportionate level of need in their sectors, such as the high concentrations of disadvantaged students in public schools, then other sectors will mobilise to focus attention and political leverage on their own vulnerability. Catholic education systems receive a lower per-student amount of public funding, on average, than public schools, and operate overall with somewhat lower per-student amounts. Independent schools operate in intensive competition mode with other schools in their local communities and target markets—any increase in public funding focused on the Catholic sector alone would provoke fierce outcry.

The best example, however, of the difficulty of unilateral funding moves is the problem of Commonwealth and state contributions. Until 2013, if the federal government decided to increase its funding contributions to particular students or schools, there was nothing to stop state governments varying their own contributions in response. This posed a major dilemma for the negotiation and implementation of the ‘Gonski reforms’—if the Commonwealth was preparing for a significant new investment in schooling, what was to stop states and territories from simply withdrawing their effort in response?

This is also the chief drawback of funding models that use a ‘base plus loadings’ approach but apply them to only one sector at a time. State governments such as Victoria, which have adopted this model for their state school systems, are unable to address the overall distribution of public funding to different schools. Increases in state funding to state schools will eventually be reflected in allocations of federal funding to non-government schools. Resource standard allocations to state schools cannot reflect the resource levels enjoyed by non-government schools, which have multiple sources of income. Practices that achieve greater efficiency or effectiveness, for example by encouraging more teachers to adopt evidence-based teaching strategies, or incentivising schools to adopt more cost-effective organisational structures and employment practices, are not necessarily reflected in the calculation of an overall resource standard. A national funding model that applies resource standards separately to different school sectors and jurisdictions will end up fragmenting and widening funding disparities, a pattern that was resumed when
Christopher Pyne abandoned the conditions on school funding agreements in 2014, rather than promoting overall coherence and equity.

Nonetheless, a resource standard model provides a principle on which all can potentially agree because it grounds the definition of funding in student need, and varies according to educational circumstance rather than sector or institutional type.

It was therefore no surprise that the Gonski Review panel recommended a Resource Standard as the basis for a national funding systems, or that it attracted the cautious yet in-principle support of all the major sectoral stakeholders when the report was launched.

The challenge of implementation
The national reforms in the areas of assessment, curriculum and reporting put in place by Julia Gillard as federal Education Minister during 2008–09, including the My School website, which was introduced in 2010, and the Australian Curriculum, Assessment and Reporting Authority, whose governance is shared by all governments and non-government school authorities, have brought about consistent public reporting of school financial resources, alongside demographic and attainment information. This was unprecedented in Australian history, and in turn meant that the modelling, design and negotiation of school funding could be approached in a way that puts educational need alongside demographic background without the forces of institutional and identity politics intervening to separate them. However, in order to achieve real impact, the results of this modelling (which can be found in the Gonski Review report) must be applied with sufficient rigour and consistency.

Working within the terms of reference set by the government, the panel had recommended an amount of additional investment needed to implement the new standard consistently while ensuring that ‘no school loses a dollar’. This commitment, announced by Julia Gillard at the same time as the review, continues to attract controversy and should be debated widely. It reflected the effectiveness with which some Catholic and non-government school interests had destroyed Labor’s school funding election policy in 2004, and the
amount of time required to conduct a comprehensive review, legis-
late and implement negotiated agreements.

The ‘no school loses a dollar’ commitment has attracted wide-
spread criticism, because it reduced the flexibility of implementation, 
increased the cost of implementing a resource standard and under-
mined the ‘needs-based’ principle by making it more difficult to 
achieve. This criticism has grown with hindsight, as the failure to 
implement the full ‘Gonski model’ has become apparent. However, 
the critics have so far not explained how agreement could have been 
achieved without such a commitment.

Specific interests associated with non-government schools have 
relentlessly attacked the government for as long as the possibility of 
their schools ‘losing’ dollars was held open. It is worth remembering 
that it took more than three years—a term of federal parliament—to 
conduct the review, negotiate and legislate the Gonski funding archi-
tecture. In the absence of a transparent, independently determined 
standard, the ‘no school loses’ guarantee was politically necessary to 
prevent meltdown.

Achieving agreement on the Review Panel itself would also have 
been significantly more difficult if it had included recommendations 
that were seen to lead to material losses of funding for large numbers 
of schools or to specific school sectors. Without consensus, it is easy 
to forget that the specific funding architecture loses its power as the 
basis for a national settlement. One way to pursue consensus within 
the panel would have been to ask them explicitly to advise on an 
equitable basis for making the transition to a new system. But it is far 
from certain that they could have found a consensus, and even less 
likely that any schooling sector would have accepted real funding 
cuts. Addressing this question of redistribution is one of the most 
important issues in identifying a pathway for progress in school 
funding during the decade ahead.

The Gillard government’s answer to making implementation 
achievable was to create an extended transition—through six-year 
agreements—and attach conditions to increased federal investment, 
linking the money to existing state government contributions, equi-
table distribution of the funding, reforms to increase school quality 
and effectiveness, and transparency about the distribution of funding.
These conditions were both essential and achievable because of the immediate context of the negotiations. The Gonski Review occurred just as the effects of the global financial crisis spread across the world. One effect of this economic crisis was a dramatic reduction in spending by states on schools. The decades of continuous, above-inflation growth in annual spending juddered to a halt. As a result, the questions of relative contribution and distribution—which groups of schools received funding priority, and from which level of government—became even more important. None of the major stakeholders would sign up to a new settlement in which their interests appeared to be relatively disadvantaged. But all had an interest in securing a long-term settlement in which the allocation and distribution of funding to schools might be shielded from the short-term volatility of fiscally driven government decision-making and the spasmodic interventions of powerful institutional interests.

The Gonski Review report created the basis for a consensus—and its broad recommendations were accepted by all the main stakeholders. All it required was the negotiation of a set of agreements that would deliver the substance of the recommendations in an institutional framework that could be durable over time. The pragmatic answer to this challenge was to put forward agreements that progressed towards achieving the Schooling Resource Standard over time—six years—and which delivered the increased investment in greater instalments each year, alongside the funding required to achieve stable incremental growth for all schools. These agreements were enshrined in the 2013 Australian Education Act, and progressed far enough to achieve a critical mass of support, covering most states and all non-government schools throughout Australia, by the time the 2013 election was held.

The Coalition found it politically necessary to declare their support for these funding agreements—at least for the first four years of their implementation—but was in fact ready to abandon them at the first opportunity. Between 2013 and 2016 Coalition federal governments uncoupled funding from the conditions of transparency, needs-based allocation and school quality reform built into the 2013 legislation, and retreated from any long-term commitment to indexation or additional federal investment above the barest
minimum of inflation. Interestingly, after the change of prime minister in 2015, the Coalition government’s new federal Education Minister, Simon Birmingham, rapidly sought to impose a broad new range of conditions on Commonwealth funding to schools. However, he did so with drastically reduced leverage, compared to the 2010–13 reform period. After the 2013 election and the formation of a Coalition Commonwealth government with a single-seat majority in the House of Representatives, discussion of school funding between the Commonwealth and the states and territories resumed, amid the widespread assumption that the six-year funding agreements, negotiated by Julia Gillard, were finally dead.

Yet whatever becomes of the original 2013 agreements, the Gonski framework and the issues it is designed to address will remain a central part of Australia’s education policy and political discussion for the foreseeable future. This is because the issues of school funding—equity, efficiency and adequacy—are politically salient and powerful. Precisely because a robust settlement is not in place to provide the underpinning for national consensus and acquire public legitimacy over time, these issues will remain politically controversial.

Second, the architecture of a settlement is in fact in place, even if governments continue to chop and change over their funding commitments. The Australian Education Act establishes the Schooling Resource Standard and its component loadings as the basis on which the Commonwealth will determine its funding contribution to schools. The level of transparency about respective state and federal contributions to the funding individual schools provided by My School will not be reversed.

At the same time, several state and territory governments including New South Wales and Victoria, the two biggest states, remain committed to implementing SRS-based models in their own jurisdictions. The breakdown of a comprehensive national agreement simply returned the debate to a set of fiercely conflicting pressures characterised by pervasive uncertainty, competing claims for funding equity and security between different sectors, systems and socioeconomic groups, and growing political heat.
The recurring challenge of equity

While that volatile political stalemate continues, the increased transparency achieved during the Gillard era reveals the existing pattern of change throughout Australia. As we saw, this is a pattern of growing stratification, polarising extremes of advantage and disadvantage and clustering groups of students more and more according to their socioeconomic status, with direct consequences for their life chances and aspirations.

This remains the most important challenge of Australia’s complex school funding system—that the workings of an obscure, complex, opaque set of dynamics, controlled by multiple actors, should combine to deepen a simple, persistent pattern that is causing cumulative, long-term damage.

In that sense, the salient aspect of school funding is not the relative privileging of non-government or government schools, but the concentration of advantaged and disadvantage students of all sectors into schools where relative affluence determines future opportunity—the opposite of the principle supported by the Gonski Review. Unfortunately, the privileging of non-government school funding since the 1990s has deepened and accelerated this socioeconomic concentration, working in tandem with Australia’s recent housing boom and the workings of selective state secondary schools.

Chris Bonnor and Bernie Shepherd use data from My School to cast fresh light on these changes (Bonnor and Shepherd 2016). They show that enrolment growth is above average into government secondary schools in high SES areas and in non-government schools in low SES areas, while the concentration of disadvantaged students into low SES schools continues, and that the percentage of students from the lowest socioeconomic quartile enrolling in non-government schools dropped dramatically between 2009 and 2016. They also show that combined public funding for non-government schools has climbed faster for non-government schools since 2009 (when My School data begins) and that a significant number of non-government schools are now approaching a point where they receive the same, or more, public funding than government schools serving similar students.

By guaranteeing funding increases for all schools at a time when the continuation of incremental funding growth was
uncertain, the 2013 agreements have ensured funding stability for many schools that have also benefited handsomely from other sources of income.

These trends are the combined result of a contradictory set of economic and social forces ricocheting through political decision-making and policy processes; of non-government schools receiving consistent support since the mid-2000s, while state government spending on state schools has dipped and begun to recover; and, importantly, of the Abbott and Turnbull governments abandoning the later years of implementation of the six-year funding agreements struck in 2013. By reneging on the final two years of those agreements, the governments of Tony Abbott and Malcolm Turnbull have excised the equity from the national increases in school funding during this decade.

Global conflict

During the 1990s and 2000s, when the previous generation of school funding policies was crafted, a policy consensus dominated the industrialised world in which globalisation of trade and finance underpinned global growth in productivity and income, which could in turn be positively influenced by improvement and innovation in education and research. The growth of inequality was viewed as an inevitable, but manageable, byproduct of this liberalised and interconnected global system. Of course, these views were not without challenge, but they largely framed discussion of education policies within and between industrialised nations.

Since the global financial crisis of 2008, from which the world has still not recovered, that consensus has been punctured—and the supposed incremental relationship between increased educational investment (through increased annual spending), improved outcomes (through reforms to increase quality and accessibility) and the increased flow of better educated young people into a workforce where they would in turn contribute to increased productivity and innovation, has been visibly broken.

The result is a new and more dramatic conflict across societies characterised by the tension between the ‘zero-sum’ contest for high-status, opportunity-rich educational places (such as places at elite schools and universities) and strategies that seek to re-establish
positive-sum growth, by using education to increase economic productivity, social cohesion and innovative capability across a broader and more diverse population. This is a conflict not only between competing policy approaches but also between different philosophical positions on the nature of intelligence and educational merit. In a context where budget deficits and fragile tax revenues are putting pressure on additional public spending, these tensions will make the future debate over school funding more intense and competitive—but it will become more, not less, important than it has been since the mid-2000s.

The decade ahead
Given these constraints, a comprehensive national settlement on school funding over the next decade will be difficult, although not impossible, to achieve.

We will see steadily increasing public focus on the inequities of distribution and the need for additional funding to be directed the areas of greatest need and potential influence. The needs of students with disabilities, supported by more consistent and reliable data, will also demand a substantive and coherent funding design.

In parallel with the inevitable Commonwealth–state negotiations, some further innovations in practice and policy may encourage more effective use of school funding to achieve educational outcomes. These include:

- Focusing policy design and evaluation on the broad objectives, in terms of impact and outcomes, of reform, and providing funding for these objectives in terms that encourage flexible, collaborative implementation across schools and school authorities, but require high levels of transparency and rigour in explaining how money is used (as outlined in the recent Bracks Review of government school funding in Victoria: Bracks 2015).

- Channelling new funding through project-based ‘challenge’ based funding structures that incentivise collaborative innovation to solve clearly identified problems in new, cost-effective ways is another important method for encouraging more cost-effective uses of money in the school system.

- Encouraging schools and other stakeholders like trade unions and professional associations to share information and
benchmark the cost of different approaches, in order to create informed discussion about relative priorities for funding and build trust and legitimacy for reforms that involve redirecting resources and adopting new organisational behaviour.

The current, incomplete set of funding rules and systems will continue to work in zero-sum terms, driving destructive competition between schools and sectors, and funnelling public funds into unproductive uses.

A durable or successful settlement cannot be achieved by pitting one sector against others. Catholic and independent schools receiving large amounts of public funding will be a fixture of Australian education over the next decade. Prosecuting the arguments as a zero-sum distributional game will not work when each school sector has powerful advocates and interest groups prepared to act exclusively for them. The only alternative is to use transparency to build a broader community debate, using a wider range of voices and institutions to build the case for a settlement in which all sectors share responsibility for achieving equity, as well as excellence, in a wider community.

**Biography**

**Tom Bentley** is a writer and policy adviser based in Melbourne. He is Principal Adviser to the Vice Chancellor at RMIT University and Honorary Senior Fellow at the University of Melbourne’s MGSE. From 2007–13 he was Deputy Chief of Staff and senior policy adviser to Julia Gillard, Prime Minister of Australia 2010–13 and Education Minister 2007–2010. From 1999-2006 he was Director of Demos, an independent think tank based in London. His publications include *Learning beyond the classroom: education for a changing world* (Routledge, 1998), *The Creative Age: knowledge and skills for a new economy* (Demos, 1999) and ‘Innovation and diffusion as a method of change’, in the *Second International Handbook of Educational Change* (Springer, 2010), *The shared work of learning: using collaboration to lift educational achievement* (with Ciannon Cazaly, Mitchell Institute, 2015) and ‘Time for a new consensus: fostering Australia’s comparative advantages’ (with Jonathan West, *Griffith Review* 2016).
The period since the mid-2000s has seen unprecedented shifts towards the development of national reforms in Australian schooling, including the formation of a national curriculum, standardised national assessments in literacy and numeracy, national standards for teachers and principals, and a revised national model of school funding. These policy shifts have been supported by major intergovernmental initiatives and agreements, including the Melbourne Declaration on Educational Goals for Young Australians (2008), the National Education Agreement (2008) and various ‘national partnerships’ established through the Council of Australian Governments (COAG). Federal government involvement in schooling has also significantly increased since the mid-2000s, particularly in the area of school funding, with the Review of Funding for Schooling (2011)—aka the Gonski Review—resulting in substantial increases in federal funding to state and territory governments. National reforms have also been enabled by new policy organisations, such as the Australian Curriculum, Assessment and Reporting Authority (ACARA) and the Australian Institute for Teaching and School Leadership (AITSL), which have assumed powerful national roles.
Although there is strong cross-party support, at least in principle, for national schooling reform on the grounds of equity, effectiveness and efficiency, rapid shifts in policy, governance and implementation structures have generated uncertainty and contestation about how policies are developed and which level of government is ‘best placed’ to manage schooling policy in future. Australia is a federation in which states have constitutional responsibility for schooling. However, shifts over the past several decades have significantly altered relationships between Australian governments and created uncertainty about the roles of states and territories. Areas of schooling policy that were once the clear preserve of state and territory governments are now developed through complex intergovernmental networks involving federal, state and territory governments. Recent government reports suggest these changes have muddied lines of responsibility and accountability, and threaten the sovereignty of states and territories (Australian Government 2015a). This is supported by recent research in which I found that curriculum, a core aspect of schooling policy, is now constituted by a complex web of interrelated actors, organisations and priorities, which in some cases is producing overlap and duplication, and making it increasingly difficult to trace lines of power and influence (Savage 2016).

In this chapter, I argue that although there is a pragmatic need to improve the clarity of national policy processes, there are also distinct limits to current debates about how to improve policy through the Australian federation. Indeed, there is a narrowness in terms of how the policy problems highlighted for attention are defined and to the policy solutions put forward as potential fixes. I argue that a broader and more nuanced view is needed that better accounts for how national policy-making actually works in the evolving ecology of Australian schooling. In making this argument, I draw attention to two distinct limits to current debates: first, a fascination with vertical rather than horizontal relations between governments and agencies; second, a focus on the division of roles and responsibilities rather than on networks of collaboration. These limits reflect a constrained political imagination that is leading to a partial and insufficient set of reform options. To illustrate these limits, I focus specifically on documents produced as part of the
recent Reform of the Federation review, which represents the most recent and comprehensive set of attempts to reform governance processes in the Australian federation. Although the review process was ultimately left unfinished (see below), documents generated as part of it provide rich insights into the contemporary framing of debates about national schooling reform and federalism. The chapter concludes by considering some alternative ideas for improving national policy processes, centred on more transparent and accountable systems of intergovernmental relations that can harness the benefits of collaboration and strengthen reform in areas of schooling deemed to be in the national interest.

**Schooling policy in the Australian federation**

When the Australian Constitution was established in 1901, it was determined that responsibility for schooling should lie with the states and that the federal government should have no substantive role to play in deciding how to educate young people. The federal government was to govern matters deemed to be of ‘national interest’, which at the time was not seen to include schooling. The political imagination at Federation, therefore, was of a relatively autonomous set of arrangements throughout the nation. In reality, however, claims to the appropriate level of control went deeper than states, since although state governments played a more significant role in primary education during the second half of the nineteenth century, government control over secondary education was minimal when the constitution was signed. Schooling was set up as a deeply local affair in the Australian federation, with a diversity of provision and structural tensions already embedded.

The terrain of Australian schooling policy transformed rapidly over the next century. State governments became increasingly involved in schooling policy, and the federal government also acquired a major role, especially from the 1970s onwards. The Karmel Report of 1973, produced under Labor Prime Minister Gough Whitlam, was a watershed moment, leading to the introduction of continuous federal funding to Australian schools for the first time, with the aim of addressing issues of equity and quality throughout the nation. In the following decades, federal funding to both government and non-government schools increased dramatically, as did
attempts by federal governments to contribute to the steering of national agendas in schooling policy (Connors and McMorrow 2015). In many cases, increased interventions by the federal government have been driven by concerns about the social and economic consequences and challenges of globalisation. This was exemplified during the federal Labor governments of Kevin Rudd and Julia Gillard (2007–13), during which a strong emphasis was placed on nationalising and standardising core aspects of schooling for the sake of making Australia more competitive in the global economy, while at the same time seeking to ensure greater equity between systems. The Labor governments exerted significant influence by making increases in federal funding conditional upon states and territories signing up to range of new national goals and accountability processes.

It was under Labor that ACARA was established to develop the Australian Curriculum, My School and NAPLAN, and AITSL was established to develop the Australian Professional Standards for Teachers and the Australian Professional Standard for Principals. ACARA was established as a statutory authority, co-owned by federal, state and territory governments, and has since emerged as a key organisation for developing schooling policies in curriculum, assessment and reporting. AITSL, in contrast, was set up as a public company owned by the federal government and Minister for Education and Training, with a board structure that includes a broad set of stakeholders. Like ACARA, AITSL has had a major influence on national policy developments in teaching and teacher education (see sections below for further discussion of the distinctions between ACARA and AITSL).

In recent years, a chorus of argument has emerged suggesting that recent changes have resulted in an unnecessarily complex, hazy and unaccountable set of arrangements that are undermining the capacities of states to govern autonomously and formulate effective policies. Between 2007 and 2009, for example, two major reports were released by the Council for the Australian Federation (CAF). Both advocated significant potential advantages to Australian federalism while also citing a range of issues (Twomey and Withers 2007, Wanna et al. 2009). According to Twomey and Withers (2007), the roles and responsibilities of federal, state and territory governments should be clarified to ‘make federalism work better’ (p. 46). Education
is described as an area ‘most in need of assessment’ (pp. 46–7). Wanna et al. (2009) focus on the need to strengthen the national ‘architecture of cooperation’ (p. 3), and pay particular attention to improving intergovernmental collaboration through COAG and its ministerial councils. These conversations were continued in the report of the Senate Select Committee on Reform of the Australian Federation (Australian Government 2011), which argued that core aspects of the federation are dysfunctional, including growing levels of shared responsibility between governments. The review concluded that ‘the processes and structures’ of reform in Australia are in many ways ‘outmoded and unresponsive to the needs of modern Australia’ (p. 125).

The most recent attempt to reform the federation came in 2014 when the federal Coalition government announced its intention to develop a Reform of the Federation White Paper. The core aim of the White Paper was to clarify the roles and responsibilities of federal and state governments, with a particular focus on reducing duplication and ensuring that the federation operates in more efficient, transparent and accountable ways (Australian Government 2014c). The review framed education as a key area of concern, and released a specific Issues Paper (Australian Government 2014d), which signalled the need to disentangle the threads of an increasingly complex system of education reform that is ‘less efficient, effective and equitable than it could be in terms of delivering outcomes for all Australians’ (p. 2).

In a subsequent Discussion Paper, the review highlighted the mixed benefits of national reforms, arguing that while shared national collaboration had ‘led to the creation of successful national education bodies and national reforms’, the ‘shared space on policy and funding has also led to duplication, waste, and poor targeting of investment and effort’ (Australian Government 2015a, 58). The review also considered the broader role of COAG and its ministerial councils. In doing so, it reiterated similar arguments to Wanna et al. (2009), arguing that intergovernmental processes were hazy and unaccountable, and that reform of COAG processes was needed. Unfortunately, work associated with the White Paper was left unfinished, and the federal government announced in April 2016 that the final paper would not be released. Nevertheless, documents
generated as part of the review are crucially important, as they reflect core assumptions and ideas about how Australian federalism and schooling might be reformed, which are likely to influence future debates and reforms.

**Two distinct limits to current debates**

A major driving force behind recent reviews and debates has been a desire to rationalise policy processes in the Australian federation. Opinion has converged in favour of a new kind of federalism, involving structural reforms and a greater clarity of roles and responsibilities between governments. These debates have been infused with a strong pragmatic commitment to make federalism work better to serve the needs of Australians. This framing has led to the identification of certain policy problems seen as needing the most attention, and a number of associated policy solutions that have been advanced in response.

While it is widely argued that national policy processes need reform, it is much less clear that the particular problems and solutions being foregrounded are ‘hitting the mark’. Indeed, current debates appear to suffer from a number of blind spots, which reflect a constrained political imagination that is leading to a partial and insufficient set of reform options. In what follows, I examine documents produced during the recent Reform of the Federation review and argue that these texts reflect two distinct limits, which mirror broader debates: first, a fascination with vertical rather than horizontal relations between governments and agencies; second, a focus on the division of roles and responsibilities rather than on networks of collaboration.

1 **A fascination with ‘vertical’ rather than ‘horizontal’ relations**

Australian political scientist Amanda Smullen (2014) argues that debates about Australian federalism suffer from a fascination with vertical processes of centralisation and the changing role of the federal government, at the expense of exploring the changing roles of states and powerful horizontal shifts taking place through intergovernmental and other networked formations. This certainly rings true when considering contemporary debates about Australian schooling, in which the role of the federal government relative to the states is
typically foregrounded, but relatively little attention is given to intergovernmental formations such as the Education Council and ACARA, or to federal organisations like AITSL that work with states and territories through new inter-agency forms of collaboration. Failure to adequately consider the evolving role of such horizontal relations is highly problematic, since these are now primary channels through which national reforms are developed.

Documents produced as part of the Reform of the Federation White Paper exemplify this policy blind spot. For example, Issues Paper 4: *Roles and Responsibilities in Education* (Australian Government 2014d) is dominated by a focus on the expanding role of the federal government, and whether such expansion is intruding into state and territory responsibilities and creating unhelpful forms of overlap and duplication. Horizontal policy processes are woefully neglected. Consideration of ACARA and AITSL, for example, is almost entirely limited to perfunctory descriptions of the roles and responsibilities of these organisations. While a few brief remarks are offered to highlight the fact that core functions of these organisations now overlap with state and territory functions, zero consideration is given to how processes of policy development operate in these organisations or to how federal, state and territory governments work with and through these organisations to influence and implement reform. Mentions of the Education Council are also purely descriptive, with no questions or critical considerations raised in relation to its powers or decision-making processes. This trend is mirrored in the subsequent *Reform of the Federation: Discussion Paper* (Australian Government 2015a), which neglects ACARA and AITSL so fully that each is only mentioned once in the entire 121-page document, in a sentence that simply describes the organisations as parts of the ‘national architecture’ of schooling policy (p. 114). Again, zero critical consideration is offered in relation to either organisation, and policy development processes within each are not considered at all. Moreover, no recognition is given to the historically unprecedented roles these organisations now play in driving reform.

Although the Reform of the Federation review does pay attention to the intergovernmental machinery of COAG, it confines this discussion to a separate Issues Paper 5: *COAG and Federal Financial Relations* (Australian Government 2014e), which features very little
consideration of schooling. Indeed, the term ‘schooling’ does not appear once in the document, and references to education mainly consist of brief and general descriptions of key agreements (such as the National Education Agreement) or to broader issues of governance stemming from Australia’s high level of vertical fiscal imbalance. The role of ministerial councils is briefly considered, but the Education Council is not mentioned once in the paper. This trend is continued in the Discussion Paper, which notes major problems with COAG’s processes and canvasses options for reform, but again separates the discussion of COAG from the discussion of schooling. While the paper recognises that ‘the federal government plays a leadership role in functions such as the national curriculum, My School and NAPLAN’ (Australian Government 2015a, 57), no critical consideration is given to the intergovernmental machinery through which federal, state and territory governments interact to inform such national initiatives.

The failure to adequately consider the role of horizontal relations and processes represents a remarkable blind spot in a series of papers designed to critically assess the functioning of schooling in the Australian federation—especially given the central roles that COAG, the Education Council, ACARA and AITSL now play in setting and developing national policy initiatives. By focusing predominantly on the federal government and vertical relations, no critical appraisal is offered of the structures and processes that are now central to developing and driving national reforms in Australian schooling. Instead, the ‘problem’ is framed in terms of a need to clarify the federal government’s level of involvement relative to the states and territories. This is exemplified in the Issues Paper on education, which poses the following question: ‘What benefits, or costs, would arise from assigning full responsibility for school education to the States and Territories?’ (Australian Government 2014d, 38). Inherent in this question is a view that the heart of contemporary problems lies in the mix of vertical relations. This framing, however, obscures from consideration the possibility that problems such as overlap, duplication and a lack of accountability might be driven just as powerfully (if not more) by horizontal relations made possible through formations such as the Education Council and such organisations as ACARA, or indeed that overlap and duplication
might not even be the most important cause of problems that inhibit successful education reform at the national level.

Recent research I have conducted, for example, reveals concerns among state policy-makers about decision-making processes within ACARA and with national reform processes more broadly (Savage 2016). State policy-makers I interviewed argued that ACARA has not only assumed unprecedented powers but is also driving new levels of overlap and duplication, and blurring lines of responsibility. State policy-makers also reflected concerns that significant asymmetries of power exist in decision-making processes at the national level, with some states dominating national agendas and others being less able to exert influence. These findings mirror aspects of broader research into Australia’s intergovernmental machinery. Kildea and Lynch (2011), for example, have argued that COAG and the ministerial councils suffer from a ‘democratic deficit’ because decision-making processes take place behind closed doors, the federal government dominates agenda-setting, parliaments are distanced from participation and consultation, and power is concentrated at the executive level. While COAG represents a higher level of intergovernmental relations than function-specific organisations like ACARA, there is much to be gained by considering the extent to which broader problems of intergovernmental relations in our federal system are reflected in organisations such as ACARA. Such consideration should also extend to investigating the role of AITSL, which is federally owned and non-representative of states and sectors in terms of its board of directors, but nevertheless plays a powerful role in driving national reform. This is not to suggest that significant benefits cannot flow from organisations like ACARA and AITSL. Indeed, state policy-makers I interviewed also identified a number of powerful benefits flowing from ACARA and its work, which suggests that ACARA is well placed to drive collaborative national reform. Instead, my point is that these organisations are now central cogs in the machinery of national reform, and if the aim of rethinking the federation is ultimately to improve national policy processes, then much more attention to the operations of these organisations is required.
2 A focus on division rather than networks of collaboration

A fascination with vertical relations leads to a related issue, which is a tendency for debates to focus on the division of roles and responsibilities between governments at the expense of focusing on intergovernmental and inter-agency networks of collaboration. As a result, debates treat federalism as a zero-sum game, which frames the policy problem in highly utilitarian terms as one of needing to determine which level of government should or should not govern different aspects of schooling. Federalism is therefore regarded as something akin to a Rubik's Cube, whereby the policy solution is seen to lie in simply 'getting the settings right'.

The Reform of the Federation review is exemplary of this problem in terms of both how the policy problems facing the federation are framed and the policy solutions canvassed in response are shaped. The review's terms of reference, for example, begin from an assumption that the division of roles and responsibilities is the central issue facing the Australian federation. ‘Division’, however, is framed in vertical terms and in a way that implicitly suggests power should be returned to state and territory governments. For example, the main challenge outlined in the terms of reference is working out how to ensure the protection and enrichment of state and territory sovereignty. In line with this, the principal aim of the review is as follows: ‘The White Paper will seek to clarify roles and responsibilities to ensure that, as far as possible, the States and Territories are sovereign in their own sphere.’

The terms of reference expand upon this principal aim by outlining a number of specific objectives and issues, which include enhancing ‘autonomy, flexibility and political accountability’, ‘achieving agreement between State and Commonwealth governments about their distinct and mutually exclusive responsibilities’, and to ‘reduce and end, as far as possible, the waste, duplication and second guessing between different levels of government’.

These points are extended in Issues Paper 1: A Federation for Our Future (Australian Government 2014c). The opening pages to the paper foreground the issue of division by suggesting that the core problem facing the Australian federation is progressive centralisation and increased federal influence over the past few decades:
Rather than seeking ever greater centralisation of power in the national government as a way of dealing with increasing complexity, now is the time to strengthen the way our federal system works by being clear about who is responsible for what … A major part of the problem is that over time, the Commonwealth has become, for various reasons, increasingly involved in matters which have traditionally been the responsibility of the States and Territories … This Commonwealth expansion has led not only to inefficient overlap and duplication—with associated cost- and blame-shifting—but loss of accountability to voters, and has also impinged on States’ sovereignty. (pp. iv–2)

This framing of the problem is mirrored in the Discussion Paper (Australian Government 2015a), which focuses on the fact that roles and responsibilities for schooling are ‘effectively being shared between the Commonwealth and the States and Territories in the areas of funding and policy setting’ (p. 57). This ‘shared space on policy and funding’, it argues, has ‘led to duplication, waste, and poor targeting of investment and effort’ (p. 58). In response, the paper canvasses four possible (and highly diverse) reform options for schooling:

- Option 1: states and territories fully responsible for all schools
- Option 2: states and territories responsible for funding government schools and the Commonwealth responsible for funding non-government schools
- Option 3: reduced Commonwealth involvement in school programs
- Option 4: The Commonwealth is the dominant public funder of all students on an equal and consistent basis (pp. 60–5).

In different ways, each of the four options seeks to provide a policy solution by ensuring a more effective division of roles and responsibilities between vertical levels of government. This is most evident, however, in relation to Option 1, with the paper arguing that this option would ensure that ‘States and Territories would be “sovereign in their own sphere” and reflect their responsibilities as set out
in the Constitution’ (p. 60). This is described as having a range of potential benefits, including ‘more consistent policy decisions, performance, and accountability measures across all schools’ (p. 60), ‘absolute clarity to the public as to which level of government is responsible for schooling’ (p. 61), and ‘better and more cost-effective service delivery’ (p. 61). Overall, the ‘Schools’ section of the Discussion Paper makes only one reference to existing networks of sharing and collaboration between governments, noting briefly that there ‘are positive examples’ of ‘shared collaboration on policy’ (p. 58), which has ‘led to the creation of successful national education bodies and national reforms’ (p. 58) and that ‘national education functions (that governments collaborate on) work well and ought to be maintained’ (p. 59). Again, zero detail or critical consideration of these national bodies is offered, and no attempt is made to consider in any detail how such processes of collaboration operate or to assess the potential benefits or limits of such networks. Instead, the architecture of decision-making is benevolently described as working well, while the vertical division of roles and responsibilities between governments is framed as the main issue.

In framing policy problems and solutions in this way, the Reform of the Federation review operates on an assumption that a broad range of problems facing the federation can be fixed by simply working out how to best ‘divide up’ roles and responsibilities. Once we know how to carve up the cake, so to speak, we will be able to put an end to inefficient levels of overlap and duplication, blame games between governments, problems of accountability and a lack of transparency. By foregrounding such notions as ‘sovereign in their own sphere’ and ‘distinct and mutually exclusive responsibilities’, the review clearly does not conjure an image of a federation in which policy should be a shared endeavour, or in which the cross-pollination of policy ideas and practices can be a good thing. Instead, Australian federalism is portrayed as a ‘tug of rope’ power play between vertical levels of government, in which the balance has shifted unproductively towards federal over-reach. In this way, the review relies upon a highly uncritical assumption that the ‘proper’ and most effective set of roles and responsibilities in schooling policy are clearly established, but have been compromised by recent developments. However, quite paradoxically, this assumption sits uneasily
with one of the central aims of the review, which is to end waste, overlap and duplication. For example, if a key challenge is to find new and cost-effective ways to solve problems and meet needs, then there is a strong possibility that finding ways to combine shared responsibility with shared resourcing and shared commitments to transparency and review might be the most effective form of governance to pursue. This possibility is not adequately allowed for in the framing of the discussion about federal–state relations, because the focus on ‘distinct and mutually exclusive responsibilities’ is assumed to be superior. There is a significant unresolved tension between the principal aim of the review and the other stated aim of increasing efficiency. Rather than seeing ‘shared spaces’ as sites of potentially productive collaboration and learning, these spaces are framed as threats.

The White Paper documents are thus far too myopic in focusing on the division of roles and responsibilities as the central problem that needs fixing. As a result, the review remains largely blind to both the potential benefits and limits associated with rising levels of sharing and collaboration across vertical and horizontal channels. This, in turn, leads to four reform options being generated that are effectively silent on how existing forms of intergovernmental and inter-agency sharing and collaboration might be reformed, or might work in relation to each of the four options canvassed. This is a major problem, as by failing to adequately consider formations like the Education Council, and organisations like ACARA and AITSL, the review fails to engage with the existing realities of national policy-making in Australian schooling. Again, for example, recent interviews I conducted with state policy-makers suggest that such formations and formulations are playing powerful roles reshaping policy processes through enabling new national policy networks and forms of collaboration (Savage 2016). These networks include the formal establishment not only of new national policy processes but also of new informal networks between state policy-makers and agencies that are forming as ‘offshoots’ around formal processes. With regard to ACARA specifically, policy-makers suggest that these expanding networks of collaboration have significant positive influences, including the creation of a common language and set of practices in curriculum policy. In order to properly understand issues of overlap,
duplication and the division of roles and responsibilities, therefore, the White Paper review documents should have paid significant attention to organisations such as ACARA, and other horizontal channels of intergovernmental and inter-agency collaboration, as well as the potential benefits that can flow from shared responsibility. But the review remained silent.

**A more productive way forward?**

In the lead-up to the March 2016 meeting of COAG, Prime Minister Malcolm Turnbull created controversy when he floated the idea of letting states raise a share of income taxes, with the view to enabling the federal government to cease funding public schools entirely. In spruiking the idea publicly, both Malcolm Turnbull and federal Education Minister Simon Birmingham argued passionately that state governments are best placed to manage schools and take responsibility for funding. The plan strongly echoed elements of the Reform of the Federation review, once again framing the best way forward as scaling back federal involvement (in this case, radically) to better clarify roles and responsibilities. Turnbull suggested that it was time to end the ‘arm wrestling’ about which level of government should control schools, adding: ‘You have got to ask yourself whether we should not have clearer lines of responsibility’ (Knott 2016). The plan sparked an immediate backlash, however, from most state and territory leaders, who baulked at the idea that the federal government might walk away from the policy settlement established under Whitlam in the 1970s. Quite rightly, New South Wales Premier Mike Baird pointed to the lack of evidence that the move would do anything to improve outcomes in schools. Unsurprisingly, the idea was dead immediately after the COAG meeting, along with the Reform of the Federation White Paper, which the government suggested would no longer be published.

Turnbull’s tax plan might have been ill-conceived, but it is exemplary of the deep and unresolved issues facing schooling reform in Australia. More than a hundred years after Federation, the ecology of Australian schooling has become profoundly complex, generating a number of concerns. Roles and responsibilities that were once unambiguously the preserve of states are now negotiated at the national scale through complex and intersecting channels of policy,
politics and power. The federal government plays an increasingly prominent role in this new ecology of schooling policy, as do intergovernmental formations like COAG and the Education Council, as well as new organisations like ACARA and AITSL. Although there are strong arguments for greater national consistency on the grounds of equity, effectiveness and efficiency (Keating 2009), arguments have also emerged that suggest we are moving towards a system of national schooling policy marked by high levels of overlap and duplication, hazy decision-making processes, asymmetries of power between governments, and the domination of the federal government in agenda-setting processes (all exemplified in the Reform of the Federation review documents).

In this chapter, I have argued that while the terrain of national schooling policy has certainly changed in dramatic ways (and continues to change), there are distinct limits to current debates in terms of how the policy problems highlighted for attention are defined and how the policy solutions put forward are shaped. Specifically, I have argued that there is (1) a fascination with vertical processes of centralisation and the changing role of the federal government, at the expense of exploring the changing roles of states and powerful horizontal shifts taking place through intergovernmental and other networked formations, and (2) a tendency to treat federalism as a zero-sum game by focusing on the division of roles and responsibilities between governments, at the expense of focusing on intergovernmental and inter-agency networks of collaboration. Both these limits rest on uncritical assumptions about how federalism should ‘ideally’ function, frame ‘shared space’ as inherently problematic and fail to capture the reality and complexity of emerging governance processes.

Looking ahead to the next decade, it is likely that collaboration and sharing between Australian governments will continue to intensify as national reforms evolve, and as politicians, policy-makers and other stakeholders seek new strategies to tackle shared and complex social problems in schooling and beyond. Governance theorist Bob Jessop, for example, has argued that the dramatic intensification of societal complexity that is underway globally has driven new forms of networked governance across public and private spheres (Jessop 2003). In federal systems, the tackling of complex problems in
education (from issues of equity and access to the shaping of curricula knowledge) appears to necessitate (and has driven) increased collaboration between governments, and between government and non-government actors. Indeed, the majority of national schooling reforms developed since the mid-2000s (including the Australian Curriculum, NAPLAN, My School, the Australian Professional Standards for Teachers and school funding reforms) have been guided by a desire to improve schooling for the sake of making Australia more competitive and relevant in an increasingly interconnected global economy and society while also seeking to ensure equity and consistency between systems.

However, while networked governance arrangements built around shared problems and marked by new interconnectivities generate new policy possibilities, these new arrangements also pose issues for long-standing policy problems, especially those concerned with maintaining democratic and representative forms of governance. As governance theorist Mark Bevir argues, the rapid growth of networked forms of governance raises complex questions about ‘the health of democratic institutions’ (2010, 12) and how to conceptualise and reform the public service to ensure that institutions remain representative and accountable in contexts in which policy roles and responsibilities are shared between multiple actors and organisations. As Bevir argues, these new forms of governance, marked by ‘complex webs of actors’, disrupt traditional lines of responsibility associated with representative democracy, making it difficult, if not impossible, ‘to hold any one agent responsible for a particular policy’ (p. 96). Aspects of Bevir’s arguments are echoed in the Reform of the Federation review and in research I have conducted and canvassed in this chapter. A key question therefore is: how can the benefits of collaboration and sharing be harnessed across Australia’s federal system, but in ways that ensure fair, transparent and accountable systems of intergovernmental relations? This is a highly complex question, but I want to finish by briefly offering three provisional responses to it, which I hope can form the basis for future debates and reform.

First, rather than seeking to carve up roles and responsibilities in line with normative ‘ideal type’ visions of what federalism should look like, we should focus instead on how schooling policies actually
operate in the Australian federation, and assess both the strengths and weaknesses of current shared spaces. In deciding how to reform existing arrangements, it is important to focus on what these shared spaces produce that is of worth and can be argued as being in the national interest. For example, two research projects I have recently been involved with revealed significant benefits to national reforms in curriculum and teaching standards, particularly in terms of fostering the sharing of good ideas between systems and in generating a common language and set of approaches across the nation (Clinton et al. 2015, Savage 2016). Moreover, as the Australian Constitutional Values Survey 2014 found, collaboration is also strongly supported by public servants, with 85 per cent in favour of improving mechanisms for sharing responsibility between governments, rather than dividing functions (Easton 2015). Rather than opposing shifts towards national consistency on principled, normative or philosophical grounds (of which there are many to be found in federalism literature), we should instead take seriously the benefits that key stakeholders are identifying, and work to build further on these positives. In other words, a more pragmatic approach to reform is needed.

Second, we need to move beyond the common assumption that national reforms invariably mean that states and territories are locked into uniformity and will lose agency. While such an assumption is both implicit and explicit in the Reform of the Federation review, it is simply not reflected in reality. For example, as the Australian Curriculum continues to evolve, it is becoming clear that many states and territories are engaging in 'adopt and adapt' approaches to implementation, tailoring the curriculum to local needs, demands and historical formations. The same goes for the Australian Professional Standards for Teachers, which are already exhibiting a variety of uses across the nation (Clinton et al. 2015). In other words, even when reforms claim to be national in form and scope, diverse translations and enactments of policies will invariably occur, not only at state and territory levels but also within different sectors, and within different schools and classrooms. As such, to argue that a national reform invariably produces policy monocultures is to misunderstand the complexities of both policy development and enactment. Linked to this, arguments that national
policies and shared spaces invariably compromise state and territory agency obscure from vision the complex processes of collaboration between governments that go into producing reforms like the Australian Curriculum in the first place. For example, not only are states and territories co-owners of ACARA but also each jurisdiction played key roles in consultation and curriculum development processes. This is not to suggest that these processes were entirely unproblematic (see Savage 2016), but it does show that viewing shared space as simply a threat to states and territories is inaccurate.

Third, further work is needed to better understand both the problems and possibilities generated by ‘shared spaces’ in the evolving ecology of Australian schooling. As I have tried to show in this chapter, Australia has evolved some important multilateral and networked governance arrangements in schooling, but these new policy assemblages are not well understood. Ongoing efforts are needed to review and research the evolving ‘national architecture’ of schooling policy in Australia, in order to better understand the multiple horizontal and vertical channels through which agendas and policies are generated, as well as how various key organisations and stakeholders interact. Some important work has already taken place in this regard through the Council for the Australian Federation (CAF) and the COAG Reform Council (but the latter was abolished by the Coalition government). In particular, further attention should be given to reviewing the machinery of intergovernmental and inter-agency relations that are now central to the making of schooling policy in our federation, especially in light of the paucity of contemporary research in this area and the lack of attention given to these issues in the Reform of the Federation review. This research is not only useful in a theoretical and academic sense, but is also crucial for generating insights to improve and reform policy processes. In my view, such research should ideally emanate from multiple sources, including formal reviews commissioned by governments, academic research, and work conducted by think-tanks and research institutes. This will ensure that a diversity of materials and perspectives is generated and can be debated, with the view to achieving a fuller and more nuanced understanding of emerging arrangements and challenges. Such review and research work will have maximum benefit if it is made publicly available for the purposes of widespread discussion and deliberation.
Ultimately, the future trajectory I am advocating is one that seeks to improve national policy processes, but in ways that are centred on transparent and accountable systems of intergovernmental relations that can harness the benefits of collaboration and strengthen reform in areas of schooling deemed to be in the national interest. Rather than retreating from the significant gains made over the past few decades towards national and bipartisan agreements on the shaping of schooling reform, we should seek to build a healthier kind of federalism, which nourishes core benefits of a federal system (including diversity, innovation and competition), but at the same time maintains sufficient levels of commonality to ensure that all young Australians have equitable access to quality schooling. As Wanna et al. (2009) argue of Australian federalism more broadly, developments over the past few decades have created rich foundations for further strengthening the national ‘architecture of cooperation’ (p. 3) in ways that make federalism work more effectively and improve the delivery of public services. Rather than negative rivalry and ‘blame game’ politics, governments need to ‘work together to achieve common objectives’ (p. 2).

Biography

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Notes

1 The Terms of Reference are available at https://federation.dpmc.gov.au/terms-reference


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